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FOR

ALVIN H. HANSEN

Preface

Before proceeding to personal acknowledgments I wish to express my appreciation for the statistical material presented in the *Bulletin* by the Board of Governors of the Federal Reserve System. This material, well analyzed and well presented, is of great aid to the scholar. Similarly, the *Survey of Current Business* (Department of Commerce), with its excellent tables, articles, and condensations, has been invaluable. No foreign government, to my knowledge, publishes an official bulletin comparable to these two.

Those who read the preliminary draft of this volume early in 1944 will, I hope, scarcely recognize it two years later. I should acknowledge especially the aid I received at that time from Profs. J. M. Clark and Carl Shoup of Columbia; Prof. W. L. Crum of Harvard University; Dr. Edwin E. Witte, public member of the War Labor Board; Dr. William Haber, adviser on labor and man power to the Director of War Mobilization and Reconversion; Miss Alice Bourneuf and Dr. Evsey Domar of the Federal Reserve Board; and Mr. John Lintner, Junior Fellow of Harvard University. The Graduate School of Public Administration of Harvard University and the Harvard University Committee on Research in the Social Sciences provided necessary financial aid.

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SEYMOUR E. HARRIS.

FOUR WINDS FARM,
WEST ACTON, MASSACHUSETTS,
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List of Abbreviations

A.E.R.	*American Economic Review*
F.R.B.	*Federal Reserve Bulletin*
R.E.S.	*Review of Economic Statistics*
S.C.B.	*Survey of Current Business*
BEW	Board of Economic Warfare
BAE	Bureau of Agricultural Economics
BLS	Bureau of Labor Statistics
CED	Committee for Economic Development
CIO	Congress of Industrial Organizations
CMP	Controlled Materials Plan
EPCA	Emergency Price Control Act
FHA	Federal Housing Administration
FRB	Federal Reserve Board
FEA	Foreign Economic Administration
GMPR	General Maximum Price Regulation
GNP	Gross National Product
L-orders	Limitation orders
M-orders	Material Conservation orders
LSF	Little Steel Formula
MPR	Maximum Price Regulation
NBER	National Bureau of Economic Research
NHA	National Housing Agency
NICB	National Industrial Conference Board
NPA	National Planning Association
NRPB	National Resources Planning Board
NWLB	National War Labor Board
OCR	Office of Civilian Requirements
OES	Office of Economic Stabilization
OPA	Office of Price Administration
OWI	Office of War Information
OWM	Office of War Mobilization
OWMR	Office of War Mobilization and Reconversion
PCA	Price Control Act
PRP	Production Requirements Plan

SPA	Surplus Property Act
SPB	Surplus Property Board
UNRRA	United Nations Relief and Rehabilitation Administration
WFA	War Food Administration
WLB	War Labor Board
WMC	War Manpower Commission
WPB	War Production Board
WSA	War Shipping Administration

Introduction

A study of inflation requires in fact a study of the whole economy, both war and postwar. Inflation is a symptom of disease, of a general breakdown of the economic body. As a physician cannot thoroughly prescribe for his ailing patient without a complete study of the patient's entire system—his circulation, respiration, metabolism, psychological setup, and so forth, and of the organs connected with these functions—so the investigator of inflation must study the whole economic system. To conclude prematurely that the symptom, inflation, results from an excess of money or from an excess of income, of wages, of diversion of supplies to the war economy, or results from large exports to foreign countries, or from lack of confidence in the currency, or from an inadequate tax system—to conclude without an over-all study that any of these is the cause, is unsound investigation.

The task we set is to find out, or ferret out if necessary, all the variables that may be relevant and to give them their proper weight in the general picture. That is why a study of inflation requires in fact a study of the war and postwar economy, the emphasis, however, being put on the price aspects of the problem.

The sources on which this book is based are largely published materials. They consist for the most part of government documents printed for the use of the general public; but the materials also, in no small part, consist of various memorandums that were circulated within the departments and agencies of the government and yet were not of a secret nature.[1] As a government servant, being on the inside, if only in my own small orbit, I learned much, and in this book, naturally, I have leaned heavily on what I learned without, however, revealing any confidential material.[2] The reader will soon find that I have used, to a considerable degree,

[1] For a good summary of the legislative and executive background of the war, see Senate Doc. 224, *Domestic Stability, National Defense and Prosecution of World War II*, 1944.

[2] My official work since 1941 has been as follows: Member of the Policy Committee of the Board of Economic Warfare, Director of the Office of Export-Import Price Control (OPA), Advisor on Stabilization Programs to several Latin-American governments, and Economic Advisor to the Vice Chairman of the Office of Civilian Requirements of the WPB.

statistical material made available by government agencies, some of which I frequently adapted to my own purpose. The 154 tables and 116 charts in this volume constitute perhaps the most comprehensive statistical history of our war economy and blueprint for the future yet made available. The reader will find in them summary histories of all the various important aspects of the inflationary process, and, therefore, of the vital aspects of our war and postwar economy.

During the war we greatly increased our supplies. This was brought about as a result of increasing productivity in war industry, the rise of the number of workers employed and in the number of hours per worker, conservation of materials, remarkable success in finding substitute materials both at home and abroad, and, so far as the civilian economy is concerned, the failure to divert a larger proportion of our economic factors to war industries. In World War II the government required at least ten times as many dollars (and of a higher purchasing power) than in World War I and approximately twice as large a proportion of the gross national product; yet prices rose only one-half as much as in World War I —and probably by the peak of the inflationary period the relative proportion will be even smaller. We have done a much better job in our fight against inflation in the course of our $300 billion (?) World War II than we did in the course of the $30 billion World War I.

A significant contribution was made toward keeping demand down. Taxes might have risen somewhat more. Yet the contribution of rising taxes was substantial. In the course of the war, Federal taxes rose from about $5 billion to $45 billion. Moreover, these taxes were imposed largely on money incomes and were, therefore, not to raise prices directly. This is not to deny that businessmen, in some part at least, passed their taxes on in higher prices. Demand was also kept down as a result of the large and unexpected rise in savings. From an average level of less than $10 billion in the thirties, individual savings rose to approximately $40 billion in 1944. This unexpected rise of savings is to be explained in part by the rise in incomes and the failure to adjust consumption correspondingly, and, related to that factor, the unavailability of goods at what were considered reasonable prices and standard quality.

Supply was, therefore, at a high level and demand was kept under control through the unexpected rises in taxes and savings. These were to a considerable degree an offset against the large rises in wages, farm incomes, and profits. The siphoning off of the excess was not adequate,

however, to prevent an excess of demand over supply at prewar prices. The excess was absorbed in part in rising prices, but more largely through the introduction of vigorous price and related controls, and hence through a reduction of demand and the maintenance of prices below what might be considered the equilibrium level.

My main conclusion is that in the postwar period the dangers are more likely to be deflationary than inflationary. In the short run, however, and especially in the 1, 2, or 3 years following the reconversion, there may be pressures to raise prices and especially in particular markets. In general, however, the large decline of employment and of wage payments and the like will tend to bring about a general deflationary pressure which may largely offset any particular pockets of inflation. We should, however, be on the watch for potential inflationary pressures and maintain controls in markets where the dangers remain substantial.

At this point I would offer a word of guidance to the reader. In the companion volume on *Price and Related Controls in the United States*, I dealt comprehensively with the subject of controls and the related one of subsidies, and, therefore, I treat the subject of controls in rather a summary fashion in this volume. Inflation is a complicated subject, taking us into an investigation of many aspects of our economy. It may be more helpful for the general reader if he follows the unconventional procedure of reading the last chapter, entitled "Conclusions," first and then Part I, which (except for Chapter I) is elementary. I hope very much that businessmen, government servants, and students will profit from the rest of the book, although it is not so elementary as Part I. It will give them the main outlines of our war economy and the important problems confronting us in the transition and postwar periods. This book assesses the anti-inflationary forces: production, economies of investment, treatment of bottlenecks, removal of excess purchasing power, controls, savings, taxation, etc.; and it evaluates the inflationary forces: the rise of labor and other incomes, the loss of goods to foreign markets, the expansion of consumption demand, the requirements of the military. For the transition and postwar, we estimate the weight of inflationary pressures by periods: money, savings, deferred demand, premature removal of controls, delays in resumption of production; and we take account of the deflationary factors: reduction of employment and pay rolls, termination of war contracts, the burden of taxes, disposal of gov-

ernment surpluses, excess industrial plants, any collapse of prices and income abroad—and so on. An attempt is made to lay down the broad lines of policies in the areas of taxes, spending, control, trade and exchange, money, etc., which will protect the country against both inflation and deflation.

Chapter I

The Issues

1. INTRODUCTION

This volume is divided into four parts. *Part I is introductory and (except for Chapter I) is elementary. The professional economist may wish to omit it or read it quickly.* He should not omit Chapter I or Chapter II. He may, however, find the concluding chapter relatively easier to read at this time than Chapter I.

Part II is concerned with questions of supply and with the relation of supplies and costs to prices.

Part III treats of demand: incomes, income distribution, savings, taxation, and the excess of demand.

These three parts deal primarily with the war economy.

Part IV examines the transitional and postwar economic outlook and assesses inflationary pressures carried over from the war period. It is, in fact, a study of reconversion and postwar economics with the focal point the net inflationary or deflationary pressures.

No study of price movements is possible without an investigation of the underlying supply-and-demand conditions. This I did to some extent in two previous books on war economics. These had been based on events and materials available through 1941. And a volume on controls, which is a companion volume to the present one, was published early in 1945.[1] In the present volume I study our war and postwar economy, emphasizing the issues that are pertinent to inflation in both these periods. The relevance of controls is indicated, but, as stated above, only a summary treatment is given here since this subject was treated fully in *Price and Related Controls in the United States.*

[1] *The Economics of American Defense*, Norton, 1941; *The Economics of America at War*, Norton, 1943; *Price and Related Controls in the United States*, McGraw-Hill, 1945; also see *Postwar Economic Problems* (edited by Seymour E. Harris), McGraw-Hill, 1943; *Economic Problems of Latin America* (edited by Seymour E. Harris), McGraw-Hill, 1944; and *Economic Reconstruction* (edited by Seymour E. Harris), McGraw-Hill, 1945.

2. THE INFLATION PROBLEM

In this chapter, sketched briefly, are many of the problems of inflation and, although the chapter is in no sense a substitute for Parts I–III of this book, it will give the reader some idea of the range of the problems covered.

The distribution of goods is a vital matter. The more inflation grows, the more inequitable becomes the distribution of goods. As prices rise, people with low incomes, or those with fairly rigid incomes which do not

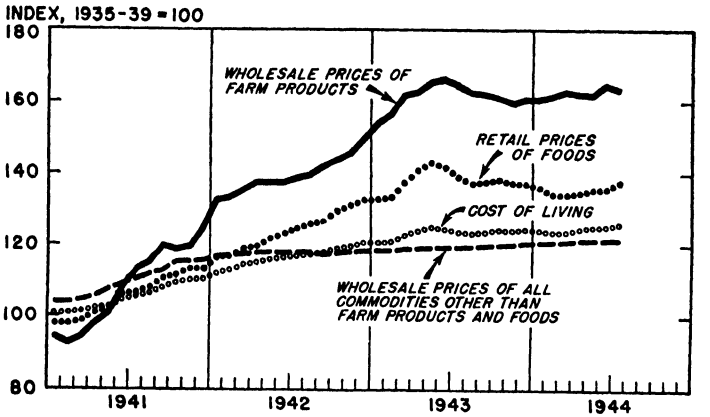

CHART 1.– Price trends. (*Source: U. S. Department of Labor; wholesale prices recomputed with 1935–1939 as base by U. S. Department of Commerce.*)

respond to higher prices, obtain a declining proportion of the limited supply of the goods made available in the war or postwar period. Inflation also increases the cost of the war and to that extent adds to the burden of the public debt, thus imposing increased sacrifices on taxpayers today and in the future.

Over a period of approximately six years of World War II the cost of living rose about one-quarter and wholesale prices about one-third. These rises are indicated by official index numbers. (See Chart 1, which gives the cost of living and sectional wholesale prices. Prices on this chart relate to the period 1939 through most of 1944; in 1944, the upward movement was unimportant.) *In part this increase was undoubtedly necessary in order to achieve maximum output and the desired diversion of resources from peacetime to war industries. So long as the government was not prepared to move factors of production from industry A to industry B or to move women from the home to industry, it was necessary to offer a substantial pecuniary bribe in order to*

obtain the optimum allocation of economic resources for the war economy. A correct price policy would keep these increases in monetary rewards down to the minimum amount required to achieve the necessary increase of output and the diversion from peace to war industries. It is not clear, however, that the increase of prices was kept down to this minimum level.[1]

The average annual wage of workers in war industries, for example, was up 75 per cent in 1943 over the 1939 level and was 50 per cent higher than in nonwar industries.[2] Does this difference represent a higher physical productivity and longer hours in war industries exclusively? Or does it reflect the willingness of the government to pay high prices on war contracts, and the tendency of contractors to bid against one another and against nonwar industries to attract labor? It reflects in part the rising real productivity in war industries, and in part the extra incentive offered workers to move into new areas and new occupations and to work longer hours. It is not easy to say whether or not the necessary movements might have been effected with the offer of a smaller incentive. In a later chapter the conclusion is reached that in manufacturing, at least one-half of the rise in the country's wage bill resulted from the increase in number of hours worked.

Further comments on the relation of inflation to production and the adverse effects of inflation will be found in the next chapter.

By inflation in the civilian economy we mean a rise of prices which results from an excess of demand for civilian goods over the supply of these goods made available to the civilian population at prices of the preceding period. Similar definitions may be applied to other markets, *e.g.*, the military. In other words, if the country earns $150 billion, but only $90 billion of consumption goods at prices current at the beginning of the period are available, there will be an excess of demand of $60 billion, unless the government, as tax collector or as seller of securities, takes away a large part of the excess, or unless the public increases its hoards of cash. This definition of inflation is more sophisticated than those which were in use in the last war. At that time, it was customary simply to associate inflation with an excess of *money* which was held to induce higher prices.

[1] *Cf.* the section on income in this chapter, and Chs. XIX and XX.

[2] *S.C.B.*, December, 1943, p. 4. From January, 1941, to April, 1944, for manufacturing the increases were as follows: Gross weekly earnings, 71 per cent; gross hourly earnings, 48 per cent; urban wage rates, 27½ per cent. BLS Serial *R* 1684 *Wartime Wage Movements and Urban Wage-rate Changes*, October, 1944, p. 20.

In the military-goods area there may also be higher prices, and the general view is that prices of war output have risen. Dr. Kuznets [1] estimates the rise of prices of war goods at more than 80 per cent by the first half of 1943. Yet, as we shall see, the rise is much less. Here two factors may be distinguished. First, the cost of a unit of economic resources used in the production of war output may have increased, and undoubtedly has increased, substantially. Therefore, the average price of a unit of war goods increases. Against rises in wage rates and raw materials should be put the increased scale of operations and savings per unit of output in factory overhead and selling and administrative expenses. Nevertheless, total unit costs are assumed to have risen. Second, it is held that efficiency in war-goods industries is not so great as in peacetime industries. For example, Dr. Kuznets assumes that the efficiency in war-goods industries in 1939 was roughly one-half and by 1943 about 80 per cent of the efficiency of peacetime industries. Therefore, the prices of war goods in comparison to the prices of peacetime goods are much higher. We have, then, higher prices in the military area, both because, in general, factors of production used in this area are not so efficient as in the nonmilitary area and also because higher prices have to be paid for the factors of production. This high level of prices is hypothetical, as we shall see later.[2]

3. THE PROBLEM OF SUPPLY

Our first problem must be that of supply because, obviously, in a free economy, prices are determined by supply and demand. The war economy requires an increased proportion of national income and of gross national product (GNP), *i.e.*, of national income plus certain additional resources made available to business and the government which are not considered part of national income. *These resources for war must come from capital—i.e., from resources that would have been used to maintain or expand our capital—or from consumption, and primarily from additional output. The more that is taken from capital and from additional output, the less will be taken from resources to be made available for consumption and, therefore, the less will be the pressure on consumption markets, and the lower prices on these markets.*

We may, for example, compare the resources made available for capital, for war outlay, and for consumption in 1939 with those made available in the first half of 1943. It will be found that war outlay increased by $77 billion. This increase of resources required for war and a significant increase in consumption of $28 billion are accounted for to the extent of one-seventh by savings on capital—*i.e.*, the using up of current capital resources (*e.g.*, failure to replace worn-out machinery) and the reduction from the 1939

[1] S. Kuznets, *National Product War and Prewar*, p. 30, NBER, 1944.

[2] *Cf.* note at end of chapter, where the issues between Dr. Kuznets and the Department of Commerce are briefly discussed.

level of resources used for new investment—and to the extent of six-sevenths by an increase of output.

These figures may, however, mislead the investigator. He may get the impression that there has been a very large rise of consumption and a very marked increase of output. These conclusions will be modified to some extent if one compares the value of these variables, not in terms of current prices as is done above, but in terms of 1939 prices. In other words, we consider the increase of *real* output (*i.e.*, in goods and services) and *real* allocations of resources for capital, for war, and for consumption, rather than the increases in monetary terms.

While we are on this subject, we should note the latest dollar figures. The main contributions to the war came from additional output. Over a period of five years, a rise of GNP accounted for 92 per cent of the additional resources made available, and economies in private capital formation approximately 8 per cent. Of the total made available, war absorbed 71 per cent and consumption 29 per cent.

TABLE 1.—SOURCES OF WAR EXPENDITURES, 1944
(In billions of dollars)

Rise 1939–1944		Absorbed	
GNP	110	Rise of war expenditures	85
Reduction of private capital formation	9	Rise of consumption	36
Total available	119		121

SOURCE: *S.C.B.*, April, 1944, p. 13, September, 1944, p. 7; February, 1945, p. 13. Minor items are not considered.

I present here estimates of the rise of real output. Dr. Kuznets' estimates are much lower than those of the Department of Commerce. Since the issues are rather technical, I have discussed them briefly in a note at the end of this chapter.[1] For our purposes, namely the study of inflation, the *dollar* rise of gross national output is the significant variable; and here differences are not serious.

The difference made by Dr. Kuznets' approach in terms of the net changes of output during the war period may be illustrated by Table 2.

We may conclude that the price of consumption goods will depend upon the total income available, after savings and taxes are deducted, in relation to the supply of consumption goods made available. How much will be made available

[1] *Cf.* also symposium by Messrs. Gilbert, Staehle, Woytinsky, and Kuznets, *R.E.S.*, August, 1944.

TABLE 2.—INCREASE OF REAL RESOURCES FROM 1939 TO THE FIRST HALF OF 1943

	Per Cent
GNP, most reasonable assumption according to Dr. Kuznets	47.3
Disregarding the relatively lower efficiency in war industries (Dr. Kuznets)	84.0
GNP according to Department of Commerce concept	74.5
According to Department of Commerce, but using Dr. Kuznets' concept of GNP	85.7
F. R. Board index of industrial production	113.8

SOURCE: S. Kuznets, *National Product War and Prewar*, p. 24, NBER, 1944.

depends upon the extent to which output rises and capital resources are drawn upon. The contribution of capital is substantially greater and the rise of consumption is substantially less according to Dr. Kuznets' figures than according to the figures of the Department of Commerce. *The less the factor cost and the greater the efficiency in consumption goods industry, the lower will prices be.* It does not follow that the gains will be net, because it is necessary to consider the relationship between the total supply made available and the total demand for the goods. Any saving resulting from a reduction of cost will have a favorable effect on prices as a whole only insofar as such reductions result in a reduction of spending. If it has a large effect in stimulating demand, then the net effect of savings on factor costs and efficiency may be inflationary.

In the area of military goods both factor prices and relative efficiency should be considered. Here the government determines the magnitudes required and appropriates the necessary funds. The lower the prices, *i.e.*, the lower the factor prices and the greater the efficiency, the less will be the cost of the required supplies, and to that extent the less will be the inflation. Any increase in prices associated with the inefficiency in war industries is a gross increase of prices and should be reduced to the extent that the heavy taxation of war industries reduces the amount of inflationary finance that is necessary. Yet prices of war goods actually have risen little if at all. Against higher prices for factors is to be set the rise of efficiency. Even Dr. Kuznets estimates prices of war goods at 182 in the first half of 1943 only because for 1939 he put them at 163. This base figure reflects the relative inefficiency of war industries—*i.e.*, the lower output in war industries as against nonwar industries, derived from a given quantum of economic resources.

Finally, a word should be said about the international aspects. Since we export more than we import, we lose commodities to foreign countries. These losses are accounted for in war outlays, for this large excess of exports is for the most part lend-lease and is included under our war ex-

penditures. It would be double counting to include these losses separately as losses to foreign countries if they have already been included under war expenditures.[1]

4. DEMAND

In current economic and noneconomic literature there is much discussion of the inflationary gap. *By the gap one generally means the excess of demand over supply at base period prices.* This excess measures, more or less, the inflationary pressure that will be exercised on the price level in a given period. *Excess demand arises largely because the amount of purchasing power to be disposed of on given markets exceeds the supply of consumption goods made available at prices current at the beginning of the period.*

Unfortunately, there is much confusion in the use of this term. Some writers refer to a gap related to incomes prior to the deduction of taxes and savings; others refer to a gap related to incomes after deduction of taxes and savings. Some refer to a gap in relation to the supply and demand for consumption goods, while others refer to one relative to the demand for and supply of consumption and capital goods, and goods and services provided by the government.

We have not been very successful in our estimates of the inflationary gap. The difficulties arise in part because of the interrelationship of the variables involved. For example, one may estimate a gap of $10 billion and suggest that if taxes were increased by $10 billion the gap would disappear. Such statements have been made. Their authors forget, however, that increased taxes will have secondary effects on income and on consumption and, therefore, the net effect on the excess will not be a reduction of $10 billion. Demand for consumption may fall only by $3 billion and output of consumption goods may be reduced by $2 billion. The gap is then reduced by only $1 billion; supply is less by $2 billion and demand by $3 billion.

The concept of the gap is very useful, however, especially since it relates demand to supply over a large part of the total economic area. It marks a great improvement over the discussions of inflation in World War I when merely the relationship between the supply of money and the supply of goods was considered. In current discussions we relate inflation to the income levels and the proportions of income that are spent, and in taking into account these variables, we discuss the in-

[1] This problem is discussed fully in Ch. X of this book, and in Ch. XXIV of the companion volume, *Price and Related Controls.*

flationary gap. (Chart 2 reveals the large rise of income payments as well as the extent to which pressure on commodity markets was reduced through rises in taxes and savings.)

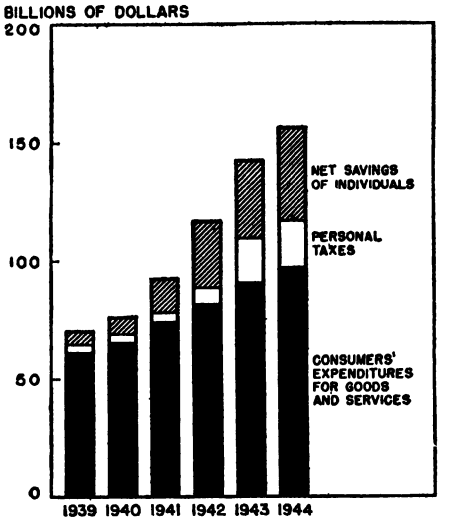

CHART 2.—Disposition of income payments, 1939–1944. (*Source: U. S. Department of Commerce.*)

5. INCOME

Although much spending will result from the accumulation of cash balances derived from past income, the amount of spending may be assumed to be a function of current income. We know that there have been very large rises of income in the present war. *These rises have been partly the result of higher prices; and the rise of incomes brings about further increases in prices.* Thus an increase in wages will bring about higher prices, both because wages are a cost and because the additional wages will in large part be spent on commodity markets; and these increases in prices, in turn, will further increase wages.

In our current war effort approximately two-thirds of the increase in income may be associated with a rise of output and one-third with higher prices. This generalization holds for both net national product and GNP. *The rise of about* 90 *per cent for both gross and net product (real) from* 1939 *to* 1944 *estimated by the Department of Commerce may be assumed to be somewhat high.*[1] It should be ob-

[1] U.S. Department of Commerce figures are discussed later in this chapter. The 1944 figures are obtained from *S.C.B.*, April and September, 1944, and February, 1945, and are corrected for price rises by the Department's deflator.

served, furthermore, that even if the rise of money income were limited to the rise of output, there would still be a considerable degree of inflationary pressure: for a proportionate expansion of money income equal to the proportionate rise of output is not an assurance against inflation in modern warfare, the explanation of this paradox being that all output is not made available to those who obtain income. A large proportion is diverted to war purposes.

That approximately 9 million new workers have been added to the labor market (inclusive of military) and that the armed services and the labor market have absorbed 8 million from the unemployed in no small part explain the large rise of income in the current war. Another relevant factor is, of course, the increase of productivity. *Here, however, we must distinguish the higher rewards in war industries from the higher output which these industries attain.* In the war industries not only are the factors of production probably less efficient than in nonwar industries but they also obtain a higher reward per unit of output or per hour of time. Wages are higher in these industries and profits are higher. We have noted elsewhere that there has been a rise of productivity in manufacturing, but this rise is not nearly so great as the increase in wage rates in these industries. In other words, the higher rewards reflect not only a rise of physical productivity but also a larger payment for a given kind of work. Basic wage rates may not, however, have risen more than the percentage rise of productivity and of prices.

The gains in income have been fairly widespread. As compared to 1939, income payments were up by more than 100 per cent by 1943 and 120 per cent by 1944. For 1944, the increase for wages and salaries over 1939 was in excess of 125 per cent, net income of farm operators rose around 175 per cent, and profits of corporations before taxes, in excess of 300 per cent.[1] And, perhaps more relevant at this point, profits after taxes were about 130 per cent above prewar levels. The rises varied within each category, however. Wages, for example, did not rise so much in nonmanufacturing as in manufacturing, payments to rentiers did not rise so much as payments to entrepreneurs, and so on.[2]

It is generally known that the rise of wage payments has been very large. It is not so generally known that the most important explanation of the rise of wages has been the increase in the number of man-hours

[1] *S.C.B.*, January, 1944, p. 17; September, 1944, p. 4. Senate Hearings, *To Continue the Commodity Credit Corporation* (December, 1943), p. 194.

[2] See Chs. XVIII–XXI.

of work. A second factor of some importance is the increased productivity which is associated with the movement of workers to higher paid jobs and, in particular, to the higher paying war industries. Moreover, as the War Labor Board (WLB) has pointed out, the increase of wage payments is explained not only by the factors already mentioned but also by other factors such as the increase of incentive pay, promotions and rise of overtime pay. It is the conclusion of the WLB that only a relatively small part of the total increase in wage payments is to be explained by an increase in the hourly *basic* wage rate. Furthermore, manufacturing wages, which are generally considered as the inflationary factor in the situation, are not typical of all wages. Nonmanufacturing wages are not so high as those in manufacturing and have not risen so much. A similar observation applies to salaries in both manufacturing and nonmanufacturing as compared with the payments to laborers. Despite the smaller number in manufacturing industries, wage inflation by 1943 was about 1½ times as great in these areas as in nonmanufacturing industries.[1]

Many will conjecture as to what might have been done if a more anti-inflationary policy had been pursued. *It is clear that with a rise of national output of* 70–90 *per cent it would have been impractical to keep the rise of income to less than* 75 *per cent above the prewar level.* In addition, an incentive had to be offered in order to attract workers into the labor market, to move them from nonessential to essential industries, and to induce them to work overtime. National income payments rose from $71 billion in 1939 to $157 billion in 1944. My conclusion is that the largest part of the increase could not have been averted. It is possible that perhaps one-quarter of the rise might have been prevented by the imposition of a very vigorous and resourceful income policy. But even these restraints would have met serious political obstacles. *It should furthermore be observed that if national income had risen only to, say,* $125 *billion instead of* $160 *billion, the anti-inflationary gains would not have been so great as they at first might seem. Large losses in tax receipts and in Treasury borrowings out of savings, and a possible reduction of output from attained levels are to be set against the gains in the fight against inflation resulting from lower incomes and demand.*

6. MONEY

It has been the function of the banking system in the present emergency to provide cash required to finance the rise of output and the

[1] See Chs. XIX–XX.

increase of the monetary income and also to purchase bonds which are not purchased by the public. Few have been disposed to criticize the bankers for the expansion of money and the inflationary threat which follows. In the present war, in contrast to World War I, money is accepted as a passive factor which will be provided in adequate amounts to establish the necessary level of output and of money income.

Through an increase of Federal Reserve credit of approximately $17 billion from the end of 1941 to the end of 1944 and through changes in reserve requirements and other inflationary measures, the Federal Reserve System was able to provide the country with large additional amounts of cash and the banking system with the reserves required to effectuate the necessary purchases. The additional cash made available in the largest open-market operations in the history of the system was almost equaled by the demand for cash to finance a rise of money in circulation of $14 billion in those three years. There have then been major movements in money in circulation and Federal Reserve Bank credit since 1941. In addition, we should note that a rise in required reserves of several billion dollars was offset by a reduction in excess reserves.

The most important task of the Federal Reserve banks has been to maintain an adequate demand for government securities and thus uphold the prices of securities and prevent a rise in the rate of interest. Insofar as taxation and sales of government bonds to nonbanking lenders could not finance the Treasury's needs, the banks provided additional cash for the purchase of government securities. The reduction in earning assets resulting from curtailment of nonessential industries was an offset.[1]

We have had, then, a considerable monetary inflation and a relatively moderate price inflation. The supply of money increased by more than 100 per cent—by money, I mean adjusted demand deposits and cash in circulation; at the same time wholesale prices rose only about one-third and the cost of living one-quarter. (This is subject to the reservations made in this chapter.)

[1] Commercial loans rose by $4.3 billion between mid-1940 and December, 1941. They then declined from their high level in 1941 by about $4 billion to a total of $22.2 billion in June, 1943. From the end of 1941 to June 30, 1943, loans to finance production of war goods rose, however, by almost $2 billion. By June 30, 1944, total loans outstanding were $3.2 billion above the June, 1943, level. *F.R.B.*, December, 1943, pp. 1143–1144; February, 1945, p. 150. Total loans declined by $3 billion from the end of 1941 to the end of 1943. *F.R.B.*, August, 1944, p. 786.

TABLE 3.—TOTAL ADJUSTED DEPOSITS AND CURRENCY OUTSIDE THE BANKS

	Billion Dollars
June 30, 1940	67.0
June 30, 1944	136.2
June 30, 1945	162.2

SOURCE: *F.R.B.*, August, 1945.

The large increase in the supply of money is, of course, a serious threat in the postwar world. *This type of war finance, in fact, may be criticized on the ground that the inflationary pressures of the present are reduced through their transfer to the future.* Future increases might, moreover, occur after Japan's defeat. Yet this is not at all clear: much depends on the rate of substitution for the reduced expenditures of the Treasury.

It has been the policy of the government to keep the rate of interest down through the creation of adequate supplies of money. The resulting dangers of inflation and the higher cost of war, either in the war period or in the postwar period, are to be set against the gains that result from a lower rate of interest on bonds.

The time may possibly come when it will pay the government to allow an increase in the rate of interest as a means of attracting more savings and cash, instead of stimulating the creation of new cash. It is largely a question of the adverse effect of more money on controls and prices as against the beneficial effects of a lower rate of interest. The manufacture of more money is a threat to the stability of the entire economy; the gains of lower interest rates are more nearly absorbed by the Treasury. *At least until late* 1945, *the policy of low rates seems amply justified: higher rates would probably not have attracted large additional savings and they would have depressed prices of outstanding securities, involved banks in temporary losses, and increased the cost of the war.* Against the expansion of money associated with current policies is also to be put the increase of borrowing and later expansion of money associated with higher costs of financing the public debt under a policy of higher rates.[1]

At this writing (fall of 1945) the official position seems to be that rates will be kept down at any cost. Banks also are more reconciled to cheap money than ever before. Should business and private interests indulge in large sales of securities after the war, the Reserve banks and the banks will have to absorb additional amounts. Business is, however, unusually liquid. Yet control by the Reserve banks will not

[1] *Cf.* Chs. XIII, XVI.

be easy. Banks are not indebted to the Reserve banks as after World War I.[1]

The rise in monetary supplies during the war period roughly corresponds to the monetary rise of national income. This monetary expansion has undoubtedly been one of the conditions for the growth of real income during this period. Monetary supplies in part have been absorbed in rising prices, and in part a rise in money has been a condition of increased output.

Relative rises of wholesale prices and GNP were as shown in Table 4. The percentage rise of GNP from 1939 to 1943 was three times that of wholesale prices in the same period, and from 1939 to 1944, four times.

TABLE 4.—RATIO OF PERCENTAGE RISE OF GROSS NATIONAL PRODUCT TO WHOLESALE PRICES

$\frac{1943}{1939}$	3 times
$\frac{1943}{1942}$	$5\frac{1}{2}$ times
$\frac{1944}{1939}$	4 times

SOURCE: Computed from materials in *S.C.B.*

These figures suggest a very successful program of monetary expansion: output in monetary terms rose four times as much as prices, though not so much as the supply of money (demand deposits adjusted and currency outside the banks). If, however, we use, not the Department of Commerce figures and Bureau of Labor Statistics (BLS) wholesale prices, but Dr. Kuznets' estimates of GNP and his deflator, GNP in the four years 1939–1943 rose only twice as much as wholesale prices.[2] By 1944, relative stability of production and prices is to be considered against continued rise (though at a slackening rate) of income payments and of monetary supplies and stock market prices. (Several of the variables are presented in Chart 3.) In general, most indices began to flatten out in 1943, though munitions and incomes continued substantial rises. By 1944, the upward movements in output were largely a matter of the past.

[1] F.R. Board, *Annual Report*, 1943, pp. 18–19. *Cf.* H. S. Ellis in *Economic Reconstruction* (edited by Seymour E. Harris), McGraw-Hill, 1945, pp. 241–243.

[2] See Chs. VII and VIII.

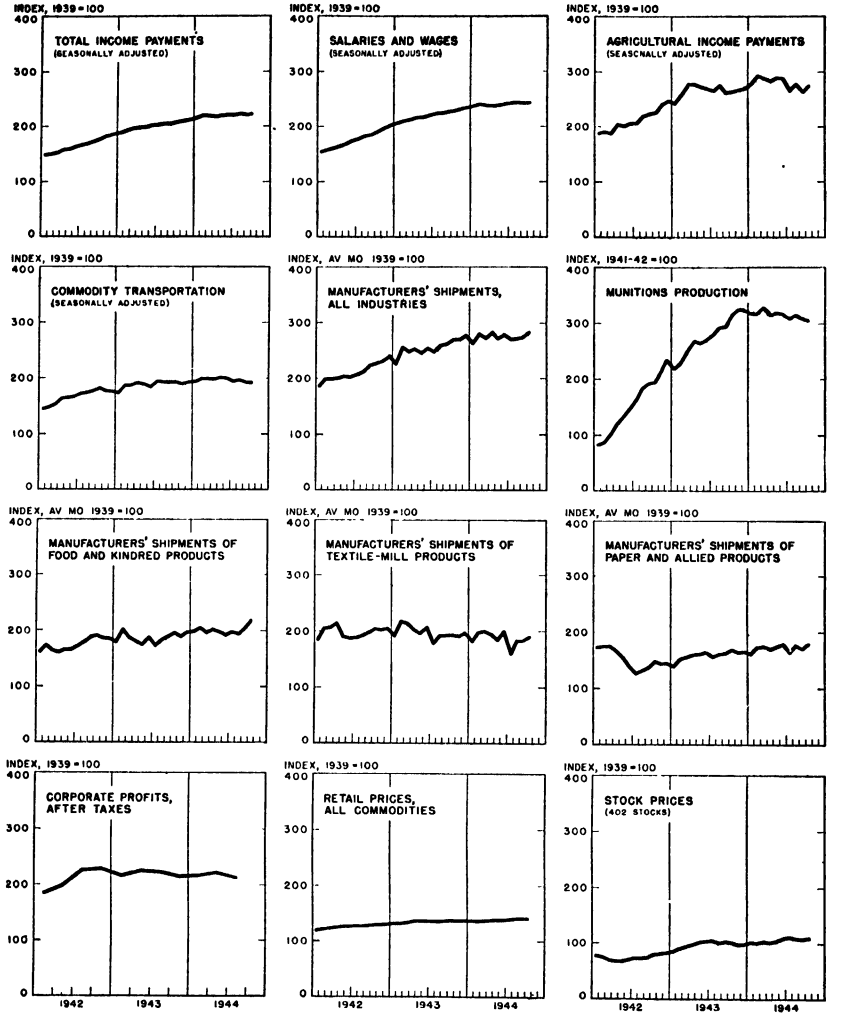

CHART 3.—Selected business indicators. (*Sources: U. S. Department of Commerce, except munitions production and stock prices which are from Facts for Industry, War Production Board, and Standard and Poor's Corporation, respectively.*)

7. FISCAL MEASURES AND SAVINGS

In view of the large incomes made available to the public and the limited supply of consumption goods, the great danger of inflation ought to be mitigated through large and vigorous fiscal measures. The problem is aptly illustrated by Chart 4, which gives the per capita civilian income payments, the cost of living, and the per capita con-

sumer expenditures for 1940–1944. *It will be observed that per capita civilian income payments rose much more than the cost of living and even more than per capita consumption expenditures.* Chart 4 shows an increase in expenditures per capita in excess of the cost of living, indicating to that extent an inflationary pressure resulting from the large income payments. This pressure undoubtedly brought about an increase in the cost of living. The difference between the rise in the cost of living and the per capita consumption expenditures indicates an improvement in the standard of living of the average American since 1940 and, perhaps in part, an understatement of the cost of living for *all* income recipients.

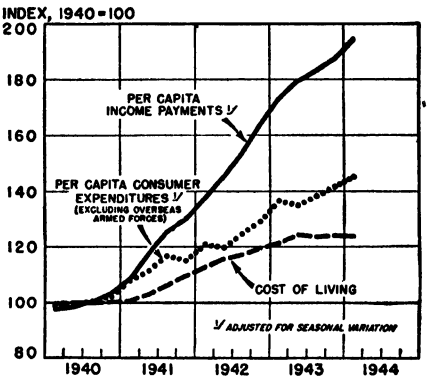

CHART 4.—Income payments, consumers' expenditures, and cost of living (percentage rise). (*Source: U. S. Department of Commerce.*)

This difference between the rise of expenditures and the cost of living may also be interpreted as a reflection of the inadequacy of our taxes and saving. Our tax program has been inadequate if compared with what might have been done, or if compared with the British program. Thus, in 1942–1943, total taxes as a percentage of national income were 24 per cent in the United States, 42 per cent in the United Kingdom, and 36 per cent in Canada.[1] We have not taken up a sufficient portion of our national income in taxation, and we have not financed an adequate portion of our total war expenditures by taxation. From 1940 to 1944 (fiscal years), the Canadian government raised more than one-half of its receipts by taxation, the British close to one-half, and this country around one-third.[2] One of the difficulties is the conflict of objectives. If we concentrate on the problem of anti-inflation, the correct tax program would require heavy taxes on low-income groups, especially on those who are disposed to consume a large part of their income. In that case, a dollar of tax revenue will cut consumption a maximum.

[1] R. A. Musgrave and H. L. Seligman, "The Wartime Effort in the United States, the United Kingdom and Canada," *F.R.B.*, January, 1944, p. 18. *Cf.* H.M. Stationery Office, *An Analysis of the Sources of War Finance and an Estimate of the National Income and Expenditure in the Years* 1938 *to* 1943, Cmd. 6520, p. 13. The ratio of tax liabilities for the United Kingdom to private income is given as 35 per cent in 1942 and 36 per cent in 1943. As we shall see, however, British and American ratios are not strictly comparable.

[2] *F.R.B.*, November, 1944, p. 1057.

If, however, we concentrate on the provision of a just program, we are more inclined to emphasize the gains made since the war began and are inclined especially to tax high incomes severely. This type of taxation (and, I emphasize, taxation of large incomes) does not yield so effective results in cutting consumption as it does in raising revenue. In formulating a judicious tax program we should take into account the principles of justice, the anti-inflationary aspects of taxation, and

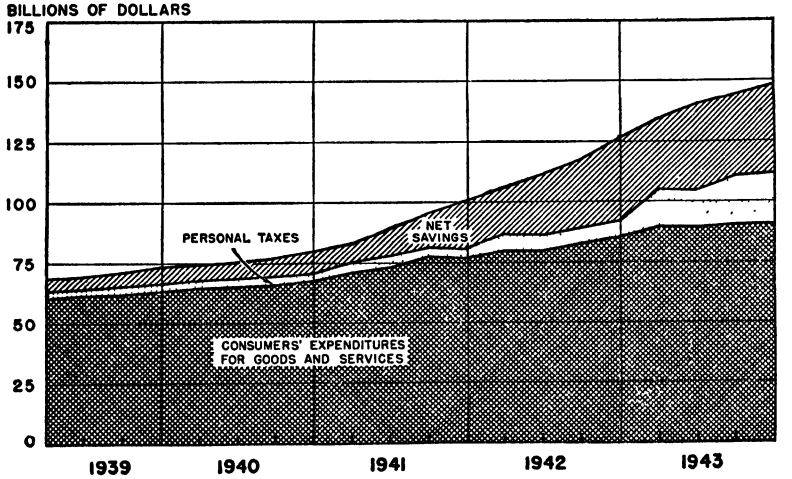

CHART 5.—Disposition of income payments to individuals, 1939-1943. (Adjusted for seasonal variation, at annual rate.) (*Source: U. S. Department of Commerce.*)

the objective of adequate revenue. The last is of course related to the anti-inflationary objective, but the Treasury is also anxious to keep the rise of the public debt down to a minimum.

On the whole our savings were larger than anticipated and the inflation would have been much greater but for this unanticipated rise of savings. In the chapter on borrowing (Chapter XVI) I make some estimates of the volume of savings available on the bases of various criteria. It is important that the amount of savings increase; thereby, as little burden as possible is placed on the banking system. Insofar as we can rely on additional savings, the net effect is anti-inflationary. It should not be forgotten, however, that to the extent to which business purchases bonds out of depreciation funds and the like and the public purchases bonds out of cash that they want to spend but are deterred from spending by the unavailability of specific types of goods

of desired quality and at reasonable prices, the inflationary pressure is transferred to the postwar period.

The general outlines of inflationary pressures are given in Chart 5 which shows that the relative rise of consumer expenditures was small as compared with the increase of income payments and especially with the rise of personal taxes and savings. Yet this increase of consumption of 50 per cent in money terms was too great.[1] The much larger rise in taxes, savings, and income is also revealed in Table 5.

TABLE 5.—PERSONAL TAXES, SAVINGS, INCOME PAYMENTS, AND CONSUMPTION, 1939–1944

	Billion dollars			Percentage rise	
	1939	1943	1944	1939–1943	1939–1944
Personal taxes and non-tax payments	3.1	18.5	19.3	496.8	522.6
Net savings of individuals	6.0	33.7	39.9	461.7	565.0
Income payments to individuals	70.8	143.1	156.8	102.1	121.5
Consumer expenditures	61.7	90.9	97.6	47.3	58.2

SOURCE: *S.C.B.*, April, 1944, and February, 1945.

8. PRICES AND INDEX NUMBERS

In most discussions of the history of prices in peacetime, we relied on indices of wholesale prices and the cost of living, issued by the BLS. In a war economy, however, the rise of prices of military goods is of some importance and, as has already been observed, these prices may not move parallel to wholesale prices and the cost of living.

It is also observed that the cost-of-living index is an inadequate measure of the rise of prices of consumption goods. This follows from the fact that the cost-of-living index measures the prices of goods purchased by low-income groups and not the prices of all consumption goods. An appropriate index of all consumption goods would give an increase of prices by the end of 1944 of 5 to 10 per cent more than the 25 per cent given by the BLS. (The British have had a similar experience.) Even for the budgets of low-income groups some criticism may be made of the BLS index number as an accurate indication of

[1] *S.C.B.*, January, 1944, p. 17; *F.R.B.*, January, 1944, p. 1. *Cf.* House Hearings, *Revenue Revision of* 1943, pp. 31–35, before the Committee on Ways and Means. By 1944, the rise of consumption *expenditures* was 58 per cent.

the rise of prices, because, for one thing, it fails to allow adequately for the disappearance of low-end products and for the deterioration of products, and to cover fully black-market sales. An accurate measure of price changes in a period of hectic changes is almost impossible of achievement.

One fundamental theoretical difficulty is not easily solved: Do we know what we want to measure? Are we interested in comparing prices of goods and quantities in the war with those which were obtainable in the prewar period? It has generally been assumed that the pricing of prewar consumers' budgets would reveal larger rises of prices than the pricing of their obtainable wartime goods. Yet a check by the British reveals that little difference is made if the index is calculated on the basis of commodities purchased in 1938 or 1942.[1] An index number based on prewar weights would serve only a theoretical purpose since commodities obtainable in the prewar period are now frequently either entirely unobtainable or unobtainable in the same quantities. An alternative is to adjust the consumer's budget according to his changing pattern of consumption. In that case, prices might be found to be less than they were if based on prewar consumption. Other alternatives are a budget based on the minimum nutritional standard or on what Lord Keynes has called the "iron ration." Such an index number would also give lower figures than one based on prewar or current budgets of consumption.

9. CONTROLS[2]

Various controls are necessary in the fight against inflation because the general excess of purchasing power is not successfully removed through measures discussed above and, moreover, specific pressures in particular markets will prevail where, as a result of the war, demand rises excessively or supply is reduced. No country as yet has been able to wage a major war without the use of price and related controls.

Price control aims to maintain the value of the dollar in given markets. The objective is to set prices at a level *generally* lower than that which would have prevailed through the operation of the laws of supply and demand. It is held that a rise of prices when employment is at a high level will do little good except further to increase incomes and demand. It will not stimulate a rise of supplies adequate to offset the

[1] H.M. Stationery Office, *An Analysis of War Finance . . .* , Cmd. 6438, pp. 5-6.

[2] For further discussion, see my volume *Price and Related Controls.*

adverse effects of rising prices. Large rises of prices are denied to suppliers on the ground that all are employed, or that in particular areas supply is inelastic—and, therefore, factors cannot be drawn from other areas—or that it would be undesirable to increase output at the expense of other industries or sections.

Other controls, too, are very useful. Rationing helps to keep demand down, and allocations, priorities, and the like also tend to reduce demand and, therefore, to bring about a lower price structure than would otherwise prevail. These controls which keep down demand should not, however, be accepted as an alternative to price control. *Experience shows that, although much help can be obtained through the use of these supplementary controls, dispensing with price control will bring about a serious rise of prices despite the control of demand.* This follows in part because in the absence of price control the large excesses of purchasing power are felt on commodity markets and they are likely to make rationing less effective than it otherwise would be. Nevertheless, we may conclude that these controls of demand facilitate the job of the price administrator. In fact, price control has had its greatest success in markets where the government has been able to control demand.

Other controls that may be of some use, although they have not been applied with the maximum degree of effectiveness or comprehensiveness, are simplification and standardization. They aim to simplify production, reduce the number of models, colors, or grades, and concentrate production in a limited number of plants when output of civilian goods is greatly reduced. These are aids to price control which make possible lower costs through savings on overhead, use of materials, inventories, and the like. In fact, any measures which tend to reduce cost or to increase supply are of inestimable value to the price administrator, for they enable him to maintain prices at a lower level than would otherwise be possible, because the span between controlled prices and free-market prices is reduced, thus increasing the possibility of enforcement.

A fundamental principle of price control is to limit a rise of prices to the minimum necessary to obtain additional supplies of essential commodities. Above all, the price administrator should not allow a rise of marginal costs or of the incremental units of the low-cost producers to determine prices. Through the use of various techniques, *e.g.*, differential pricing, averaging of prices, and subsidies, the price administrator may prevent an increase of cost for high-cost but essential units from becoming an occasion for a rise of prices for all units.

One of the puzzling aspects of price control is its failure to prevent a very large rise of profits.[1] Over a period of about four or five years profits of corporations before taxes have risen from about $5 to $23 billion.

Many reasons may be adduced to explain the large rise of profits. First, the control of prices in important areas, such as military commodities, is not a success. Military authorities have been disposed to emphasize supply more than prices, and it is not surprising, therefore, that large profits have been made despite the fact that the military negotiators have been able to tailor their contracts to the individual costs and requirements of each contractor.

Second, there have been large rises of output in certain war industries in which it has been very difficult to reduce prices. In fact, it is often argued that it is the job of the price administrator to prevent inflation, not to reduce prices below their prewar level. It is certainly much more difficult to lower prices than to prevent prices from rising. War contractors have frequently profited from large economies resulting from an expansion in the volume of output, but they have not always passed these savings on to consumers and the government. This is not, however, the whole explanation. Many firms have been able to increase their profits despite the absence of any material rise of output and, what is more important, many of the business units with higher profits have been favored by rising prices and deterioration of quality. It is no secret that in the food, textile, and distributing trades, for example, profits increased by a very large percentage. In many cases the explanation for the inordinate rise of profits is economies of overhead, of selling, and of administration costs; yet, despite these economies, prices have continued to rise. The seller can frequently point to the increase in wage rates and raw-materials costs, but it is very difficult to allow for his savings on selling and overhead costs.

Third, and this is connected with the preceding point, usable techniques of control are not always easy to enforce. The Office of Price Administration (OPA) has had to rely on formula pricing, freezes, and only to a limited degree on dollar-and-cents pricing. These techniques of formula and freeze pricing are complicated, frequently difficult of enforcement, and give the supplier a considerable amount of discretion in setting his prices. It is not easy to prevent prices from rising under this type of price regulation.

Fourth, it is necessary to take into account the fact that the OPA may take profits into consideration only when a price regulation is not "generally fair and equitable"; also, the OPA must consider other objectives of a war economy, *e.g.*, the problem of obtaining adequate supplies. This is particularly important for industries or firms that were unprofitable in the prewar period. Where firms or even industries, such as coal and certain textiles, provide essential supplies which might not be forthcoming with profits at the 1936–1939 level—the yardstick for the "generally fair and equitable" clause—then higher prices and profits must be allowed. Especially where a price differential is not practical or subsidies cannot be used, prices have

[1] This problem is discussed fully in my volume, *Price and Related Controls*, Ch. IV.

to be set high enough to assure the continued operation of high-cost producers. Low-cost producers, then, are certain of high profits.

In short, the failure of profits to be stabilized or to rise only moderately may be explained in part by lack of jurisdiction of the OPA, in part by the large savings of overhead costs, and in part by the difficulties of introducing price techniques which would make it possible to pass savings along to the ultimate purchasers. It is hardly necessary to add that the influence of special groups on Congress has had a significant effect in preventing the reduction of prices and the moderation of their rise.

Finally, we should note that price control is not likely to be successful unless it is part of a general program of stabilization. If our fiscal policy and our wage and profit policies lack in consistency and vigor, to that extent the policy of price control is jeopardized. In fact, many might be critical of the OPA for its attempt to freeze all prices when it did not have absolute assurance that all costs would be stabilized, or that it would receive the help of a vigorous subsidy program.[1] All unexpected and unavoidable rises of costs might be absorbed through the payment of subsidies. In the absence of a real stabilization program, the only hope would have been for a moderate price-control program allowing increases wherever it could be shown that profits were jeopardized or that rises of costs which were inescapable could not be absorbed by the seller.

The freeze technique puts pressure on many sellers to reduce costs or absorb them out of profits. It had a moderate success in this respect, but undoubtedly, in the absence of adequate stabilization measures, the burden of rising costs was too heavy for the system to absorb them. Under these circumstances price control does not function too well, despite the unparalleled rises in profits for business enterprise in general. Unfair squeezes on a small minority of entrepreneurs who are required to absorb large increases in costs relative to their profits may be accompanied by large and increasing profits of the vast majority. Yet the outcries of the former will jeopardize controls.

We cannot here discuss the various techniques of price control nor the many problems raised.[2] One other problem of price control

[1] *Cf.* C. O. Hardy, *Wartime Control of Prices*, Ch. VI, Brookings, 1940. Dr. Hardy warns against a general price ceiling.

[2] My companion volume on *Price and Related Controls* deals with the following problems: (1) general aspects of price control in relation to equity, costs, supplies, and profits; (2) techniques: freeze, formula, dollar-and-cents regulations, differential pricing; (3) case studies: rent, clothing, and others; (4) special problems: export and import price control, regional problems, subsidies, government pricing; (5) related controls: rationing, supplies, man power, exports, imports, simplification, concentration, wages, salaries, and consumer credit; (6) the future of controls.

should, however, be discussed briefly. Selective price control inevitably leads to more comprehensive programs. Scarcities in particular markets, which are the occasion for controls, are, through the process of substitution, gradually felt in more and more markets. Purchasing power shunted off controlled markets finds its way to relatively free markets, and pressures increase in these markets. As the area of free markets is reduced, the pressure on these markets increases in intensity. Once controls for essential goods are well-nigh universal, the excess of purchasing power is diverted to savings, and to the luxury and other markets where controls are not imposed or are not enforced. How else can one explain a rise of consumption expenditures of 130 per cent ($3.5 billion in 1939 and $8 billion in 1943) for eating and drinking establishments or a rise of 91 per cent for apparel shops? The average rise for all retail stores was less than 50 per cent.[1]

10. SUMMARY

The main outlines of the inflationary factors are given in Chart 6.[2] Compared to the proportionate rise of money and income, the rise of prices (not shown in this chart) has been moderate indeed. Consumer expenditures, it will be noted, rose but half as rapidly as national income; and prices but half as much as consumer expenditures. Both the large rise of taxes and the unexpected growth of savings have contributed to the moderation in the rise of consumer expenditures. At the peak of the war effort Federal taxes were running at the rate of $45 billion annually or nine times the prewar level. Net savings of individuals attained $33 billion in 1943 and $39 billion in 1944; the figure for 1939 was $6 billion.

These are indeed anti-inflationary factors. They reduce the demand for consumption goods. Other factors also aid in curtailing demand for scarce factors and goods: rationing, priorities, allocations, restrictions on consumer credit, limitation orders which force nonessential industries to curtail output, and conservation orders, which save materials.

Supplies are, of course, a relevant consideration. Gains in productivity, rises in man-hours of work, increases of imports or curtailment of exports, conservation of materials—all of these tend to make more

[1] *S.C.B.*, January, 1944, p. 8.

[2] Chart 6 is on a ratio scale: equal vertical heights represent equal *proportionate* rises; all variables but war expenditures relate to the left-hand scale.

goods available. Yet one must distinguish the increase of war goods from that of civilian goods and services. Production of both yields income; but when income is earned in the production of war goods, demand for consumption goods is created without the provision of a corresponding supply of consumption goods. It is especially this excess

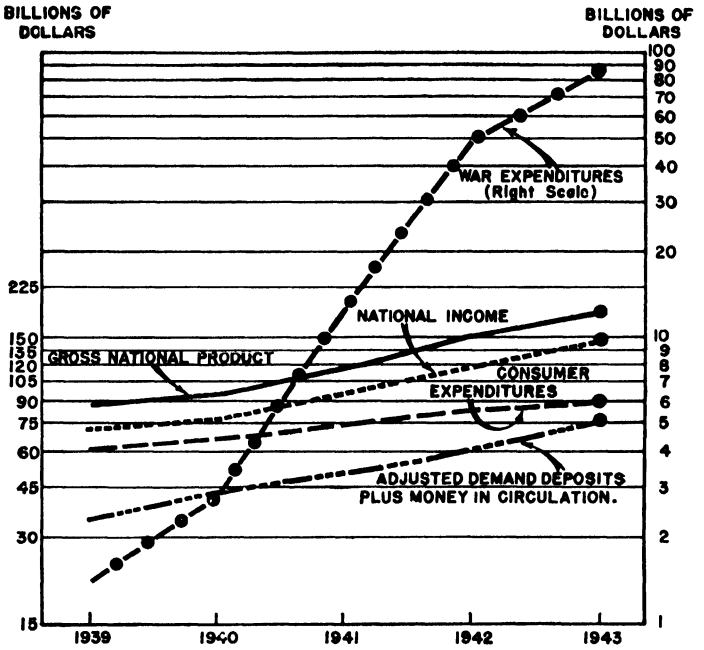

CHART 6.—Rise in national income, gross national product, war and consumer expenditures, and money, 1939 1943. (*Sources: Board of Governors of the Federal Reserve System, and Department of Commerce.*)

of income and potential spending over the supply of consumption goods made available that is a threat to price stability.

Despite the large improvement in tax yields and savings, the excess of income over supplies made available at base period prices remains a threat to price stability. Controls which operate through demand correct the situation only in part. Here, then, is the decisive reason for price control. Demand is too large at reasonable or prewar prices. The government, therefore, establishes prices below those which would prevail in a free market. Excess money is thus sterilized; and the pressure on commodity markets can further be treated through rationing and similar techniques. This does not mean that price control unaided

can do the job of curbing inflation. The larger the excess of disposable income over goods available at controlled prices, the greater the danger of evasions of both price and rationing measures. The more that is taken through taxation and the sales of securities, the less the danger that controls will break down.

Thus, from this brief discussion of price control, we see its relevance to the subject of inflation. Price-control measures are anti-inflationary. The better the price-control regulations are formulated, administered, and complied with, the stronger the guards against inflation.

A NOTE ON ESTIMATES OF GROSS NATIONAL PRODUCT (1939 DOLLARS) BY THE DEPARTMENT OF COMMERCE AND DR. KUZNETS

One of the most perplexing problems confronting the student of war and postwar economics is the extent of the rise in output and income since 1939. Since we come back to this problem again and again, I attempt in this note in the first chapter to indicate the nature of the problem. No completely satisfactory theoretical solution is possible. On the one hand, we have the approach of the Department of Commerce which tends to yield a marked expansion and, on the other, the Kuznets approach which yields less favorable results.

In a recent study for the National Bureau of Economic Research, Dr. Kuznets concluded—on what seemed to him the most reasonable assumptions concerning relative efficiency in war production—that by the middle of 1943 the rise of GNP *in* 1939 *prices* was 47.3 per cent. The rise according to the Department of Commerce was 74.5 per cent, and 85.7 per cent for a GNP adjusted to Dr. Kuznets' concept.[1] These and additional variables are presented in Chart 7.

These differences of estimates are serious indeed for, if Dr. Kuznets' figures are correct, then the rise of output in war has been only two-thirds as large as the official figures would seem to indicate. If this is so, the optimism of many concerning our postwar potential, as based on our wartime experience, is misplaced.

I shall not go into this controversy in detail. The reader is referred again to the symposium in the *Review of Economic Statistics*, August, 1944.

We measure GNP, *i.e.*, the flow of consumption and capital goods and services both private and public, in dollar terms. Dollar prices

[1] *Op. cit.*, p. 24.

have risen in the course of war. A comparison of real output, *i.e.*, in terms of goods and services, prewar and war, requires, then, a correction for the rise of prices.

The difference in results obtained by the Department of Commerce on the one hand and Dr. Kuznets on the other is explained for the most part by the larger rise of prices revealed by the Kuznets approach.

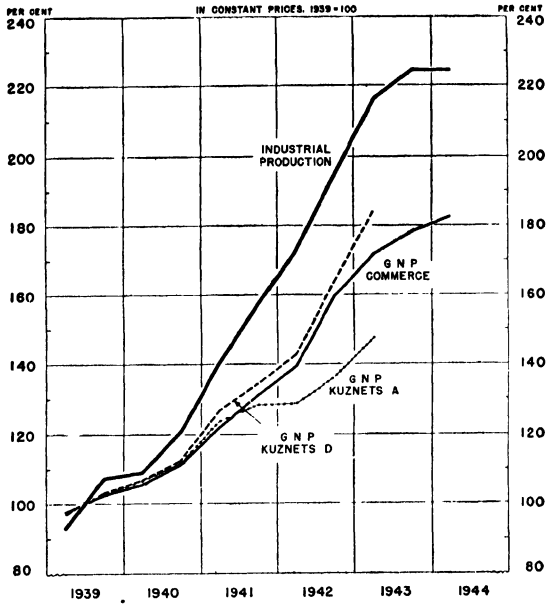

CHART 7.—Indices of gross national product and industrial production. (*Source: Board of Governors of the Federal Reserve System.*)

Dr. Kuznets arrives at a much larger deflator than the Department of Commerce, mainly because his theoretical approach is different. The problem is how to compare the output of civilian products in 1939 with that of civilian and war output in 1943. How do we add autos and tanks, houses and barracks, cocoa and poison gas?

Dollar figures are of course unsatisfactory. The most important departure made here by Dr. Kuznets is his attempt to allow for the greater inefficiency in war than in nonwar output and the greater importance of nonwar than war industries in 1939 than in 1943. Allowing for the high prices paid for factors of production by war industries and their inefficient use, he concludes that their price indices in 1943 were 182. (This is based on what seems to him the

most reasonable assumptions of relative efficiency in war to nonwar industries: 50 per cent in 1939 and 82 per cent in 1943.) This does not mean that price indices of war products are up by 82 per cent. In fact, even in 1939 they were priced at 163.[1] In this manner, he attempts to make prewar and war series comparable: He makes a tank comparable with an automobile by allowing for the greater inefficiency of war output (prices in 1939 = 163) than of nonwar output. This is a courageous effort to solve a problem which has defied solution for many years; in doing so, Dr. Kuznets obtained results strongly at variance with official figures. The differences are also explained by other factors, but this is the most important.

A price index of 182 for war output necessarily tends to raise prices for GNP above the official level. Dr. Kuznets thus obtains a price rise for *total* output from 1939 to the first half of 1943 of 50 per cent (his favored assumption of relative efficiencies), whereas the rise given by the Department of Commerce is 17 per cent; and his price rise for war outlay, *disregarding relative inefficiency in war production*, is but 9 per cent.[2]

I shall not discuss Dr. Kuznets' estimates fully since they have been discussed elsewhere. He seems somewhat pessimistic. If one allows for the degree to which large-scale business enterprise has concentrated on war orders and, therefore, the large savings made in war orders through economies of overhead costs, the special access to raw materials, reduction of sales expenditures and the like, and the attraction of the most effective labor, one may conclude that the efficiency of war labor has not been quite so low as Dr. Kuznets assumes. These are of course matters of judgment. One should also take into account the efficiency of nonmanufacturing industries. Do war industries operate inefficiently relative to service industries, agriculture, and other nonmanufacturing output?

The crucial issue is whether we can devise an index number which will satisfactorily compare output in war with output in peace. The Department of Commerce is content to rely on dollar figures adjusted by a modest deflator. Dr. Kuznets attempts, although without complete success, to make adjustments which will make war and prewar output comparable.

As this book was to go to press, Dr. Kuznets' preliminary edition of *National Product in Wartime* appeared. In this excellent study he

[1] *Op. cit.*, p. 19.
[2] *Ibid.*, p. 19.

further elaborates on the position taken in the earlier study and carries it through 1943. In general he adheres to the conclusions drawn in the earlier study. Some of his more important results are given in Table 6.

TABLE 6.—PRICES AND OUTPUT, 1943
(1939 = 100)

a. Price Rises

	Final product and resource price indices for	Price indices for resources embodied in	Final product price indices
1. Flow of goods to consumers	134	140	134
2. Nonwar construction and equipment	123	129	123
3. War outlay, gross	160 *	162	182-126 †
4. Wholesale prices, BLS	134		
5. Cost of living, BLS	124		
6. GNP	...	149	152-130 †
7. Net national product	...	153	

b. Output Rises

The percentage rise of 1939-43:

1. Net national product,
   a. In resource prices = 51.4
   b. Disregarding relative efficiency in war production = 90.7
2. GNP,
   As in 1*a* = 50.4
   As in 1*b* = 86.1
3. GNP, Department of Commerce = +75.3
   GNP, Department of Commerce, adjusted to Dr. Kuznets' concept = +87.2

SOURCE: S. Kuznets, *National Product in Wartime*, prelim. ed., 1944, pp. II-16 to II-33.
* Primarily resource prices.
† Prices are higher according as lower relative efficiency is assumed in war industries.

Part I

INTRODUCTORY CONSIDERATIONS

So far, a few of the problems to be treated in this volume have been adumbrated. Next, before the heart of the discussion, come three chapters (1) on further elements of the problem, (2) a historical sketch of inflation, and (3) on the possibilities of a great inflation in the United States. There is not much for the expert in inflation in these three chapters, being, as they are, at a more elementary level than the remainder of the book. The average reader should profit from them, however.

Chapter II

Our Problems

1. INFLATION IS THE NO. 1 PROBLEM

Inflation has been *the* economic problem of our war economy and is an important problem for the postwar economy. Few other economic problems transcend it in importance, in the range of issues raised, or in the degree to which it touches the lives of 130 million Americans,

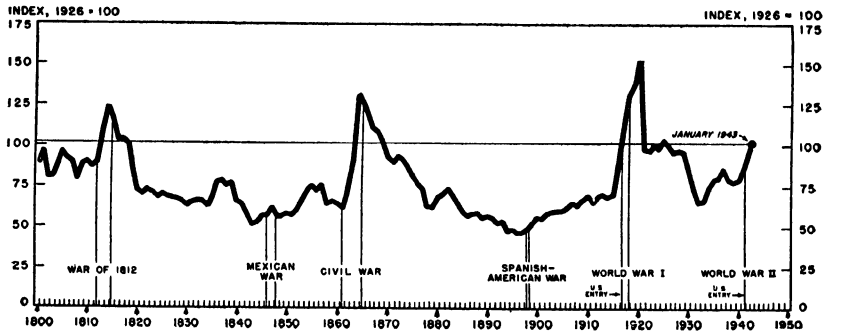

CHART 8.—Wholesale prices, all commodities, 1800–1942. (*Source: U. S. Department of Commerce.*)

or, for that matter, the lives of people everywhere. It is understandable why the inflationary process was intimately associated with the success of the French Revolution, with the chaotic economic conditions of the American Revolution, with the German economic collapse after World War I, with the disappearance of the middle classes and the rise of Nazism in Germany, with the disillusionment of the powerful fixed-income groups in prewar France, and, finally, why it is associated with the economic chaos in present-day Greece and China.

Inflation has plagued us in other war and postwar periods, as is evident in Chart 8.

Maximum production and optimum distribution of consumption goods are the goals of our economic system, and inflation is to be feared and fought because in the long run it reduces output and, in both the short and the long run, it brings about an unfair distribution of goods. Much can be said against inflation on pecuniary grounds in peacetime; in wartime, when goods are scarce and great sacrifices are being asked of a country's fighting forces, nothing short of an equitable distribution of supplies available to the civilian population will be accepted. None should be allowed to obtain more than his fair share.

2. INFLATION AND PRODUCTION

In normal times a rise of prices induces an expansion of total output, and factors of production are redistributed in response to relative price movements which reflect the desires of final consumers. Where demand is insistent, prices rise and the entrepreneur adjusts his output accordingly. In wartime, however, once employment has reached a high level, the immediate favorable effects on output of higher prices may well be small, and these favorable effects will be more than offset by long-run adverse effects on output and by unfortunate effects on the distribution of goods. As we shall see, uncontrolled prices may well result in the movement of labor and capital to industries which can be dispensed with in wartime. And there is a further reason why, in times of war, the government should not rely on price movements alone to obtain the optimum allocation of resources: the response to rising prices at best is slow and unpredictable.

A system of allocations and priorities is put at the disposal of the government in wartime, and by applying it the government can determine with precision the distribution of raw materials, other capital resources, transportation facilities, and other factors, and thus in turn greatly influence the distribution of all economic factors. Only when the government is confronted with administrative difficulties, or for some other reason is fearful of the use of its great powers of allocation, is there a case (to be made out) for reliance on price movements. For example, the government might have required the packing houses to use bones in certain proportions for food, gelatin, chemicals, etc., in accordance with war requirements; but it suggests the use of the price mechanism to bring about the desired changes. Even here reliance is had on price changes imposed by the government, not on fluctuations

under a free economy. In short, the province of price movements is severely restricted in wartime. In some instances, a rise of prices may be helpful, but as a general rule much more harm than good will be done by permitting an uncontrolled increase in prices. That rises of prices are necessary to some extent has been argued in Chapter I and need not be repeated here.

In response to higher prices, then, labor, capital, and raw materials are shifted. Allow the price of taxi fares to rise and more workers will become taxi drivers, even though in wartime it is preferable that workers move into munition industries rather than into luxury trades. Society can set up certain social objectives in both wartime and peacetime. It may ask for a war output equal to two-thirds of national output; or, in the postwar period, for expenditures on housing, schooling, and other social services of one-fifth of national income. Under abnormal war or immediate postwar conditions, freedom in commodity markets will be accompanied by price disturbances, and these in turn will induce a distribution of labor and capital which will interfere with the attainment of these objectives. Another example of how free prices could work is the following: Suppose that in a war year excessive numbers of people are tempted to operate in black markets, work for theaters, night clubs, and so forth, or trap animals for their skins. Most, if not all, of these workers could be used more effectively in the war effort. They will, however, not be so used so long as prices are allowed to rise spectacularly in these trades and so long as complete allocation of economic resources difficult of attainment in a "democratic" society is unachieved. The optimum output can be obtained, then, by a thoroughgoing allocation of man power, capital, management, and raw materials. Price control and inflation control alone will not bring about the best possible distribution; but they will at least prevent maldistribution of labor and capital resulting from inflation.[1]

Let us summarize and clarify on this point. First, the province of price rises is limited in a full-employment economy: where additional resources are not available, the price bribe cannot bring them out. Second, care must be exercised not to stimulate output of nonessential goods at the expense of essentials. This amounts to saying that the argument for price control is stronger for nonessentials than for essentials; and it is an argument for general price control. Third, if

[1] Where the price bribe is eliminated, optimum allocation of economic resources may be jeopardized in the absence of control of factors of production. Thus wage rates had been frozen; but the WMC lacked full authority to move labor.

exemptions or looseness of control is to be tolerated, the favors should be shown to producers of essential goods. Our logic carries us too far, however. We must keep in mind also the harmful effects of rising prices for essential goods. On this score controls are to be pushed in essential areas.

Total production and supplies are affected adversely by the inflationary process. Not only does uncertainty of future prices discourage enterprise, but excessive inventories pile up. Wholesalers, retailers, and consumers all try to increase their hoards. Hoards beyond a minimum necessary level are wasteful. Yet, once the imminence of further price rises is sensed, the propensity to hoard inventories rises; the propensity to hoard money declines—the longer one waits, the less goods a dollar will buy. Sellers, therefore, withhold supplies awaiting further price rises while buyers, fearful of further increases, seek to purchase quietly and excessively. Inevitably, prices climb upward.

As a result of the ensuing detrimental changes in the business structure (inclusive of the loss of working capital) which accompany advancing prices, and as a result of the deterioration of morale then suffered by many groups, production falls rapidly in the later stages of inflation. To illustrate: When prices rise precipitously and distribution becomes haphazard, business entrepreneurs are inclined to by-pass their suppliers. They take over production of their raw materials and gradually extend operations; *e.g.*, from the mining of coal or bauxite to the manufacture of kitchen utensils. This vertical integration had not proved efficient or necessary under stable conditions; but now it becomes a *sine qua non*, not for producing more goods but to assure each business unit access to its share of a dwindling supply. Thus an inefficient system is introduced in order to assure supplies. Once inflation ends, business leaders reestablish the normal structure of industry; but in the meanwhile, much capital will have been wasted. That was Germany's experience in the twenties.

Many other phases of the adverse effects on output might be discussed. Who has not been impressed by the wasteful practices of businessmen when prices and dollar receipts rise? The businessman thinks in terms of dollars. He will pay large bonuses, increase salaries, and tolerate inefficient practices when his prices and dollar profits rise. In estimating the dollar value of his plant or of his profits, he fails to correct for the rise of prices. It is symptomatic that, despite their strong interest in estimating their net profits at a low figure, businessmen do not comment on the value of their profits in terms of a stable currency. They harp upon the problem of profits after taxes vs. profits before taxes; but they do not point out that each dollar of profits in 1944 is equal to only 75 cents in 1940 dollars. In other words, their profits seem to them larger than they really are, with the result that they indulge in wasteful practices. German businessmen in 1920 also boasted of their vast dollar profits; but by 1922 and 1923 they began to realize that their plants yielded little in goods or in marks of 1914 value and that, irrespective of the paper-mark income, their plants were worth little when they yielded a pathetically small *net* output in terms of real value, *i.e.*, in goods.

3. ABSOLUTE AND RELATIVE SCARCITIES

In wartime serious deficiencies of essential commodities develop as the result of war demands and dislocations associated with war. These shortages are of two types: First, there are instances where supplies available are inadequate on prewar consumption standards. Second, the supplies of most commodities are inadequate in the face of the unusual demand. The explanation of this scarcity is simply that when incomes rise greatly, while the supply of goods made available to the civilian economy is reduced or does not increase, demand will greatly exceed supply at prewar prices.

Shortages are relative to the demand at the high levels of present-day incomes. If incomes were as low as in 1939, there would be relatively few shortages. In 1943 and 1944 consumption of foodstuffs seemed to be above the level of the late thirties although shipping shortages and unavailability of foreign sources of supplies accounted for some absolute shortages.[1]

I can do no better than quote from the *Report on the U.S. Wartime Food Situation* issued by the Office of War Information (OWI) on Apr. 15, 1943, to indicate the nature of the problems confronting the government:

"In 1941 and 1942, the needs of our fighting men and our fighting allies were somewhat smaller than the increase in total production. Military and Lend-Lease food requirements took 4 per cent of the 1941 output; 12 per cent of the 1942 output; will take 25 per cent in 1943. Civilians in 1941 and 1942 were able to eat better than they had in the past 30 years. They were supplied with more food per capita than in the most prosperous year of the 1920's or the most depressed year of the 1930's. But in 1941 and 1942 more of them had the money to buy the food they wanted than had the money in the most prosperous year of the 1920's; incomparably more than in the most depressed year of the 1930's. The result was that even though the civilian supply per capita was the largest in three decades, by the end of 1942 there was not nearly enough of many food items to satisfy the rip-roaring demand, and 'shortages' developed.

"It is most essential to realize the unprecedented size of this civilian demand; and to realize that it is the most important factor in many of the wartime food 'shortages.' It would easily absorb all the food being diverted to military purposes. The extent of the demand may be better realized from estimates that in 1943 Americans will demand about 40 pounds more of meat per capita than probably will be available; about 9 pounds more of fats and oils, including butter; of all dairy products, about 85 pounds.

[1] WFA, *Food Program for* 1944, p. 34.

"Thus, despite the fact that the food supply will approximate that of the pre-war years, civilians may feel that the shortage is more severe than it really is. Those who have been able to buy all they wanted will no longer be able to do so. They will get enough, but they will feel shortages as compared with their regular habits of eating. These shortages will be felt largely by the well-to-do, who may find themselves troubled by not having as much as usual, and by the new demands of war workers and others with 'new money.' In 1941 and 1942, this latter group established new food habits with their additional money. They had not eaten as well in the prewar years, and now do not wish to return to a less comfortable standard.

"The situation for 1943 is that the total production, assuming average weather, will probably be at least 3 per cent greater and may be 8 or 10 per cent greater than in 1942. However, the needs of our armed forces operating on scores of different fronts over the globe, and of our fighting allies, gathering their energies for the decisive offensives of the war, will add up to one-quarter of the total supply. Remember that on the average, a soldier must be provided with about twice as much food as the average civilian. Three-quarters of the total supply will be reserved for civilians.

"Compared with 1942 and roughly estimated on the basis of prospective 1943 output, civilians this year will have about 11 per cent less meat; 27 per cent less canned and shell fish; 21 per cent less butter; 11 per cent less cheese; 15 per cent less canned milk; 51 per cent less canned fruits; from 3 per cent to 25 per cent less of various fresh vegetables; 27 per cent less canned vegetables; 6 per cent less dry beans; about 22 per cent less sugar; 21 per cent less rice; 29 per cent less coffee; 60 per cent less tea; 12 per cent less cocoa.

"Civilians will have about the same amount of fresh and frozen fish, eggs, turkeys, fluid milk and cream, lard and other cooking fats, fresh citrus fruits, canned fruit juices, dried fruits, tomatoes, potatoes and sweet potatoes, corn, oats, and barley for human consumption. Civilians will have 30 per cent more chicken; 57 per cent more margarine; 9 per cent more apples; 13 per cent more frozen fruits; 7 per cent more wheat; 13 per cent more rye.

"One reason for the hard impact of the general situation on civilians is that certain foods to which we are accustomed are definitely short in civilian markets. There are special reasons for some of the main food shortages. Coffee, sugar, bananas, cocoa, chocolate, vegetable oils, and a few other items we usually import are scarce partly because the enemy has taken over some producing areas and partly because ships can't be spared from more urgent tasks. Canned goods are scarce because tin and steel go into munitions and because tinned foods can be shipped and stored for fighting duty overseas. Supplies of meats, dairy products, and eggs will not be equal to demand in large part because our fighting forces and allies greatly need these high protein foods, especially those that can be shipped in concentrated form." [1]

[1] *Cf. Ibid.*, pp. 34–41. This compares 1944 with prewar and not, as above, with earlier war years.

War governments, therefore, face two extreme alternatives: First, they may allow the unusual demand to fall on markets inadequately provisioned. Prices will then rise greatly and supplies will be obtained by the highest bidders. This occurs under the inflationary process as happened in earlier wars when distribution was determined in no small part according to capacity to pay. A second alternative is for the government to take over complete control of distribution, allocating supplies according to need. Not even the Soviet Union has gone as far as this.

4. THE TASK OF PRICE CONTROL

A practical alternative is to keep prices down, thus giving low-income groups a chance to obtain a fair share of dwindling supplies. For example, rent control in Washington has enabled the government clerk earning $2,000 a year to compete for available housing on equal terms with the dollar-a-year government man who may earn $10,000 to $100,000 a year in private occupations. In the absence of such control and in view of the strong and insistent demand, the $50-a-month apartment would undoubtedly have skyrocketed to $100 or higher.

5. THE TASK OF RATIONING

Price orders alone will not solve the problem of distribution when there is excessive purchasing power. People earn income whether they produce war or civilian goods. They earned $160 billion at the peak of the war effort and yet there were less than $100 billion of goods available for purchases. Moreover, by 1944 they held more than $100 billion of deposits and cash, a substantial proportion of which they might spend. When demand is in excess of supply at existing prices, the government may fix prices at prewar levels or at a level based on current costs. Even if the government fixes prices at a fairly high level, large excesses of income remain. At prewar prices, the amount of goods and services available to consumers may be $70 billion; at current prices, $95 billion. The cost of a pound of steak may be 50 cents and the public, surfeited with cash, bids zealously for the limited supply of it. This excess of money available to buy steaks will result either in maldistribution or violations of price regulations. Favored customers, early shoppers, those who give large orders for noncontrolled items, those who do no war work and have plenty of time to shop—these groups will obtain the steaks. Another result is likely to be price viola-

tions. Those who have plenty of cash will offer higher prices, accept more waste with their steaks, or will buy nonrationed luxuries—all serving as a bribe to the seller who has command over distribution of scarce supplies. Numerous transactions will, therefore, take place at prices above the maximum, and price control will not work when available supplies of cash are too large in relation to the supplies of goods at controlled prices. Rationing is then a necessary supplementary measure but no cure-all. Under rationing each individual is allowed to purchase a designated amount, although there is no guarantee that the allotted supplies will be available to all.

6. THE TASK OF THE TREASURY

Nor will rationing and price control work unless a large part of the excess of purchasing power is removed. This excess, if not removed, will spill over into markets where supplies are not easily rationed and will offer strong temptations to those who can divert supplies from the regular channels of distribution. Thus meat that is not sold to licensed packers may be sold in black markets.

Severe taxation and large increases in savings are therefore required. The government will not be able to siphon off the entire excess through taxation and borrowing, but courageous policies may drain off (mop up) a large portion. In recent years the British and Canadians have succeeded in raising around 50 per cent of their expense through taxation alone. It was proposed by the British government that one-half of the public expenditures in 1944–1945 should be covered by taxes of £3 billion. In this country, the President's ambitious program for 1943–1944 called for a Federal tax program of almost one-half of

TABLE 7.—HYPOTHETICAL DISTRIBUTION OF NATIONAL INCOME, 1944

	Billion Dollars
1. National income *	170
2. Taxation all governments (exclusive of $20 billion as noted below) †	45
3. Public borrowing out of savings	35
4. Available for consumption	90
5. Goods available for consumption	90
Excess of purchasing power	0

* Includes $20 billion of tax payments of business to government which are not part of national income. *Cf. S.C.B.*, April, 1943, p. 17.

† Federal taxation would have been $55 billion if the President's recommendations had been followed in 1943. Total taxation would then be close to $65 billion and the appropriate figure here, $45 billion. Actually Federal receipts were estimated in 1944–1945 at $45 billion.

government expenditures, *i.e.*, one-third of national income. Had this tax program been accepted and had the public subscribed $35 billion to war loans out of savings, the excess purchasing power would have been absorbed, and price control and rationing would have had a reasonable chance of complete success. The outlines of the program are shown in Table 7.

7. EXCESS CASH

Three final points should be made. Observe that the government, on the basis of information available late in 1944, still seemed to be borrowing at the rate of approximately $20 billion annually from the banks. When the banks lend, they manufacture deposits. They give these deposits to the Treasury and receive securities in exchange. Government creditors receive cash when the Treasury spends these deposits. Twenty billion dollars of additional cash are thus made available each year. Once this money is allowed to be used freely, it becomes a threat to price stability both in war and postwar periods: currently the excess will be used in free (nonrationed) markets and in controlled markets. Whenever scarcities threaten or the fear of rising prices becomes general, it will jeopardize economic stability. This accumulation of money is a warning that the sterilization of cash through price control and rationing must be made effective.

8. RATIONING DOES NOT ASSURE EQUITABLE DISTRIBUTION

The second point is that rationing and price control do not *assure* equitable distribution: they are no more than a minimum guarantee. Since many cannot afford to buy rationed goods, governments have supplemented rationing with subsidies, by means of which prices of necessaries are reduced. The prices of bread, milk, eggs, and other basic foods are set at a figure below cost and, although minimum payments are made to producers and sellers whose output is essential, consumers are protected against price increases. Another possible step to improve distribution is to allow low-income groups to supplement their incomes through sales of their excess ration coupons and thus enable them to purchase nonrationed necessaries of life.

9. PRICE STABILITY AN UNMIXED BLESSING?

The third point is one that must be emphasized again and again: that deficiencies of supplies for civilian use are characteristic of a war

and an early postwar economy. Goods are not available in adequate quantities and no price system will yield in stable dollars $160 billion worth of commodities when the economy can provide only one-half as much. A short-sighted price policy will reduce the supplies available, while a sound policy will stimulate output and improve distribution. But there are limits beyond which monetary policy and controls will not improve output or increase available supplies. The American government may *conceivably* succeed in stabilizing prices at the level of 1943. (In 1944 the cost of living rose but 1 to 2 per cent.) Our $160 billion would then have a purchasing power of $160 billion in 1943 dollars. Yet there were but $95 billion of goods available. It was imperative, then, that not more than $95 billion should be spent by the civilian population; and in that case about two out of every five dollars would have no purchasing power, *currently*. Each dollar spent retains high purchasing power; but the average dollar has only three chances in five of being spent for current consumption. Out of five dollars, one would be saved; and one would be collected by the Treasury's agents. In addition, the Treasury collects dollars that do not become net income. An alternative would be a large rise of prices and expenditures of $160 billion, or better $140 billion (after personal taxation) on $90 billion of goods. Our government prefers stability in the value of current dollars, restrictions of spending to three out of every five dollars of income, and promises of goods plus interest in the postwar period for one out of every five dollars issued during the war. This plan is preferred because a fair distribution is assured and a larger supply of goods is made available under a stable price system than under an unstable one.

Chapter III

Inflation: A Historical Sketch

1. INTRODUCTION

An entire book could be written on the history of inflation. Space here allows only a very short discussion of a few instances and the treatment must necessarily be synoptic. Those interested will find references for further reading at the end of the chapter. Here it suffices to refer briefly to a few earlier inflations which may serve as a reminder that it can happen again, and in our own time. The fact that the current war effort is on a larger scale increases the dangers and makes all the more necessary the introduction of strong controls and vigorous fiscal programs based on the knowledge which we now have but which was denied to earlier periods of history. However, unless we are prepared to act with courage and audacity when necessary and to disavow selfish special interests, we shall be confronted with inflation and, even worse, with dangerous aftermaths in the postwar period which will inevitably bring economic upsets and political upheavals.[1]

2. THE RENAISSANCE PERIOD

I turn now to a catalogue of a few outstanding inflationary experiences. In the later Middle Ages and in the early modern period, kings increased the supply of money by raising the value of a pound of silver. They would announce that a pound of silver would herewith be worth, say, 10 marks rather than 8. Usually, the occasion for these revaluations of the precious metals—a process generally called "competitive debasement"—was a scarcity of money. At one time a pound sterling was a pound of metal, but as a result of successive debasements —*i.e.*, increases in the money value of a given weight of metal—the pound sterling has become much less than a pound weight of metal.

[1] This chapter remains substantially as it was written several years ago. It is of some historical interest. Again, I wish to remind economists that this and the next chapter are rather elementary.

These attempts by governments in the fourteenth, fifteenth, and sixteenth centuries to increase the monetary value of a given weight of metal were not exactly inflationary because the increased pound or thaler value frequently made it possible to substitute monetary transactions for barter. In this sense, the increase in the supply of money did not necessarily bring about higher prices but merely enabled one country to attract the necessary supply of metals by outbidding another—and to some extent increased the effective use of the precious metals for money. Tinkering with the currency in this manner often did as much good as harm.

3. THE FRENCH REVOLUTION

Let us turn to a more recent period. The French government in 1790 issued paper money—assignats [1]—because, with a very inflexible tax system, there was no alternative method available for financing the Revolution. According to many leaders of the Revolution, the assignat, which was an assignment on land appropriated from the churches and nobility, accomplished much: it financed fourteen victorious armies. In the earlier years of the Revolution, the assignat did not depreciate so much as might have been expected when one considers the numerous and large issues of this paper money. This was partly because the government through a reign of terror imposed the severest control of prices and a very restrictive control of the distribution of supplies. The penalty for violation was the guillotine and that proved an effective—if impermanent—deterrent. With the fall of the Robespierre government, the assignat began to depreciate seriously and by 1796 its value had declined to $\frac{1}{200}$ of its 1790 value. Prices, in other words, had risen 200 times.[2]

Despite the large issues of paper money—for the total supply of money had risen 20 times—there was much lamentation concerning the scarcity of money. It seemed to many that once the people experienced the stimulative effects of paper money they behaved like addicts who could not do without their drug. The more money was issued, the less there seemed to be. Actually, there was a scarcity of money. This becomes evident if one considers that at the high prices of 1796 the supply of money was only one-tenth of what it had been in 1790. Prices were 200

[1] *Cf.* my study of paper money in the French Revolution, *The Assignats*, Harvard University Press, 1930.

[2] *Ibid.*, pp. 121, 221.

times as high, the supply of money only 20 times as high. The explanation of this paradox is that once the public loses confidence in its money, it begins to spend it rapidly and prices rise faster than the supply of money. An increase in velocity only in part offsets the increase in money which is smaller than the increase in prices. People realize that the sooner they buy, the more goods their money will buy. Those who hold goods, however, are loath to dispense with them. Thus there is more money and there are fewer commodities. It is not necessary to discuss here the injustice done to labor, to creditors, *rentiers*, and others, or the hardship and economic maladjustments which France experienced for many years after the Revolution.[1]

4. MORE ADVANCED INFLATIONS

The world has experienced even greater inflations than the classic one of France. I need mention only the experience of the American colonies during the American Revolution and the Russian and German experiences of World War I and the years immediately following, and the Greek and Chinese experiences of World War II.

Advanced inflation appears when the government has to issue large amounts of paper money or when it has to borrow excessively from banks in order to pay its bills. Markets are not provisioned at all or very badly; competition for available supplies is intense; monetary supplies are disbursed upon receipt; and pressure is felt on foreign exchange markets as well as at home. Exchange depreciation reinforces the loss of value at home. Confronted with rising prices, governments are unable to adjust tax receipts to the rise of prices and rely more and more on inflationary methods of financing. Yet, though more is borrowed in each period, the cash received purchases less and less in goods.

5. TWENTIETH-CENTURY INFLATIONS

There is no indication that inflation has progressed or is likely to progress in the Americas as much as in Germany or Russia in World War I, or even in France during the Revolution. The supply situation was a great deal more serious in those countries than it is here today; besides, we have learned much about controls as a means of moderating price rises. We should not forget, however, that in those days total war was unknown and that the magnitude of the effort in the

[1] *Ibid., passim.*

United States is much greater today than in World War I. The need for controls, therefore, is also considerably greater; and without controls and an improved tax structure, prices would have risen substantially more than they have.

An adequate picture of extreme monetary change, as exemplified by the German inflation of 1923, is shown in Table 8.

TABLE 8.—GERMANY: MONEY, PRICES, AND EXCHANGES, END OF 1923

	Marks
1. Volume of circulation	100 trillion †
2. Prices of imported commodities *	1,577 milliard †
3. Internal prices *	1,125 milliard †
4. Cost of living *	1,200 milliard †
5. Dollar rate *	1 billion †

SOURCE: C. Bresciani-Turroni, *The Economics of Inflation*, Allen & Unwin, Ltd., 1937, pp. 36–37.
* 1913 = 1.
† A milliard = 1,000,000,000 (one American billion).
A German billion = $1{,}000{,}000^2$.
A German trillion = $1{,}000{,}000^3$.
American billions and trillions are powers of thousands; German billions and trillions are powers of millions.

Living costs in the end had risen no less than 1,200 billion times. There are no dangers of comparable inflationary episodes in this country.

Unless strong support is given our government in its price-control and rationing programs, however, we may very well experience an inflation as great as that of World War I. In 1920, the index of retail prices in the United States (July, 1914 = 100) was 222 and in the United Kingdom 249. In the United Kingdom the collapse in 1920 and 1921 was followed by a very severe period of unemployment and much unrest in the twenties and early thirties. While the remainder of the world was experiencing prosperity, the British were undergoing a disastrous period of unemployment and wasted resources. Once their prices had risen and their exchanges had depreciated, they embarked in 1920–1925 on a program of appreciation of exchanges and fairly stringent monetary policy. The well-known catastrophic results of this policy may be considered the aftermath of monetary instability in 1914–1920. Perhaps if the British had not been so concerned with monetary appreciation and stabilization following their inflation experience and the resulting distortions in the years preceding the present war, they could have and would have turned their attention to the portentous rearmament taking place on the Continent. The unfortu-

nate economic conditions, resulting in part from the inflation and the ensuing collapse, made it imperative for the British government—so it seemed at that time—to concentrate on economic recovery, and therefore she paid inadequate attention to political and military events abroad.

Similar difficulties appeared in France, where the price rise was substantially greater than that experienced by the British. By 1926 wholesale prices had risen sevenfold. In 1928, after a bitter struggle with the *rentier* class, the government stabilized the franc at the then current value of 4 cents. This meant that the bondholders, who were being paid in francs and hoped for a franc that was worth almost 20 cents, were henceforth to be paid in francs worth only 4 cents. But actually, the francs they were being paid then (in 1928) were not worth more than 4 cents, and thus the revaluation merely acknowledged the current value of the franc. Moreover, in the 1930's, when most countries on gold were abandoning the gold standard, the French, still smarting under the revaluation of 1928, continued to struggle on with the gold standard. This resulted in contraction and increasing unemployment.[1] The consequence was a vast amount of unemployment in France in the 1930's, a sharpening of the issues between capital and labor, and a deterioration of the political situation. More than anything else, the growing weakness of the French government may be associated with the economic struggles that were an inevitable result of the inflation during the war of 1914–1918 and the early postwar period.

The strengthening of the forces of totalitarianism in Germany may also be directly associated with the inflation and the damage done by the collapse of the currency in the early 1920's. Hitler obtained much of his early support from the middle classes which had lost their economic status as a result of inflation. The later attempt in the early 1930's to stay on gold while other countries were abandoning the gold standard further weakened the German economy. As we have seen, a similar attempt in France had the same effect on the economy of that country.

This brief and simplified historical survey of inflation has been presented merely to emphasize the fact that, in the absence of strong measures, inflation of serious proportions is an inevitable accompaniment of wars and that the ensuing collapse and revaluation of the currency may wipe out important economic groups and arouse bitter

[1] *Cf.* Seymour E. Harris, *Exchange Depreciation*, especially Part II, 1936.

animosities which are bound to have disastrous political and economic repercussions. These experiences are a warning to all of us that the fight against inflation must be carried on with vigor and courage if we are to be spared the economic disasters that have followed earlier and less intensive wars.[1] The greatest advances of inflation and its direct results occur not in war but in postwar periods.

This chapter, as stated, was written early in the war. It reflects well the fears of inflation prevalent during those early war days and perhaps suggests that the country had less inflation in the war than was anticipated. For this reason the chapter remains in content and form (even tenses) as originally written.

[1] The literature on inflation is voluminous. In addition to the works already quoted, the reader should consult: J. M. Keynes, *A Tract on Monetary Reform* (1924), and *A Treatise on Money* (1930); R. G. Hawtrey, *Monetary Reconstruction* (1926); F. D. Graham, *Exchange, Prices and Production in Hyper-inflation: Germany*, 1920–1923 (1930); G. Cassel, *Money and Foreign Exchanges*, 1914–1918 (1922); E. Dulles, *The French Franc*, 1914–1928 (1929); R. A. Lester, *Monetary Experiments* (1939); Seymour E. Harris, *Monetary Problems of the British Empire* (1931).

Chapter IV

A Great Inflation in the United States?

1. INTRODUCTION

Our discussion has been restricted to a few cases typical of the countless inflationary episodes which have occurred: the experience during the French Revolution, an example of *advanced* inflation; the German experience of World War I and the postwar period, an example of *extreme* inflation; [1] the British and American experience of World War I, *substantial* inflation. In the present war, we had extreme inflation in Greece and advanced inflation in China.[2]

What is the American price history going to be? A complete collapse on the German model? A collapse on the French model? A serious inflation of the British-American proportions in the last war? Or are we going to be able to restrain the inflationary forces and keep the rise in the cost of living down to 5 per cent per year or less? As was observed in the preceding chapter, extreme inflation during this war was most improbable.[3]

The great inflations in history stemmed from reduced supplies of goods and excessive supplies of money. Actual warfare within a country, loss of territory, inaccessibility to foreign supplies, excessive diversions to war industries, all contribute toward inadequately provisioned markets. France's wars of conquest during the Revolution consumed a large part of available supplies. China's loss of territory and the breakdown of its transportation system have been decisive factors. Blockades and excessive inroads by the military as well as military defeat paved the way for the monetary debacle for Germany after World War I.

2. SUPPLY AND DEMAND

Why do prices rise a thousand billionfold in one episode, a hundredfold in another, two- or threefold in still another? It is a question of

[1] The conversion rate of the new reichsmark of 1924 was fixed at a *thousand billion* paper marks. C. Bresciani-Turroni, *The Economics of Inflation*, p. 24.

[2] *Cf.* Prof. Li on Chinese inflation in *R.E.S.*, February, 1945.

[3] Parts of this chapter were written several years ago. To reflect fears prevalent in 1941–1942, I have preferred to let them stand unaltered.

supply and demand. British prices rose but one and one-half times by 1919–1920 because her supply lines were maintained, her output was reduced by only a small percentage, and her fiscal policies were more courageous than those of France. In other words, demand was kept down by intercepting a substantial part of spendable funds. Too much credit may be given for this to sound fiscal policies. A weak government has recourse to inflation, it is said; the fisc then relies on monetary expansion rather than on a vigorous tax program or a diversion through borrowing out of savings. Yet the crucial issue is supplies. When supplies are adequate, the government may obtain its lien on necessary supplies to a considerable degree through monetary *diversion:* taxation and borrowing out of savings. It is then relatively easy to force the public to pay taxes or urge it to buy bonds. When the standard of living has been seriously cut, however, sound fiscal policies encounter increased opposition. In order to carry on its normal functions, the government manufactures cash or requires the banks to create deposits for the account of the government. The new dollars, or marks, or yen compete with existing supplies, and what the government cannot obtain through *diversion* it obtains through *creation* of money. Prices rise at the expense of the civilian population: the government, favored by its sovereign right to manufacture money, squeezes the civilian consumers or producers out of the market for labor, materials, and goods. At *some* price, of course, the consumer will cut his demand for food in competition with the quartermaster. In short, the smaller the supplies, the greater will be the monetary demand. Only within narrow limits will a courageous fiscal policy save the day. No Gladstone could have saved Germany from a precipitate rise of prices in the postwar period. It is even dubious that extreme controls could have staved off a great inflation in 1922–1923. In fact, these controls are not so easy of enforcement in peacetime as in wartime.

3. SOME FAVORABLE FACTORS

In 1941 we were fearful that we might have a great inflation. Now (mid-1945) the dangers of a galloping wartime inflation seem to be definitely over. Our war program has reached unanticipated heights, and we have at the same time reserved more than minimum supplies for civilians. Unlike earlier wars, the main contribution to war supplies today comes out of unemployed resources, more intensive use of existing resources, and large economies in spending for capital purposes—and

not at the expense of consumption. Output, especially in agriculture, rose substantially more in the United States after its entry into World War II than in the preceding war. By 1918, real national income had risen by only a few billion dollars, whereas by 1945 the rise in gross national product was about $110 billion, and the rise in stable dollars about $70–90 billion. In 1944, the rise began clearly to taper off.[1] Not only do we rely primarily on additional output, but we also control output and its distribution much more effectively than we did before. As a result, there is much less wastage of economic resources; furthermore, allocations and rationing preclude harmful competitive bidding for supplies. When each producer and consumer is allotted an appropriate amount, he is denied permission to bid up prices of existing supplies.

This is a vital departure from earlier wars. *We rely far more on government orders to provide equitable and efficient distribution and less on the moving force of price incentives than we did in World War I.* To the extent that the state allocates economic resources, the economy can dispense with price movements as a means of attracting economic resources. Inflation may still serve a useful function in particular areas where the government cannot divert resources or refuses to do so. In the early years of the American war effort, the country was not prepared to move labor into war areas. There was no substitute for the pecuniary appeal and, therefore, the fabulous wage rates on war jobs served a useful function. Once a government announces a freeze of wages, however, it discourages movement and, if it is not then prepared to issue orders for taxi drivers in Washington to move into lumber camps in Vermont, a serious lacuna is opened. At this point we emphasize the fact that distribution of resources is much more widely controlled in the present war and that, for this reason, price rises play a less useful function in our war economy than they did in earlier wars.

4. SUPPLIES

Whatever the premonitions in 1941–1942, few economists in 1945 envisage a calamitous rise of prices in the United States. Adequate,

[1] *Cf.* S. Kuznets, *National Product in Wartime*, prelim. ed., 1944, p. III-6; J. M. Clark, *The Costs of the World War to the American People*, 1931, p. 124; F. C. Mills, *Prices in a War Economy*, October, 1943, pp. 10-13; W. C. Mitchell, *Wartime Prosperity and the Future*, March, 1943, p. 25. Dr. Kuznets finds that from 1914 (second quarter) to 1918 (fourth quarter) GNP in constant prices rose by ½ of 1 per cent per quarter; from 1939 (second quarter) to 1943 (fourth quarter) the quarterly rise was six times as great.

if minimum, supplies were made available to the public. When money income is up 120 per cent and real income at least 75 per cent and possibly 100 per cent, when industrial production is up by 115 per cent and agricultural output up by more than 30 per cent, the supply situation is not conducive to inflation. Thus, although almost one-quarter of the country's farm output went directly to our armed forces and allies, nevertheless total food available to civilians in 1944 exceeded the 1935–1939 average on a per capita basis by 7 per cent.[1] The public is protected not only by what it has and by what will be made available, but also by government control of distribution. Once fair distribution is assured, panicky demands and excessive dishoards of cash on inadequately provisioned markets will not occur. In short, a supply situation similar to that which confronted the French or the Russians in their revolutions or the Germans in the twenties is not to be anticipated from our inflation barometer.

5. DEMAND

Since shortages are unlikely to account for a catastrophic inflation, the great danger lies not in supply but in demand. Once inflation has progressed beyond a certain point, the advance continues not in arithmetic but in geometric progression. When prices rise 5 to 10 per cent per year, the public do not change their buying habits drastically; but once the rise is 25, 50, or 100 per cent per year, they prefer to hold goods rather than money. Every citizen senses that delay is fatal: the longer he waits the more he will have to pay. Then even price control will not stem the tide. The accumulated excess of purchasing power can no longer be restrained by laws, edicts, or even by threats of death penalty. This is what happened in the American colonies in 1780, in France in 1795, and in Germany in 1922–1923.

The fight against inflation is decided at a relatively early stage. The choice is not as between 5 to 10 per cent and 10 to 20 per cent per year. It is a choice between a manageable and an unmanageable degree of inflation. Beyond a certain point—which may be 5, 10, or x per cent per year—confidence suffers and the rate of use of money begins to rise alarmingly. Once its velocity begins to increase sig-

[1] *First Report* by Director of War Mobilization and Reconversion, *Problems of Mobilization and Reconversion*, Jan. 1, 1945, p. 27.

nificantly, disintegration of the monetary system is on the way. Acceleration of the rate of circulation is, of course, a symptom of distrust of the currency which appears once the common man becomes convinced that prices will continue to rise.

It does not seem probable now (mid-1945) that a serious inflation is on the way. The country has done better than most people anticipated. We must, of course, continue to be vigilant. From 1940 to 1947, we shall likely have experienced an inflation of 30 to 50 per cent; but it is still possible, if the anti-inflationary programs are scrapped too soon or administered without vigor and enthusiasm, that prices may rise by 50 to 100 per cent. A rise of these proportions would be a serious matter and in particular for the significant proportion of our population with relatively fixed incomes—military and government personnel, teachers, low-income workers, etc.

In the period 1939 to 1944, wholesale prices rose by 35 per cent and the cost of living by 26 per cent, or an average of 7 and 5 per cent per annum, respectively. In 1943, the percentage rises were 4 and 6 per cent, respectively; and in 1944 but 1 per cent for both indices. This is a much better record than we had anticipated.

Can we keep the yearly increase down to these proportions? Weak fiscal programs, inadequate controls, failure to use subsidy programs boldly, and the pressure of special groups (*e.g.*, labor, farmers, distributors) will determine whether we experience an inflation of moderate (25 to 50 per cent) or serious (50 to 100 or more per cent) proportions.

The more pronounced the monetary inflation in the war period, the greater the dangers in the postwar period.[1] *By* 1945, *the country has experienced considerable monetary inflation but only a modest degree of price inflation. The postwar problem will be to prevent monetary inflation from becoming price inflation.* The more money manufactured and not intercepted by the tax collector, the greater the danger. The more price inflation for a given monetary inflation in the war, the less the *additional* potential price inflation in the postwar period. In that case, the damage has already been done.

Above all, adequate fiscal policies are required. The French Revolution was financed almost exclusively through the manufacture of paper money; similar excesses prevailed in the Russian Revolution and in other extreme inflationary episodes. In World War I the very

[1] Monetary inflation means an expansion of money and deposits in excess of the rise of transactions.

effective system of the creation of bank deposits as a means of providing demand for government securities was applied in the United States.

The central bank purchases $1 billion of government securities; then the Treasury spends the billion dollars. Thus banks have $1 billion more cash. They may now lend the government $10 billion (the exact amount depending on custom, reserve requirements, etc.) which in turn becomes deposits of government creditors. This process is not easily understood by the average citizen who, therefore, does not realize that it can be more dangerous than eighteenth- and nineteenth-century techniques. How many citizens know that during the two years after Pearl Harbor, the Federal Reserve banks in this manner provided the banks of the country with approximately $17.2 billion of cash and many times as many potential deposits?

That deposits did not rise even more than they have is explained in part by the large withdrawals of cash by the public and in part by controls. It might be held that the Federal Reserve banks merely provided the banks with the cash necessary to obtain additional circulating mediums and that additional deposits were created on the basis of excess reserves available to the banks. These have gradually been reduced.

There is thus no doubt concerning the manufacture of deposits. What is required is that as many of the newly created dollars as possible should be intercepted by the Treasury and that as large a proportion as possible should be sterilized. Taxes, sales of war loans for cash, and compulsory loans will divert the dollars to the government; and effective price control and rationing will contribute toward both sterilization and diversion to the government. When the government shuts off markets or restricts expenditures on markets, the public is more disposed to lend and is less hostile to taxation.

6. CONCLUSION

In short, the current supply situation is conducive to a minimum of inflation. Whether prices will continue to rise by 5 per cent per year or less, or will rise by 10 to 25 per cent per year, will depend upon the vigor of our fiscal programs, on the courage with which Congressmen resist the pressures of special groups, on the continued effectiveness of the Office of Economic Stabilization, the White House, and those responsible for price maintenance and equitable distribution. Above all, it will depend upon the successful and persistent fight against every price increase which is not clearly required to prevent extreme inequities or to obtain indispensable supplies.

So far, the country's planned course against inflation has been highly successful. Fiscal policy is more courageous than in the preceding war.

(In World War I important countries raised a relatively small percentage of war expenditures through taxation.) In addition, techniques of control have improved immeasurably. Measures to control profits, prices, and distribution and techniques of war borrowing have been developed. Unfortunately, however, the drains on the economy also are very much greater. Total war requires almost one-half of this nation's annual output of goods. For this reason it cannot tolerate the pressure of special interests which demand higher prices, higher wages, higher profits, business as usual, and distribution on the basis of the caprices of the market.

Part II

SUPPLIES

Chapter V

Supplies

1. INTRODUCTION

Prices, as we have said, rise in response to a reduction in the flow of goods or a rise in the monetary demand. It is necessary to consider supplies, and, therefore, current production. Yet supplies are determined not only by current production but also by past production and—what is related to production—the accumulation or decumulation of inventories. When inventories are drawn upon, prices are depressed as though production had increased. A serious reduction in inventories may in turn be a signal for an acceleration of demand and higher prices. *Finally, the relevant variables for the consideration of inflation in the civilian economy are not "total supplies made available" but rather "supplies made available to the civilian economy."* Income is earned in the production of both war and nonwar goods, but it can purchase only part of the current output of nonwar goods and none of the war goods. Total production is of course a relevant consideration in the study of inflation in the military sector.

Our economy gradually shifted from a peacetime to a defense basis in 1941 and to a total war economy in 1942–1943. At the end of this chapter I quote from a report by the War Production Board (WPB) entitled *War Production in* 1942, which tells clearly the story of this conversion and of the later shortages and suggests the measures necessary to correct these shortages. Conversion was the first phase; complete mobilization, which requires the adjustment of the total program to man power and raw materials available as well as the most effective use of scarce factors, constituted the second phase. Chart 9

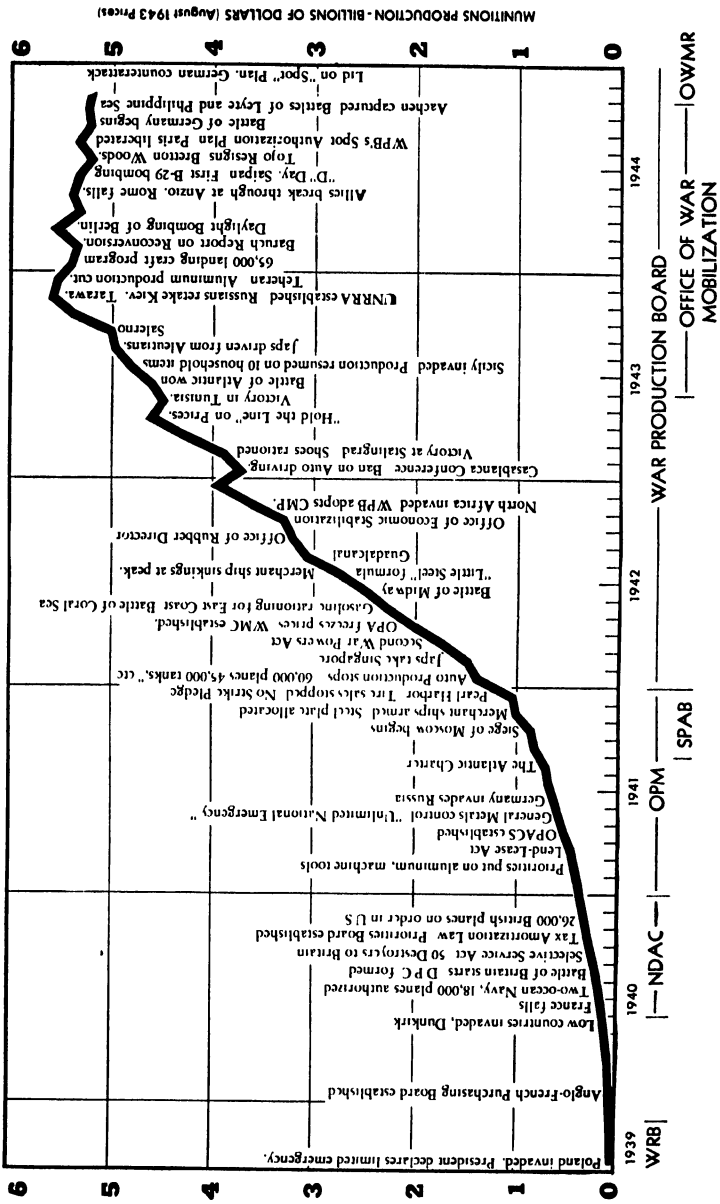

CHART 9.—Munitions production and other war developments. (*Source: Office of War Mobilization.*)

gives a broad view of munitions output and important political and economic events.

War production is obtained through an increase of output or a diversion from existing output. Less consumption goods are then produced and less capital goods (such as machines, residences, and so on) for nonessential purposes. It has been estimated that, for example, out of a rise of war expenditures of $32 billion in 1942, roughly $21 billion came from additional output and $11 billion from diversions. In 1943 the rise in gross national product (GNP) exceeded that of war expenditures: the respective figures were $34 and $31 billion.[1]

That Dr. Kuznets' approach leads to different results from that of the Department of Commerce is evident from what follows. It will be observed that neither the rise of output nor its contribution to the increase in war output is so great as was estimated by the Department of Commerce. Dr. Kuznets finds that in 1942 and the first half of 1943 a rise of national product accounted for less than one-half of the total rise in war outlay of $37.8 billion. The Department of Commerce finds that the rise of output was 2½ times the figure given by Dr. Kuznets (under the latter's choice of assumptions, *a*) and it accounts for more than two-thirds of the rise of $60 billion of war outlay. Although the explanation of the difference in results was discussed briefly in Chapter I, a few comments will be added below.[2]

TABLE 9.—NATIONAL PRODUCT AND ITS COMPONENTS, CHANGES 1939–1941 AND 1941–1943
(In billions of dollars at 1939 prices)

Rise	1939–1941		1941–1943 (first half)	
	War outlay	National product	War outlay	National product
Kuznets: GNP. Most likely assumption *a* concerning relative efficiency in war industries....	5.8	20.5	37.8	16.8
Same, assumption *b*.....	6.9	21.6	46.1	25.1
Department of Commerce: GNP in 1939 prices.....	10.4	23.7	59.7	42.3

SOURCE: S. Kuznets, *National Product War and Prewar*, p. 29, NBER, 1944.

What becomes available for military use, then, depends on how much can be produced, on how much can be tapped from the civilian economy, and on how much

[1] M. Gilbert and G. Jaszi, "National Income and National Product in 1943," *S.C.B.*, April, 1944, p. 7.

[2] *Cf.* pp. 28–31.

can be retained or obtained at the expense of foreign countries. Unfortunately, our exports must rise in this war and our imports decline—therefore we send more abroad than we receive. The excess of exports rises. Because we support the United Nations with war materials and food, our exports increase. Exclusive of direct military shipments, our exports in 1944 and early 1945 ran approximately at an annual rate in excess of $15 billion, while our imports in dollars were at a relatively normal level, but subnormal in terms of goods, since prices had risen greatly.

The civilian economy got the remainder. The reduction is less than it may at first seem, because the military had taken over the feeding, housing, and clothing of 11 million men and women and, furthermore, because the supply of durable consumers' goods and even nondurable goods was unusually large in the years 1941–1943. Consumers can live for a time on past capital by continuing to use their old radios, automobiles, and perhaps last year's clothes, and they may learn to use these commodities more economically.

But to return to the issue of total supplies: output depends upon the availability of capital, equipment, labor, and raw materials. If the necessary machine tools and factories are unavailable, delay is inevitable. Time and resources may be saved, then, by converting existing factories and equipment. Where raw materials are unavailable in adequate quantities, they may frequently be imported or substitutes may be found. Inevitably, however, the substitutes become scarce as more pressure is put on existing supplies of substitute materials. For a time, plastics were used in order to offset certain deficiencies, but now plastics are scarce. When gasoline became unobtainable, the public turned to railroad transportation, but this overtaxes the facilities of railroads.[1]

2. THE GENERAL PICTURE OF SUPPLIES AND PRICES

Economists generally assume that, as output rises, in the short run costs will rise more and more. At early stages, when unemployment is high, the increase of prices will be moderate. But as output expands, wage rates rise and, in a war economy, taxes increase and bottlenecks begin to appear and to make themselves felt.

[1] The excerpts from *War Production in* 1942, given at the end of this chapter, throw further light on conversion, expansion, conservation, and allocation of scarce resources.

In this war, prices have not moved as anticipated. As Table 10 indicates, *wholesale prices and the cost of living rose increasingly in successive years beginning in* 1940. *But in* 1943 *the upward trend was reversed. This is explained partly by the increased importance of controls and partly by the continued expansion of output.*

TABLE 10.—PERCENTAGE INCREASES IN WHOLESALE PRICES AND COST OF LIVING

Year	Wholesale prices	Cost of living
1940 / 1939 *	2.0	0.8
1941 / 1940	11.1	5.0
1942 / 1941	13.2	10.7
1943 / 1942	4.4	6.1
1944 / 1943	1.0	1.5

SOURCE: Computed from materials in *S.C.B.*
* Percentage rise of the average of 1940 over the average of 1939.

The expansion of production relative to the rise of prices has continued to confound experts. It was anticipated that the rise of output by 1943 would be reduced by a very large percentage. Yet the percentage rise of output in 1943 was not much below that of 1942, and the latter not much below that of 1941. Gross national product and national income, which of course are not deflated by the rise of prices, actually rose more percentagewise in 1942 than in 1941 and approximately as much in 1943 as in 1941. As was noted in the opening chapter, however, a flattening out of production curves was clearly discernible in 1944. Yet an official estimate in December put national income in 1944 at $161 billion, or 8 per cent above the 1943 figure. The cost of living in 1944 was up about 1 per cent over 1943.

A summary view for 1944 is given in Chart 10. Munitions production continued to rise at a substantial rate in 1944. The rise for exports, national income, manufacturers' shipments, consumer expenditures, GNP, and sales at retail stores were less than for munitions, the former five rising about 5 to 10 per cent. In most munitions programs, the peak

of output had been reached by 1944.[1] As the President pointed out in his budget address of January, 1945, construction expenditures were relatively unimportant. Expenditures for war construction and plant were $12.7 billion in 1943, $4.6 billion in 1944, and estimated at but $2.2 billion in 1945, all fiscal years.

The general picture is given succinctly in Table 11 *which compares the ratio of the rise of production, of GNP, and of national income with the percentage rise of prices. What is most striking is the considerably greater relative rise of production than of prices and the fact that this held even for* 1943. In general,

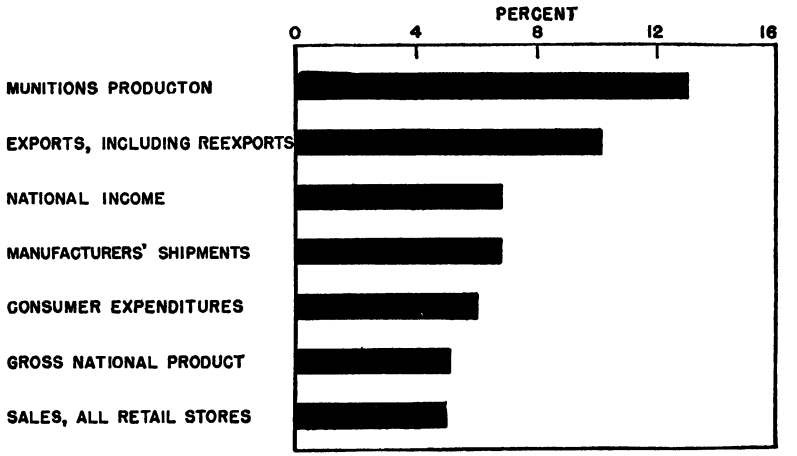

CHART 10.—Percentage increase, 1944 from 1943, for selected business indicators. Data for 1944 are preliminary estimates. (*Source: U. S. Department of Commerce, except munitions production which is from Facts for Industry, War Production Board.*)

output seems to have increased more than three times as much as prices.[2] This is remarkable, both in comparison with our record in World War I and in comparison with what had been anticipated. The significance of the ratio of movements in GNP and national income to price movements is reduced because the increases of the former two variables are in part explained by rises of prices. Note, for example, that production rose 8 times as much as wholesale prices in 1940 and almost 4 times as much in 1943; that GNP in 1940 and 1943 rose 5 and 4⅖ times as much as wholesale prices, respectively; and that national income rose 12½ and 3¾ times as much as the cost of living in those

[1] *Cf. S.C.B.*, December, 1944, pp. 2–3.

[2] As was suggested in Ch. I, the official figures may overstate the rise of output.

years:[1] These ratios are not very significant for 1940 and 1944 when net changes were not large.

TABLE 11.—NUMBER OF TIMES PRODUCTION, GROSS NATIONAL PRODUCT, AND NATIONAL INCOME ROSE IN COMPARISON WITH INCREASE OF PRICES

Year	Production (F.R. Board index) / BLS, wholesale prices	GNP / Wholesale prices	National income / BLS, cost of living
1940	8	5	12½
1941	2⅔	2	4¾
1942	1⅔	2	2¼
1943	4−	4⅖	3¾
1942 / 1939 *	3	2½	4+
1943 / 1939	3½	3⅕	4½

SOURCE: *F.R.B.* and *S.C.B.*
* Rise 1939 to 1942.

In Table 11, I have compared GNP with the official index of wholesale prices. This is probably sufficiently accurate for a study of the broad aspects of the problem. The deflator used by the Department of

TABLE 12.—PRICES OF CONSUMERS' GOODS, WAR OUTLAY, AND GROSS NATIONAL PRODUCT, 1939–1943 (FIRST HALF)

	Percentage Rise
Flow of consumers' goods	31
War outlay:	
Assumption *a*	82
Assumption *b*	50
GNP:	
Assumption *a*	50
Assumption *b*	38
Department of Commerce deflator	17

SOURCE: S. Kuznets, *National Product War and Prewar*, pp. 17*n*, 19.
NOTE: Relative efficiency in war to nonwar industries for 1943,

Assumption *a* 0 76
Assumption *b*.. ..... 1.0

Commerce is smaller and yields a larger rise of output than the deflator I used. Dr. Kuznets presents price increases for the years 1939 to the first half of 1943 as shown in Table 12.

[1] Preliminary figures for 1944 indicate that GNP and national income rose five to six times as much as prices. Percentage changes: GNP, +6; national income, +8; production, −1½; cost of living and wholesale prices, +1 (approximately).

Using the 120 per cent rise in *money* GNP *obtained by Dr. Kuznets* for the years 1939 to the first half of 1943, and the 50 per cent rise in the appropriate (his assumption *a*) index for GNP, we obtain a relative increase in output 2⅖ times as great as in prices. If we use the index for Dr. Kuznets' assumption *b*, we obtain a ratio of 3 to 1, which roughly equals my result. Dr. Kuznets' rise of GNP is larger than the Department of Commerce rise which I used; but his deflator is also higher than that given by wholesale prices, the deflator used in my estimates.

For the period 1939–1943, the rise of output (GNP) relative to the rise of prices follows:

My calculations (Table 11)	3⅕
Same—Department of Commerce deflator	5½
Same—Dr. Kuznets' deflator for 1939—first half 1943 (assumption *a*)	2+

The Department of Commerce deflator for 1943, relative to 1939, is but 20 per cent. For the years 1939 to 1943, therefore, they obtain a rise of GNP of from $88.6 billion to $155.3 billion (in 1939 dollars), or 75 per cent. In current dollars, the increase was no less than 111 per cent. From Table 13 we may also obtain the annual percentage rise of GNP in 1939 dollars. Percentage rises in real output were 8, 17, 18, 17 per cent in 1940, 1941, 1942, and 1943, respectively. The rise in 1944 was 8 per cent.

TABLE 13.—GROSS NATIONAL PRODUCT IN CURRENT AND 1939 DOLLARS, 1939–1944
(In billions of dollars)

Year	GNP *		Implicit price index
	Current dollars	1939 dollars	
1939	88.6	88.6	100
1940	97.1	96.0	101
1941	119.6	112.3	106
1942	152.1	132.6	115
1943	186.5	155.3	120
1944	198.7	165.6	120

SOURCE: M. Gilbert and G. Jaszi, "National Income and National Product in 1943," *S.C.B.*, April, 1944, p. 6; see also *S.C B.*, September, 1944, p. 4; February, 1945, p. 5.

* I have not raised the implicit price index for 1944 to 120 as suggested in *S.C.B.*, February, 1945. There the Department of Commerce seems to take account of some of Dr. Kuznets' criticisms; but the revisions should be made all along the line.

One final observation of great importance should be made. We have compared the rise in money value of GNP and prices. If we should compare the *real* increase in GNP with the rise of prices, the relative increase in output would not seem so large as we have so far assumed. The reader should also note the much more favorable results obtained by the government's method of calculation than by Dr. Kuznets'.

TABLE 14.—RATIO OF RISE OF OUTPUT * TO RISE OF PRICES, 1939–1943

Dr. Kuznets, using assumption *a*	1
Harris, using Dr. Kuznets' assumption *b*	1½
Department of Commerce	4½

* Real, not money output.

3. SPECIAL ASPECTS OF SUPPLIES [1]

OVER-ALL FIGURES. In January, 1945, the government's war program called for appropriations and authorizations of $363 billion by June, 1945, and $423 billion by June 30, 1946. As estimated, expenditures, by these dates, will have been $289 and $358 billion, respectively. War expenditures for fiscal years 1945 and 1946 were estimated at $90 billion and $70 billion, respectively.[2]

War expenditures in successive fiscal years ending June 30 were as given in Table 15.

TABLE 15.—WAR EXPENDITURES, 1941–1946 (FISCAL YEARS)

	Billion Dollars
1941	6.7
1942	28.3
1943	75.1
1944	89.7
1945	90 *
1946	70 *

SOURCE: *Budget* 1946, pp. v, vii.
* Estimated. Late in 1945, the estimate for 1946 was $50 billion.

Let us return to the nonfinancial aspects of the problem. A few general indices reveal the upward trend.

[1] Figures, unless otherwise indicated, are taken from *S.C.B.*, and *F.R.B.*
[2] *Budget*, 1946, pp. vii–ix.

TABLE 16.—RISE OF OUTPUT, EMPLOYMENT, ETC., 1939–1944
(1935–1939 = 100, unless otherwise indicated)

	1939	1943	1944 *
GNP, 1939 dollars (1939 = 100)	100	175	187
Industrial production, total	109	239	236
Manufactures:			
Durable	109	360	353
Nondurable	109	176	169
Employment, nonagriculture (1939 = 100)	100	131	127
Freight-car loadings	101	137	143

SOURCE: *S.C.B.*
* Estimated.

The peak of *production* was reached in 1943. So much is evident from the figures in Table 17. Charts 11–14 represent the broad outlines of expansion of output.[1] Figures in Table 16 also stress the greater rise in industrial production than in total product (GNP); the greater rise in durable than in

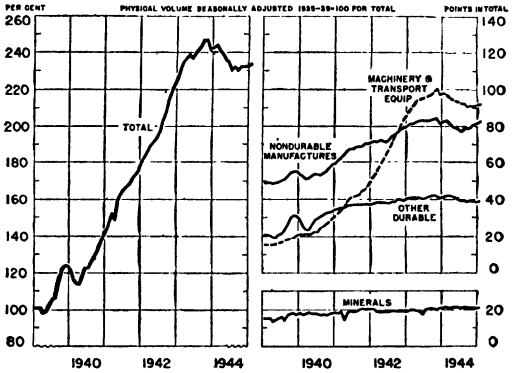

CHART 11.—Industrial production. (*Source: Federal Reserve Board.*)

nondurable manufactures; the much larger rise in output than in employment. The rise in agricultural and mineral production and services has not been so great as that in industrial production. We can thus explain in large part the smaller rise in GNP than in production. Again, to continue with the analysis of the table, a large increase in durable manufactures is associated with the marked expansion of war output. A given rise in employment is reconcilable with a much larger rise of output because there has been much upgrading, increases in hours of work, some general improvement in productivity; and some allowance is required for the amount included in GNP

[1] *Cf.* Charts 3 and 7 in Ch. I.

for income earned in military service. Finally, expansion of GNP in 1944 reflects little more than rises in military pay, wage rates, and prices.

A helpful indication of the relative rise of individual industries is given by the chart on increases in electrical requirements (Chart 15). Note should

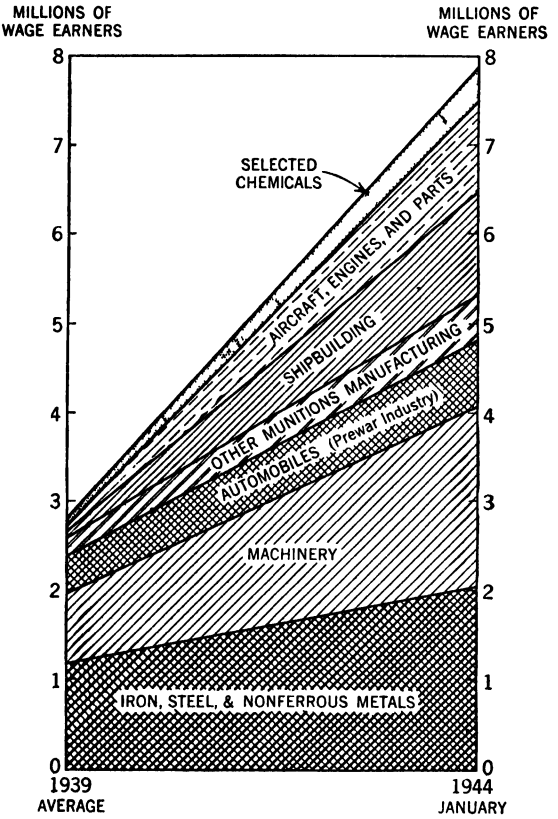

CHART 12.—War expansion in millions of wage earners, by industries. (*Source: Bureau of Labor Statistics.*)

be taken, for example, of the rise in the requirements for nonferrous metals, machinery, and transportation equipment, on the one hand, and petroleum, food, and textiles, on the other.

Further to illustrate the rise in production in our country during the war year, Table 17 presents detailed production figures for the latest month available at this writing.

The largest rises were of course in industries closely related to the war effort. Yet the rise was uneven. Conversion of industries to meet the demands of war and the need of much new equipment accounts for the marked rise in machinery output. In general, industries catering directly to the war effort—

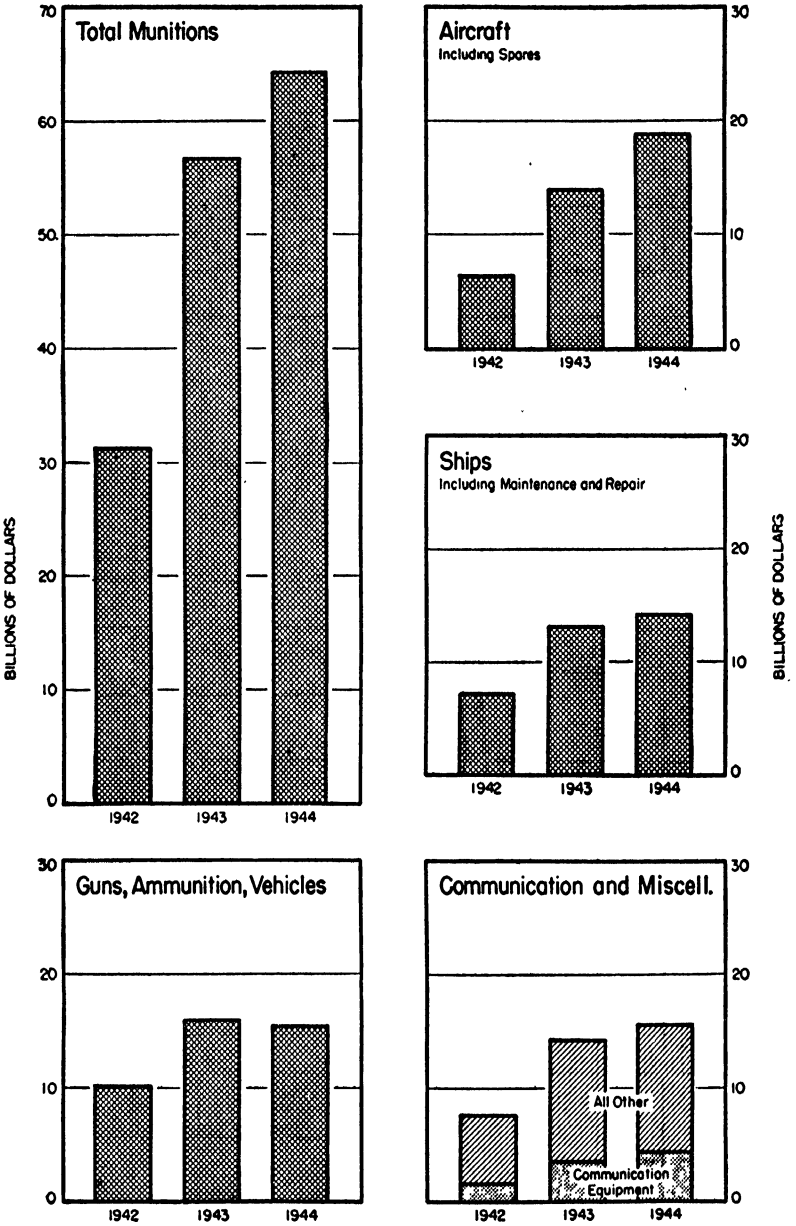

CHART 13.—Munitions production, total and major groups. (*Source: First Report by Director of War Mobilization and Reconversion*, 1945.)

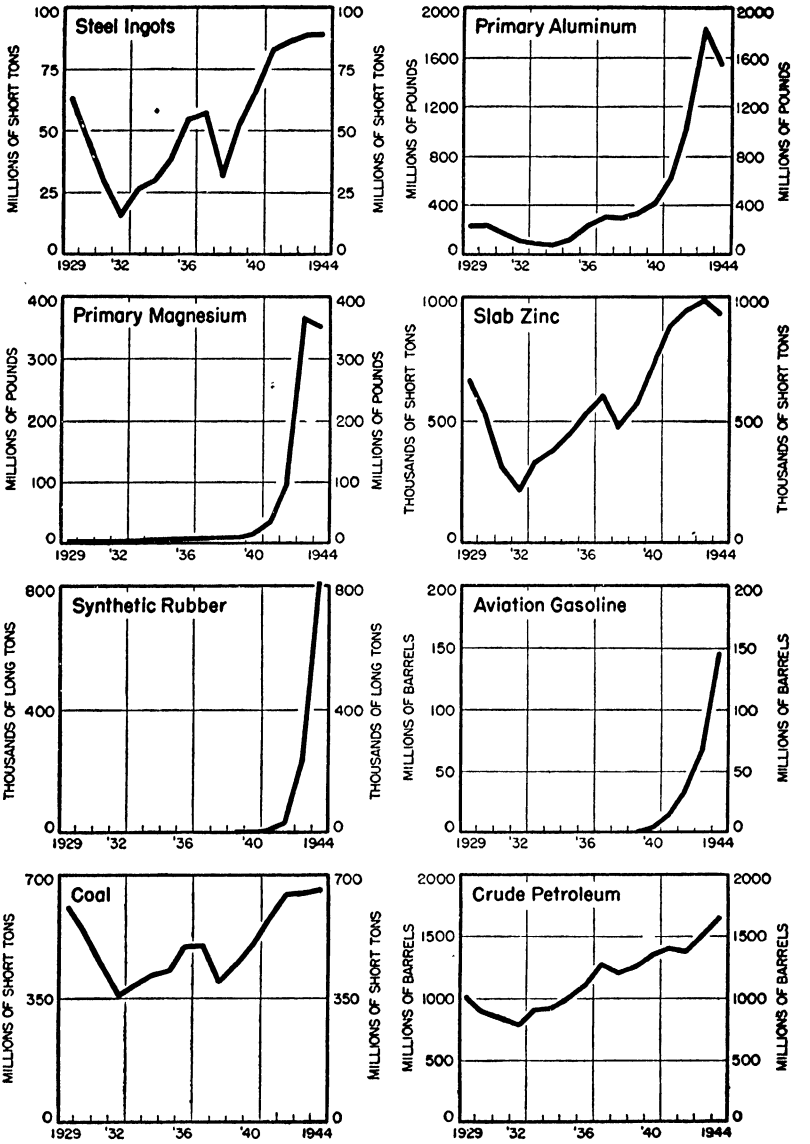

CHART 14.—Materials for War. (*Source: First Report by Director of War Mobilization and Reconversion*, 1945.)

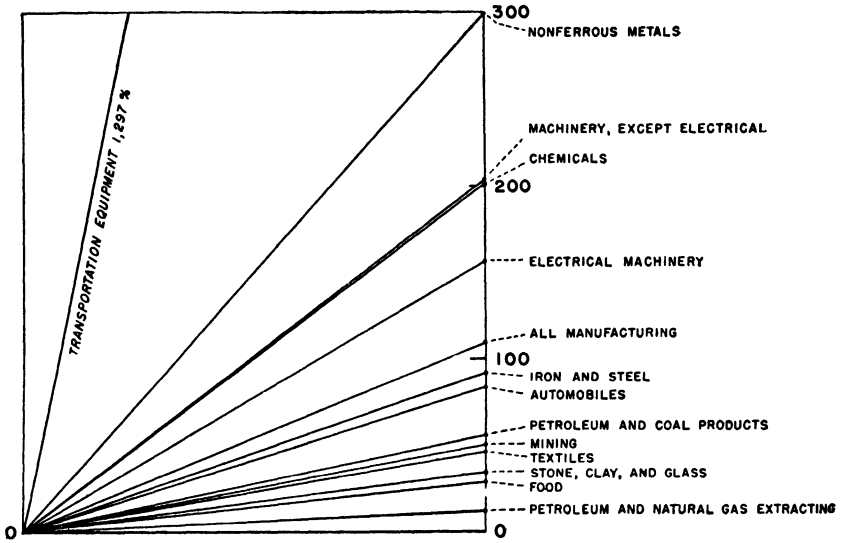

CHART 15.—Percentage increase in electricity requirements of manufacturing and extracting industries. (*Source: U. S. Department of Commerce.*)

TABLE 17.—PRODUCTION, BY GROUPS

(1935–1939 = 100)

	December, 1944, adjusted for seasonal	Peak in 1943
Industrial production, total	232	247 (Oct.)
Transportation equipment	708	786 (Nov.)
Machinery	431	463 (Nov.)
Chemical products	312	404 (Aug.)
Nonferrous metals and products	229	295 (Oct.)
Petroleum and coal products	267	219 (Dec.)
Rubber products	237	241 (Nov.)
Iron and steel	198	214 (Oct.)
Manufactured food products	154	153 (Nov.)
Textiles and products	152	162 (Feb.)
Minerals, total	137	138 (Sept.)
Paper and paper products	135	143 (Sept.)
Tobacco products	131	148 (Nov.)
Alcoholic beverages	169	143 (Dec.)
Lumber and lumber products	122	137 (Dec.)
Leather and leather products	114	123 (Feb.)
Printing and publishing	104	116 (Feb.)

SOURCE: *F.R.B.*, February, 1944, and March, 1945.

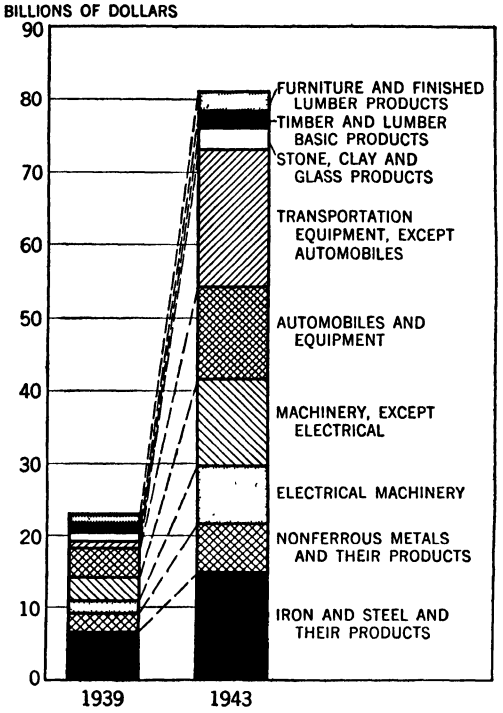

CHART 16.—Manufacturers' shipments for durable-goods industries. (*Source: U. S. Department of Commerce.*)

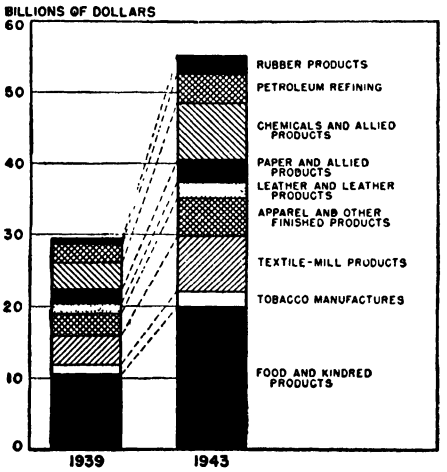

CHART 17.—Manufacturers' shipments for nondurable-goods industries. (*Source: U. S. Department of Commerce.*)

chemicals, nonferrous metals, iron, steel, etc.—experienced larger growths than the industries that continued to serve both civilian and war demands (*e.g.*, lumber and paper). Expansion in such cases would be required mainly for governmental purposes and here the proportionate rise when the civilian consumption had been large would not be so great as for materials required almost exclusively for war. Despite the efforts of the government, consumption-goods industries continued to expand; and the rises were in several instances substantial (*e.g.*, food and textiles). Yet large demands for the military and lend-lease left civilians with smaller increases than these figures might suggest.

Charts 16 and 17 give a summary picture of changes in manufacturers' *shipments* of the more important groups of durable and nondurable goods.

4. THE RELATION OF SHIPMENTS AND EMPLOYMENT

Output alone does not determine shipment of goods. Output may rise and the flow of shipments may lag; or shipments may rise more

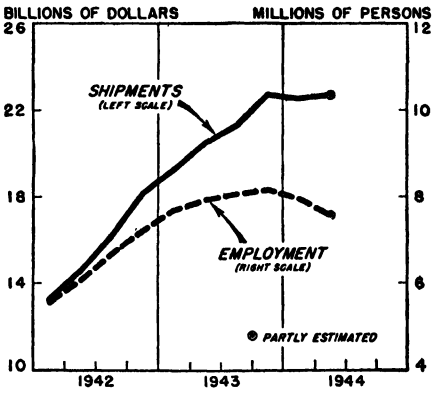

CHART 18.—Shipments and employment in war manufacturing industries. (*Sources: U. S. Department of Commerce; employment based on U. S. Department of Labor data.*)

rapidly than output. In the later stages of the war program the flow of finished goods rises relative to the volume of output. This in part explains the gains of shipments relative to employment revealed in Chart 18. In the years 1941 and 1942 a large proportion of current output went into construction and preparation. In 1943 and especially in 1944, the flow of goods increased rapidly relative to total war outlays. The reader might compare the ratio of supplies to total war output in columns (1) and (2) in Table 18.

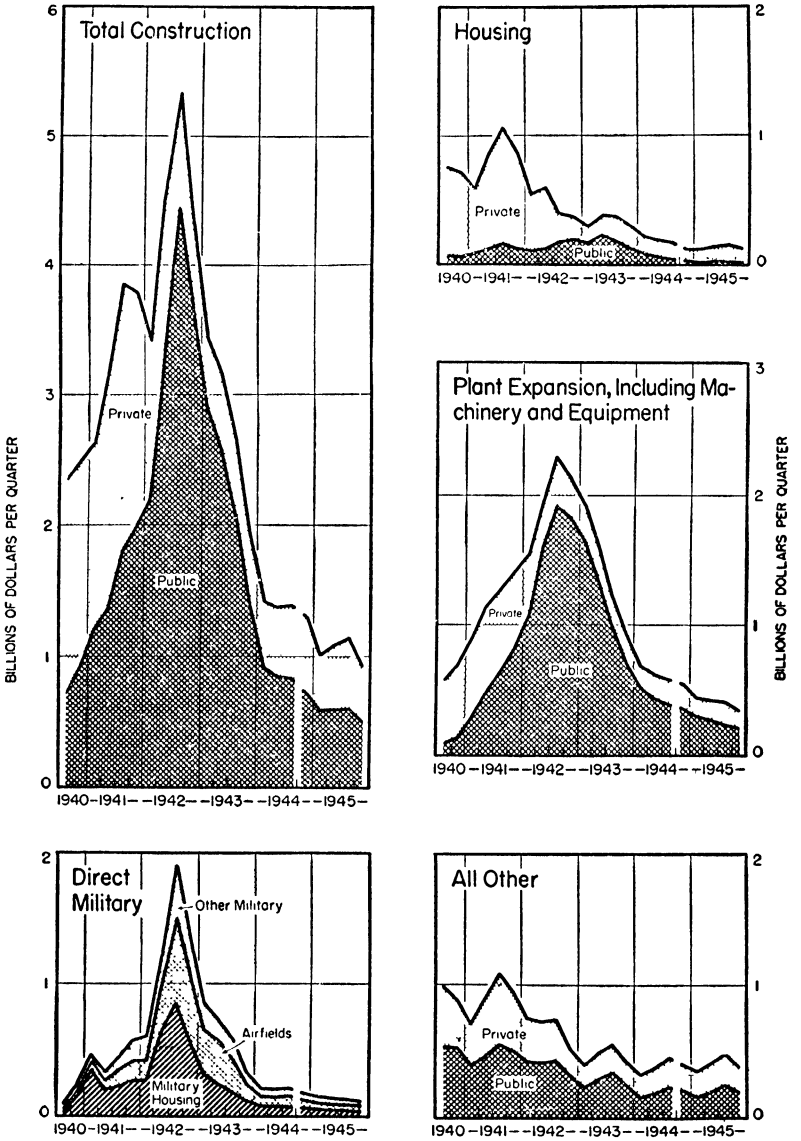

CHART 19.—Wartime construction. (*Source: First Report by Director of War Mobilization and Reconversion*, 1945.)

TABLE 18.—WAR OUTPUT, 1940–1944 *
(In billions of dollars)

Type of goods	(1) Completed or in place by end of 1943	(2) Scheduled for 1944
Supplies (munitions)	100	72
Construction and equipment:		
Military installations	16.5	1
Industrial facilities	13.5	2
Total	130.0	75

SOURCE: A. D. H. Kaplan, *The Liquidation of War Production*, 1944, p. 9.

* *Cf. Budget* 1946, p. vii. Expenditures for war construction and war plants are put at $27.1 billion for fiscal years 1941–1944 and estimated at $2.2 billion for fiscal year 1945.

Charts 19 and 20 reveal the large rise in new construction for military and industrial purposes in 1942 and the marked decline in 1943–1944.

On a free market, the prices of war output would have been very high in 1941 and 1942 and would have tumbled in 1943 and 1944.

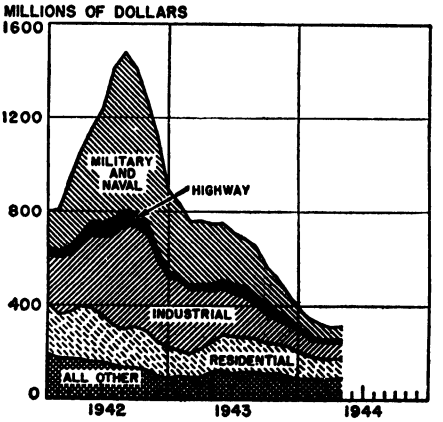

CHART 20.—New construction activity, by type. (*Sources: U. S. Department of Commerce, U. S. Department of Labor, and War Production Board.*)

Prices would have reacted later both to the economies of large-scale production and the increased flow of finished goods. (An offset was the rise of wage rates.) Actually, prices were controlled and negotiated. Scarcity of munitions in the years 1941 and 1942 was reflected in higher

prices only because costs were high in the early stages, but not because supply was low relative to demand. Sellers were not allowed to charge what the traffic would bear. In 1943 and 1944 the increased flows accounted for lower prices only insofar as costs were reduced. In short, costs, not supply and demand, are likely to be the decisive factor in the determination of prices subject to renegotiation.

5. OUTPUT AND CAPACITY

When output is much below capacity, the rise of output will of course exceed that of capacity. A large rise of output can, therefore, occur without corresponding

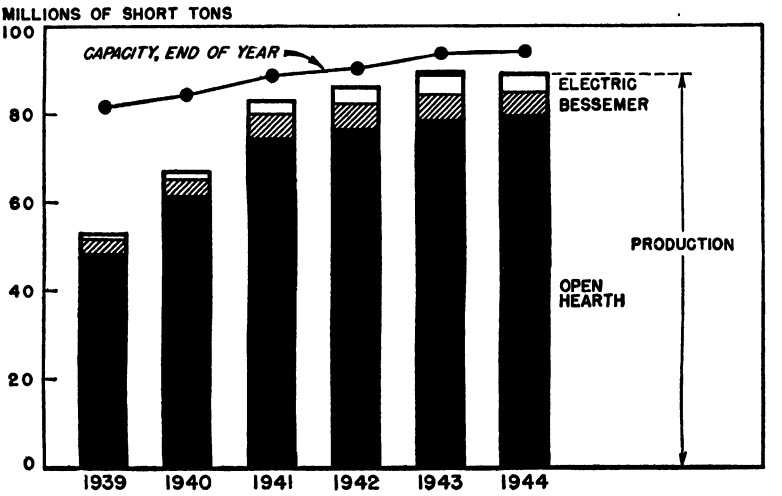

CHART 21.—Steel capacity and production (ingots and steel for castings). (*Source: American Iron and Steel Institute.*)

increases in prices. Additional goods are produced out of resources that were formerly unemployed; and up to a certain point a given amount of capital and labor will yield increasing returns. In response to rising demand prices will rise nevertheless: wage rates rise quickly and numerous bottlenecks appear. Insofar as capacity is increased, capital costs per unit of output will be higher than they otherwise would be. Here, however, the reader should take account of the fact that 80 per cent of the $20 billion of new plant and equipment were provided by the government. Thus, prices are not inflated by high capital costs; but the increased government deficit accounts for a growth of general inflationary pressures. Yet we may conclude that the moderation in

the rise of prices was associated in no small part with the large amounts of unemployment and excess capacity in 1940.

An interesting example of the large rise of output in relation to capacity is given by the experience of the iron and steel industry. Charts 21 and 22 present the facts in summary form, the first contrasting a modest rise in capacity with a large rise in output, and the second a substantial rise in output and pay rolls with virtual stability of prices.[1] Prices of finished steel products were $56.27 per ton in September, 1939, and $56.73 in December, 1943. This experience was shared by many other industries producing basic

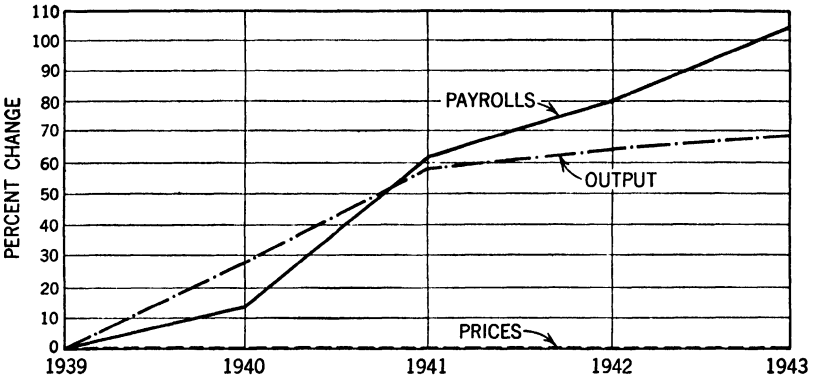

CHART 22.—Wartime rise in steel pay rolls and production. (*Source: Steel's War Record, June*, 1944.)

materials: rises in wage rates, costs of raw materials, and taxes were offset by large economies resulting from the rising volume of output; and the net result was price stability or modest rises at most.

TABLE 19.—CAPACITY AND PRODUCTION, 1939–1944

(In millions of tons)

	Blast-furnace capacity	Pig-iron and ferro-alloys, production	Steel ingot and casting production—per cent capacity produced
1939	56	36	64
1943	64	63	98

SOURCE: American Iron and Steel Institute, *Steel's War Record*, June, 1944.

6. BOTTLENECKS

A cause of rising prices was the appearance of serious bottlenecks. As production expanded, scarcities in particular kinds of labor,[2]

[1] Figures for capacity and production are also presented in Table 19.

[2] Man power is discussed in Ch. IX.

materials, components, etc., threatened the production program and, in many cases, the stability of prices. An item might account for a relatively small proportion of total costs of a finished product; but if the finished product were scarce and indispensable, because it was a vital war commodity and because no substitute could be found for the component item, its owners might exact very high prices. Price controls in such cases might prove to be very helpful. Bottlenecks were frequently removed through substitution of more plentiful supplies, implementation through importation, and through control of demand (and to some extent supply) through priorities, allocations, conservation, and limitation orders. Remarkable progress has been made in removing bottlenecks and in keeping prices of scarce components down.

A noteworthy example is the problem of alloys in the steel industry. War put an end to importation of supplies from many parts of the world. Chart 23 indicates the peacetime sources, many of which were lost in the war. Substitutes were found in areas still accessible, and conservation measures were introduced.

TABLE 20.—RUBBER SUPPLY, REQUIREMENTS AND STOCKS

(In thousands of long tons)

	New supply			Requirements, total	Stocks, end of year
	Crude	Synthetic	Total		
1935–1939, average	494	*	494	538	231
1939	500	*	500	605	126
1940	818	*	818	656	289
1943	56	234	290	542	191
1944 †	118	811	929	883	237

SOURCE: *S.C.B.*, August, 1944.

* Negligible quantity.

† Second half of 1944, estimated.

Another well-publicized bottleneck was rubber. Sources of natural rubber virtually disappeared. Yet despite a rise of requirements from 538 million tons in 1935–1939 to 883 million tons in 1944, estimated stocks for 1944 were approximately at the 1935–1939 level. The explanation of the successes achieved is of course the large rise in the production of synthetic rubber and the increasing economies in the amount of crude rubber used.[1]

[1] The unsolved problems in rubber are (1) adequate production of certain end products (*e.g.*, heavy-duty tires) and (2) the postwar status of the industry. *Cf.* WPB, *Special Report of Office of Rubber Director on the Synthetic Rubber Program*, Aug. 31, 1944, and periodic reports of Rubber Director, 1943–1944.

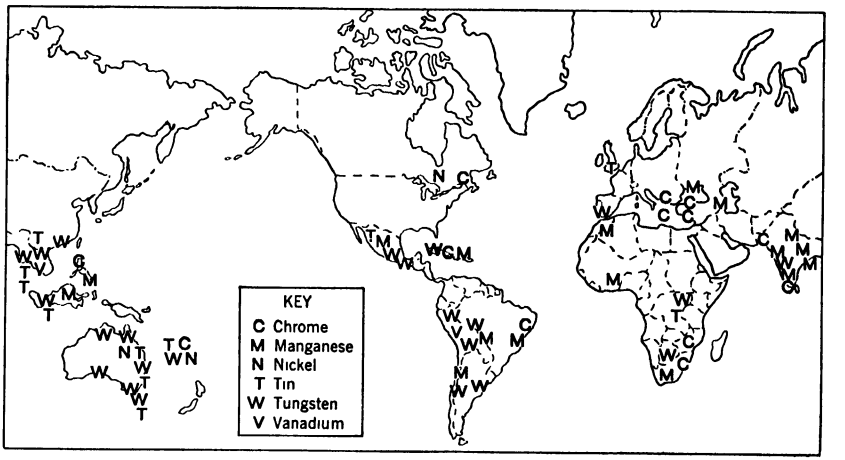

CHART 23.—Peacetime sources of alloys. (*Source: Steel's War Record, June,* 1944.)

In connection with the rubber program, the increase in the output of ethyl alcohol and the increased proportion made available for the synthetic rubber program are of interest (Chart 24).

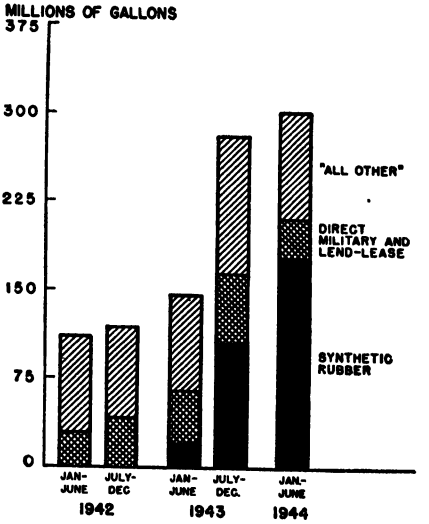

CHART 24.—Distribution of ethyl alcohol. (*Source: War Production Board.*)

7. OUTPUT AND AVAILABLE SUPPLIES

We commented above on the relation of supplies and output. Here some further discussion is added. First, there is the relation of war and civilian output. *A rise of output may be inflationary for the civilian sector*

of the economy: for a rise of output brings an increase of incomes; with higher incomes come inflationary pressures; and even though nonwar supplies made available increase, the upward pressures of rising incomes exceed the downward pressures associated with any expansion of civilian output. Clearly this is exactly what happened in the American economy of 1940–1945. *Expansion of total*

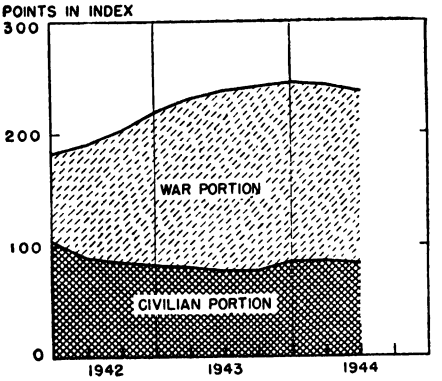

CHART 25.—Industrial production (seasonally adjusted, 1935-1939 average for total = 100). (*Sources: U. S. Department of Commerce based upon industrial production index of the Board of Governors of the Federal Reserve System; second quarter* 1944 *partly estimated.*)

output then tended to reduce prices in the military sector but to increase them in the civilian sector. If any net rise in prices of military goods occurred, it should be associated with the increase of wages, prices, raw materials, etc.

Output for war and nonwar is given in Table 21 (*cf.* also Chart 25).

TABLE 21.—GROSS NATIONAL PRODUCT OR EXPENDITURE, 1939–1944

	Total, billion dollars	Government expenditures for war, billion dollars	Per cent for war
1939	88.6	1.4	2
1940	97.1	2.8	3
1941	119.6	12.8	11
1942	152.1	50.3	33
1943	186.5	81.3	44
1944 *	196.4 (198.7)	86.1 (86.3)	44

SOURCE: *S.C.B.*, April, 1944, p. 13; September, 1944, p. 4.

* Estimated. All figures were revised in February, 1945, *S.C.B.* Figures in parentheses are revised as of early 1945; but the results are not changed significantly.

Relative to output and supplies we should also consider the changes in inventories. More goods are made available through releases of inventories; and markets are denuded through their accumulation. In the early years (1940–1941) inventories tended to rise; but in 1942 and 1943 reduction in holdings by distributors and relative stabilization by manufacturers contributed to the fight against inflation. Relative to sales, marked declines were registered in 1943 and 1944; and these reductions are associated in part with controls [1] (Chart 26).

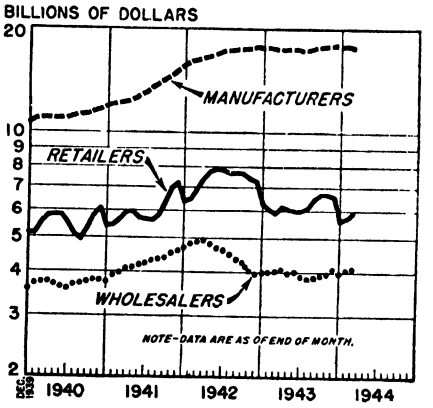

CHART 26. Business inventories. (*Source: U. S. Department of Commerce.*)

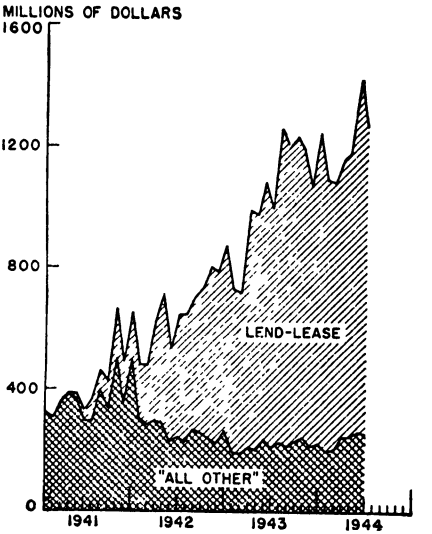

CHART 27.—Total United States exports. (*Source: U. S. Department of Commerce.*)

Finally, the drain of goods to foreign countries contributes to scarcities and higher domestic prices (Chart 27).

8. CONCLUSION

In this opening chapter on supplies (a vital aspect of inflation), we emphasized the relation of supplies and prices. To sum up:

1. The rise of output has been substantial. Large gains have been made, even on the basis of Dr. Kuznets' approach.

2. In a period of monetary expansion and rising prices, it is well to compare the rate of price rise with that of the expansion of output.

[1] *Cf.* Ch. VIII of this book, and especially Ch. XXII of my volume, *Price and Related Controls.*

In general, output has risen far more than prices. In short, rising prices have not caught up with monetary expansion.

3. In general, expansion of output tends to keep prices from rising. But it is necessary to distinguish war and nonwar output. The net effect on prices depends on demand as well as on supply. The vast expansion in war output contributed to the moderation of prices for the military. Output of consumption goods rose by but 10 to 20 per cent, whereas national income increased by more than 120 per cent. Rise in demand contributed more to rising prices of consumption goods than the modest expansion of supplies contributed to falling prices.

4. What if the rise of output had been substantially smaller? Undoubtedly the war effort would have suffered, and less would have been consumed by civilians. At a lower income level associated with a reduced volume of output, the demand for civilian goods would have been reduced below current levels. Assume that what was required by our war economy was a reduction of civilian consumption by 15 per cent instead of a rise by that percentage. Then at a rise of national income of 60 per cent instead of a rise of about twice as much, the government would have had to introduce more severe controls or induce larger doses of inflation in order to force consumers off markets.

5. Output figures at best, it has been observed, will give an indication of supplies available to the American economy. Rate of flow of finished goods to output varies, and changes in inventories and the relation of exports to imports influence supplies available.

6. Excess capacity in 1939–1940 accounted in no small part for the large rise of output relative to the small rise of prices. Against the rise of direct costs, the producers were frequently favored by a reduction in overhead costs: they made more effective use of existing capacity.

7. Where additional plant was required, it was largely provided by the government. Thus, capital costs might not be reflected in the prices of commodities produced with the new capital, but the general price level would be affected by the increase in deficit financing involved.

Excerpts from a government report on output follow, after which we turn to the problem of productivity. Its relevance is that supplies will be greater and inflation less, the more productivity rises.

APPENDIX

EXCERPTS FROM WPB: *WAR PRODUCTION IN* 1942

"In 1942 the United States transformed itself from the world's greatest producer of peacetime goods to a producer of the machines and equipment of war at a rate unequaled by any other nation. At the end of the year the United States was producing shooting equipment at a rate more than four times faster than in November, 1941.

"The nation came into 1942—the year of crisis—carrying a substantial war program on top of the greatest volume of civilian production ever attained in one year. But at year's end the civilian economy was getting little more than it needed to support the increasing weight of a prodigious war program.

"In 1941 the United States boosted tank production from virtually zero to many hundreds a month, and at the same time produced 3,700,000 electric refrigerators. Some 50,000 machine guns were produced, as were more than 1,500,000 typewriters. Plane production of about 2,000 a month was achieved in the same year that saw production of an all-time high of 5,000,000 motor vehicles, decorated with chrome and stainless steel bright work. Millions of tons of steel went into bedsprings, farm machinery, egg-beaters, washing machines, school buildings, railroad locomotives, and hundreds of other civilian products, and there was enough steel besides to achieve production of 125,000 deadweight tons of maritime shipping in a single month.

"America in 1941 loaded its industry with orders for civilian goods like a trader packing his willing beast of burden with a tremendous load of produce for a trip to a market thronged with eager buyers—not forgetting to include in the bulging pack a few things he had promised to lend a friend in town.

"Then the shock of Pearl Harbor. But even so, it wasn't until a month later—January 6, 1942—when the President set production goals which startled the world, that the United States, like a sluggish champion prize fighter, fully realized it couldn't do the job unless it got lean and tough and threw all its strength into the effort.

"As total appropriations for war purposes bounded from 60 billion dollars to 100 billion, 200 billion and 238 billion, the primary task of converting industry to war production was rushed. The pressure was on, and there was no time to lose. Singapore fell to the Japs and with it went the rubber source of a nation whose more than 30,000,000 cars and trucks rolled on rubber. With it, too, went the normal source of tin, cobalt, hemp, and other materials.

"In early February the WPB issued an order which loosed the might of America's greatest industry against Hitler: production of automobiles was stopped, and the industry which had produced 5,000,000 cars and

trucks in a year set its manpower and inventive genius to work tooling up for tanks, planes, guns and other weapons. In quick succession came limitation orders to insure that steel, copper, aluminum, and a score of other materials went into war goods, and that industry went to work producing them. Within a few months the great consumers' durable goods industries were virtually shut down, as such, for the duration.

"The conversion phase unfolded. Manufacturers of women's unmentionables were making mosquito netting; a hair-curler producer was making clamps for airplane assemblies; a roller coaster maker had converted to production of loading hooks and bomber repair platform; toy trains to bomb fuses, watches to fire control equipment, typewriters to machine guns, tombstones to armor plate.

"Manufacturers who couldn't make a war product separately pooled their resources and took a contract together. Most prime contractors let out subcontracts by the dozen, some by the hundred.

"Altogether, about 70,000 prime contracts and 700,000 subcontracts were let during the year.

"Construction was booming. Airfields, cantonments, barracks, ammunition plants, synthetic rubber plants, housing for war workers—contracts were let and work was rushed throughout the land. The 1942 construction program within the United States totaled some 13 billion dollars—the greatest in history. Deliveries of machinery and equipment added another 3.5 billion. In relation to resources, the program was too big.

"The production curve climbed steadily. In March the rate of munitions production was twice what it had been in November, 1941. By June it was three times greater. The President announced that nearly 4,000 planes were produced in May.

"Then production began to falter, and the answer was, in part, materials shortages and the problems of scheduling that these shortages increased. More steel, copper, and aluminum were being produced than ever before, but not enough. America learned, for example, that it couldn't get all the synthetic rubber it wanted because it takes, among other things, a lot of copper to build a synthetic rubber plant, and some ammunition plants were temporarily shut down and others were running at less than capacity for lack of copper. Steel was short. Aluminum was short. Rubber was short, and silk; and all the good substitutes for them were short.

"Conservation measures, already well developed, were intensified. Industry cooperated with government in cutting down industrial waste. Production for civilian purposes was cut further. Products for civilian and soldier were simplified. Specifications were changed: steel treads instead of rubber treads on tanks, a Victory bicycle model, no 3-inch pipes where a 2-inch pipe would do.

"The scrap campaign and other conservation measures alleviated the situation, but the troubles of the ailing production program had to be attacked at their roots. The program had growing pains. It had grown so fast it was out of balance; more contracts had been let for munitions, con-

struction, equipment, transportation, and other military and civilian items than there was material to fill them.

"The first big job had been done, and done well: American industry was in production for war. The WPB went on to the next big job: achieving maximum sustained production by helping to get every plant on an approved schedule within a precisely balanced overall program. Materials and other resources had to be budgeted and allocated to produce the greatest possible amount of the things needed most by the United Nations at any given time.

"The normal laws of supply and demand had long since become inoperative, because there was no ceiling to demand, and the nation's ability to produce, which had never before been tested, was definitely limited. The preference rating system, designed to insure that urgent production got materials ahead of less urgent, bogged down because there were more 'urgent' calls than there was material. Rating in the A-1 class progressively became less valuable.

"The Production Requirements Plan, a big improvement, was set up as a means of allocating materials on the basis of the quarterly needs of the various manufacturers. It proved inadequate principally because it did not compel that the total program would be kept within ability to produce and because it didn't make sure that some components wouldn't be manufactured at the expense of others. The patriotic manufacturer, for example, who boasted his production of machine guns was 60 per cent ahead of schedule, had unwittingly caused some other manufacturer of an equally important product to be behind schedule. Further, some manufacturers, determined to keep *their* plants on schedule, ordered more materials than they needed before they needed them.

"Under CMP the War Production Board divides available steel, copper, and aluminum among the government agencies responsible for filling the essential military and civilian needs of the United States and the other United Nations. Each agency, in turn, cuts its programs to fit its share of materials and divides the steel, copper, and aluminum allotted to it among its manufacturers. Thus, each manufacturer is assured of just enough material, when he needs it, to produce precisely what is asked of him. CMP goes into effect gradually until July 1, 1943, when it becomes the only system under which Controlled Materials are allocated.

"On the anniversary of Pearl Harbor the American people, their allies, and their enemies were told that 1942 would see production of approximately 49,000 planes, 32,000 tanks and self-propelled artillery, 17,000 anti-aircraft guns larger than 20 mm., and 8,200,000 deadweight tons of merchant shipping. There was the additional satisfaction that most items —particularly planes—were bigger and more complicated than those contemplated when the goals were set.

"Other figures and comparisons help to tell the story of production accomplishments for 1942. In 1941 the United States spent $13,800,000,000 for defense. In 1942, $52,500,000,000 was spent for war. In the first World

War rate of expenditures hit a peak of about two billion dollars a month. By the end of 1942, the rate exceeded 6 billion dollars a month.

"Three and one-half times as many aircraft—bombers, fighters, transports, observation and trainers—were produced in 1942 as in 1941. Production of guns, large and small, and of tanks and ammunition, was six and one-quarter times 1941 production. Naval vessel production was two and three-quarters times and merchant shipping five times.

"By the end of the year, the monthly rate of U.S. military plane production was twice that of Germany's. The U.S. and the United Kingdom together were producing two and one-half times as many planes as all of Axis Europe combined. United States war production at the end of 1942 was equal to that of all the Axis nations, and the United Nations were out-producing the Axis almost 2 to 1.

"As 1942 ended, the United States grimly entered its second year of war. In 1943, the overall war program would have to be intensified to do a better than 90-billion-dollar war job. Production for war *alone* would have to equal the value of *all* the goods and services produced by the nation in its years of greatest prosperity. It would have to produce two-thirds again as much as in 1942. Attainment of these goals would mean that by the end of 1943, the United States alone would be out-producing the Axis two to one, and with its allies would be out-producing the Axis three to one.

"America was entering the third stage of its production for war. The first stage, begun in mid-1940 when a total of 12 billion dollars was available —appropriations, contract, and tonnage authorizations—for all defense purposes, had ended with Pearl Harbor when the total program had reached 64 billions. This was the 'curtain raiser,' the tooling-up stage. The second stage was represented by the expansion of armed forces and the rate of production achieved in 1942. The third stage, in Chairman Nelson's words, entailed 'all-out mobilization and centralized direction' over the economy.

"In the third stage every man and every pound of critical materials must count. The war production labor force grew from 6,900,000 in 1941 to 17,500,000 in 1942. At least 5,000,000 more workers would be needed in 1943; no man or woman could be wasted. Faced with filling staggering demands for munitions, food, clothing, transportation, and communications and all the other things needed on the home fronts of the United Nations and the military fronts of the world, the United States could waste nothing that could be used to make the enemy weaker and the United Nations stronger."

Chapter VI

Productivity and Prices

1. THE PROBLEM

In the preceding chapter we surveyed the over-all picture of supplies and prices. Our task in this chapter is to discuss one important aspect of supplies, namely, productivity.[1] *The more produced per man-hour of work, the more supplies will be available and, ceteris paribus, the lower will be prices.*

The following approaches should be distinguished:

1. In war, the authorities dispense with frills and discourage excessive servicing (*e.g.*, advertising, fancy containers, etc.); and, under the incentive of a guaranteed market, sellers are disposed to economize on dispensable services. As a result, basic output, for a given supply of factors, tends to rise. These gains are real and important; they are not, however, measured by the usual index of productivity. They may be measured rather by *relative* diversions away from distribution and services and from relatively nonessential industries, generally to manufacturing.[2]

2. *Then there is the relation of output and man-hours of employment, which is generally interpreted as a measure of productivity.* If, for example, the output of anthracite coal doubles and man-hours of employment remain unchanged, productivity will be found to have risen by 100 per cent.

3. Finally, productivity might be measured in a manner suggested by Dr. Kuznets.[3] He proposes to compare not the man-hour output of war industries in (say) 1939 and 1943, but rather (1) the output of a

[1] *Cf.* also Ch. XXVII.

[2] *Cf.* Ch. IX, where the success in attaining these objectives is discussed.

[3] See especially S. Kuznets, *National Product War and Prewar*, NBER, 1944; and the discussion by M. Gilbert and others in "National Product, War and Prewar," *R.E.S.*, August, 1944; *cf.* also F. C. Mills, *Prices in a War Economy*, p. 13.

given supply of factors as actually used in 1943 and (2) what these factors would have yielded in 1939 had they been allocated as between war and civilian industries as in that year. Since, according to Dr. Kuznets, war industries were less efficient than nonwar industries in 1939 and even in 1943, the net change in man-hour output over *all* industry is found to be less encouraging than is found under the usual attack on the subject. This follows because relatively inefficient war industries become of increasing importance.

In this study we propose to use approach (2). *For a study of inflation, what counts is the change in output per man-hour in each group of industries.* That more might have been produced if the war industries had been as efficient as nonwar industries is an interesting fact if true, but is only of theoretical interest for our problem. Prices fall, *ceteris paribus*, the more output expands per man-hour of employment. It is clear that Dr. Kuznets' approach must lead to results different from ours. He guesses at a rise of productivity of 67 per cent in war industries from 1939 to the first half of 1943; but productivity in 1943 was nevertheless only 80 per cent of productivity in nonwar industries. *Our conclusion would be that productivity has risen by* 67 *per cent in war industries; his, that productivity is* 20 *per cent less than in nonwar industries.*

On the whole, the expansion of output has surprised most observers. Economists were in general agreement that a large rise of output in a brief period was likely to bring about a serious rise of real costs. Yet, despite the concentrated expansion of output, real costs per unit of output seem to have fallen since 1940. There are various explanations for this unexpected development. First, new industries have played a large part in the expansion of output, and these industries, starting from scratch, have been able to utilize the most efficient methods of production. Second, the country before 1940 had a considerable amount of excess capacity. As demand rises with the spread of the war and the intensification of the war effort, industry is able to make more effective use of its existing capacity and managerial personnel. Third, business managers have made very effective use of their raw materials and their human resources. In this connection upgrading, insofar as it has tended to promote the use of given human abilities, has been particularly important. The intelligent unskilled laborer has been converted into a semiskilled laborer, the semiskilled laborer into a skilled laborer. Road workers are now operating intricate machines, and divers have become supervisors of salvage operations.

In this connection, two other considerations are of some importance. Under the conditions of monopolistic competition that prevail in American industry, business units are not inclined to produce so much as they would produce under competitive conditions. The entrepreneur who has a limited monopoly within a certain price range or within a certain market area will expand his output only up to the point where any further expansion would result in a larger loss from total sales receipts than the gain had from selling an additional unit. In technical jargon, he produces up to the point where marginal revenue equals marginal costs. Under the pressure of military demands, however, the entrepreneur is assured that the expansion required by the war economy can be had without the penalty of falling prices. Therefore, he is willing to use a larger proportion of his capacity. Another gain results from elimination of unnecessary frills, *e.g.*, some selling costs and certain advertising costs. The less man power and other resources used for selling, the lower the real costs are likely to be per unit of output. In wartime the businessman experiences a sellers' market and, therefore, can easily cut his selling and distributive costs.[1] For all these reasons, then, man-hour output tended to rise from 1940 to 1945.

One should not leave out of account, however, the numerous factors in the economic situation that tend to increase real costs. First, hours of work are on the increase, and that necessarily brings reduced efficiency. Second, the military absorbs efficient workers who are frequently replaced by less competent and less experienced ones. Third, many plants are being subjected to increasing pressure to such a point that they are producing beyond the optimum, *i.e.*, at costs in excess of minimum costs. Fourth, when taxes are heavy and profits are rising rapidly, business tends to adopt careless methods of production. Entrepreneurs will waste resources through the payment of excessive wages and will reduce their taxes by advertising in order to build up their postwar markets. Where the government through loss of taxes indirectly pays a very large part of the advertising bill, business management is tempted to advertise excessively and so dissipate resources of the war economy. That output per man-hour continued to rise until 1942 may be explained by the fact that the new industries and the more

[1] Such gains will not always be evident in a rise of man-hour output. In estimating changes in productivity, we frequently compare output and man-hours of work directly employed in manufacturing. A reduction of selling costs would result in larger output for a given expenditure of labor, etc., but might not be reflected in a rise of output per man-hour in manufacturing.

efficient ones were playing an increasing part in our economy.[1] *The reader finally should be reminded that any rise in man-hour output, though it tends to reduce prices and, therefore, moderate the inflationary pressure, does not assure the country falling prices. Against the rise in man-hour output ought to be put the increased rewards to the factors of production.* Increased profits, wage rates, farm prices, and taxes, all contribute toward higher prices and more than offset the gains in "real" costs.

2. STATISTICAL ASPECTS

Man-hour output has been on the increase in the past 50 *years*, though temporarily at certain stages of the business cycle, the rise has been stopped. According to estimates of the National Bureau of Economic Research, the number of man-hours required to produce a unit of manufacturing goods was reduced by two-thirds in the 40 years preceding the war. According to one estimate, the rise of man-hour output from 1914 to 1939 was 120 per cent in manufacturing and 100 per cent in railroad transportation. In agriculture the rise of output per worker from 1913 to 1938 seems to have been 50 per cent. From 1919 through 1939 the estimated increase of man-hour output in manufacturing was 130 per cent; but it will be recalled that 1919 was not a year of high productivity.[2]

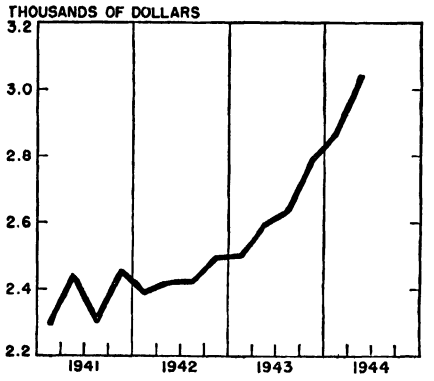

CHART 28.—Output per wage earner in war manufacturing. (*Sources: U. S. Department of Commerce and U. S. Department of Labor.*)

The Department of Commerce, in comparing the F.R. Index of Production to man-hours of work, concludes that the implied index of man-hour output rose approximately 3 per cent per year from 1939 to the early part of 1943.[3] In this comparison, all industries, war and prewar, are considered. But there are other difficulties in addition to the theoretical difficulty mentioned above. For instance, the production index itself is based in no small part on statistics of man-hours of work, and deflating the index by man-hours is thus not very meaningful.

[1] Here the reader should keep in mind what was said above. First, these gains through a reduction of selling costs will not generally be reflected in upward movements of productivity indices. Second, the rise in the importance of war industries, on Dr. Kuznets' theory, would yield a net reduction in productivity.

[2] *Cf.* Mills, *op. cit.*, p. 3; U.S. Department of Labor, *Productivity and Unit Labor Costs in Selected Manufacturing Industries*, 1919-1940 (February, 1942), p. 1; *A.E.R.*, September, 1943, *passim.*

[3] *S.C.B.*, October, 1943, p. 8. *Cf.* Mills, *op. cit.*, pp. 12–13. Prof. Mills cautiously concludes that man-hour output is up slightly.

Efficiency in war industries has, of course, risen especially in war manufacturing (Chart 28). This is to be expected since the volume of output has increased much more rapidly in war than in nonwar industries. In 1940, a worker produced 23 pounds of planes per month; in 1944, 73 pounds, or a rise of more than 200 per cent. Despite improvements in quality and an increase in costs of labor and raw materials, the cost of a four-engine bomber had fallen from $500,000 in 1942 to $250,000 in 1944. Munition prices in general have declined. From the latter part of 1943 to July, 1944, employment in munitions industries declined by 9 per cent, and yet output was relatively stable. For 1941–1944, Chart 29 shows a rise in dollar output

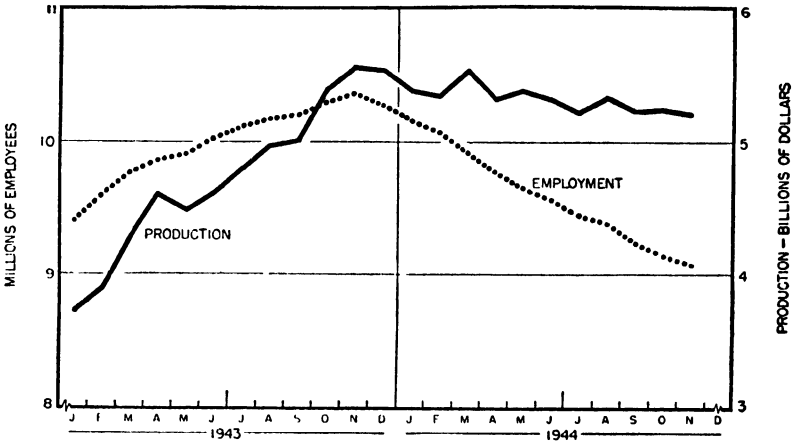

CHART 29.—Munitions production vs. employment. (*Source: First Report by Director of War Mobilization and Reconversion*, 1945.)

per wage earner in munitions production of about one-third. Since prices actually declined, the gain was even more than one-third.[1] The chart reveals large gains in output of munitions per worker in 1943–1944.

The general picture for 34 industries analyzed by the author is given in Table 22. (The number of industries covered in 1943 varies from 24 to 27.)

We may draw the following conclusions. *Man-hour output in American industry had risen significantly in the years* 1940–1943. (Gains for all industries covered, *other than mining*, were 9 per cent.) The gains attained by 1941, however, were reduced somewhat in 1942–1943.[2] These gains are large if one considers that for 34 industries covered, the rise of total output was 33 per

[1] *S.C.B.*, April, 1943, p. 10; August, 1944, p. 3. *Cf.* W. Haber, "Manpower and Employment Problems in Transition from War to Peace," *R.E.S.*, May, 1944; W. Haber and E. Welch, "The Labor Force during Reconversion," *R.E.S.*, November, 1944; Aeronautical Chamber of Commerce of America, Inc., *Air Power, an Estimate of American Aviation and a Recommendation for a Policy of American Air Power*, 1944.

[2] The BLS estimates are not quite so optimistic; they put the rise by 1941 at 8 per cent, and in 1943 at 4.6 per cent. (Letter accompanying *Impact of the War on Employment*, June, 1944.)

TABLE 22.—OUTPUT PER MAN-HOUR, MAN-HOURS, PAY ROLLS AND UNIT LABOR COSTS IN SELECTED INDUSTRIES, 1940–1943

(1939 = 100)

	Output per man-hour	Man-hours of work	Pay rolls	Unit labor costs
1940	103.7	105.4	107.9	98.8
1941	107.8	116.6	129.5	103.1
1942	106.9	125.1	154.1	116.5
1943	104.9	133.9	176.1	123.3

SOURCE: *Analysis of Materials on Productivity*, issued by BLS.

cent by 1942 and for 24 industries 40 per cent in 1943. Gains in straight war industries have, moreover, been much larger.

In general, the gains in output per man-hour have been especially large in industries where output expanded greatly. This generalization does not apply with equal force to the mining industries. In the steam railroad industry the output rose close to 150 per cent in 1943 over 1939, and man-hours used per unit of traffic declined substantially (see Chart 30). In the rayon industry, the

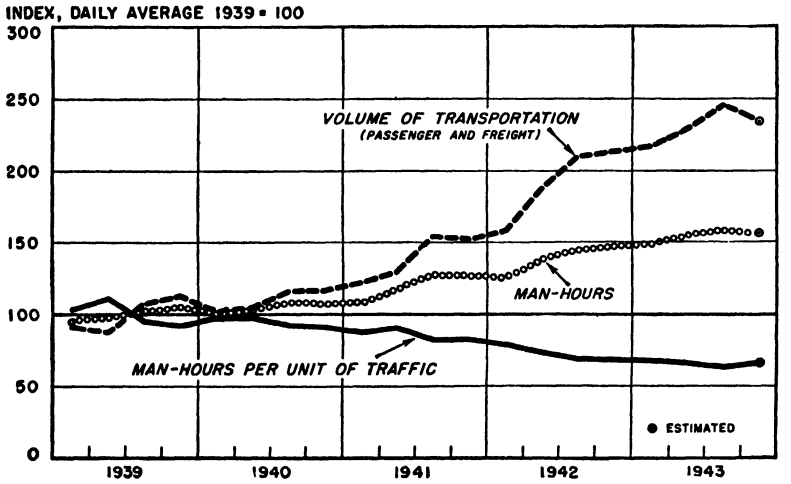

CHART 30.—Man-hours and volume of transportation (Class I steam railways, excluding switching and terminal companies). (*Source: Survey of Current Business.*)

output rose by 60 per cent, and output per man-hour, 32 per cent. In copper, lead, and zinc mining, on the other hand, the respective rises of output were 50 and 13 per cent; but production per man-hour in the former declined by 1 per cent and in lead and zinc mining by 21 per cent.

For 24 industries up to 1943, the changes are shown in Table 23.

TABLE 23.—CHANGES IN MAN-HOUR OUTPUT, 1939–1943
(24 industries)

	Number of Industries
Large rise in man-hour output (10 per cent and over)	8
Small rise (less than 10 per cent)	6
Small decline (less than 10 per cent)	8
Large decline (more than 10 per cent)	2

SOURCE: *Analysis of Materials on Productivity*, issued by BLS.

3. PRODUCTIVITY AND PRICES

One might at first expect that, in the light of the general improvement in productivity, prices would tend downward. Undoubtedly the rise of output per man-hour contributes toward an increase of supplies and thus tends to depress prices. Furthermore, the expansion in the number of hours of work has similar results.[1]

But unit labor costs continued to increase, because in most instances pay rolls increased more rapidly than the product of the percentage rise of man-hours and man-hour output. Wage rates per man-hour rose and, where these increases were not offset by an increase in output per man-hour, the labor cost per unit of output soared. In 1940 and 1941 remarkable stability prevailed. In 1942 and 1943, however, pay rolls rose much more than the product of the percentage rise of hours and of output per man-hour. Thus for flour and other grain mill products, pay rolls rose 69 per cent, whereas man-hours of employment rose only 29 per cent and output per man-hour declined 17 per cent. Unit labor costs rose 60 per cent. These increases of unit labor costs help to explain the price problems of the years 1942–1945 and the postwar period. On top of the increase of labor costs per unit of output, rises in certain taxes and costs of raw materials tend to increase unit costs further. As output expands, on the other hand, money costs per unit of output tend to fall. This gain, however, has been reflected in the rise of output per man-hour.

Despite large increases in output, unit prices in general continue to rise. The explanation is, of course, the increase in monetary rewards per hour of work or, better, per unit of output. Farmers and miners receive

[1] Prof. Mills estimated the rise of the number of hours of work in manufacturing from 15 billion hours in 1939 to 26 billion in 1942, a rise of 73 per cent. In 1943, one government agency estimated the rise of hours for factory wage earners from December, 1939, to December, 1944, at 115 per cent. Mills, *op. cit.*, pp. 12–13; NRPB, *Demobilization and Readjustment*, June, 1943, p. 88.

higher rewards per unit of product, and labor receives an increase per hour of work and a smaller increase per unit of output. In manufacturing and in railroads, we are confronted with large rises of output and relatively modest changes in unit prices. In the railroad industry, where prices are fixed by law and are easily enforceable and where the reduction in overhead costs per unit of output resulting from expansion is especially important, there has actually been a reduction in freight revenues per ton-mile. In agriculture a substantial rise of output is accompanied by a very large increase in unit prices. There the influences of parity, of strong political pressure, of limited price control (which is related to strong political pressure), and of intense demand are all important. The facts are summarized in Table 24.

TABLE 24.—PERCENTAGE CHANGE IN QUANTITY AND UNIT PRICE OF SELECTED ELEMENTS OF THE ECONOMY, 1939, TO MARCH, 1943

	Quantity	Average unit price
Manufacturing production	+96	+25
Mineral production	+17	+14
Revenue freight per ton-mile	+120	−2
Agricultural production	+20	+71

SOURCE: F. C. Mills, *Prices in a War Economy*, p. 23.

4. CONCLUSION

1. Man-hour output has tended to rise during the war, though the major gains had been attained by 1942.

2. Rises were particularly large in war industries.

3. These gains contributed toward reduced prices; but in nonwar industries the increase in factor prices more than offset reductions in real costs and prices tended upward. In war industries, the net movement was downward.

4. Our results should not be interpreted to mean that more was produced in 1943 or 1944 for a given composite of factors than would have been produced in 1939 had the relative importance of different kinds of industries been as of 1939.

Chapter VII

Resources for War

1. INTRODUCTION

So far in Part II we have dealt with the general problem of supply and the relevance of productivity for supply and prices. In this chapter we are concerned with the question of the sources of war production. We, therefore, analyze the national product: its size, its growth, and the contributions of various components to its increase. *In general, war resources are provided out of a rise of national product or a diversion from less essential production.* An obvious conclusion but subject to serious reservations is the following: the greater the contributions of rises in product, the less the inflationary pressures; and the more that recourse is had to diversions, the greater the inflationary pressures.

Let us consider these alternatives in turn:

1. Output expands and additional resources are made available to the military. Here incomes rise and the flow of civilian goods remains unchanged. Inflationary pressures therefore increase.

2. Military resources are made available through diversions of factors from less essential civilian industries. Here prices will rise not because incomes expand but because at a given income less civilian goods are made available. We should, however, distinguish diversions from capital, where the effects on supplies of consumption goods are not immediate, from diversions from output of consumption goods.

Despite the excess of demand over supplies resulting from expansion of war output, the increase of output is probably anti-inflationary. We may consider what would have been the result of a less satisfactory expansion of output. Thus from 1939 to 1943, gross national product (GNP) rose by $100 billion and war expenditures by $80 billion. Had GNP risen by $50 billion, for example, instead of by $100 billion, it might have been necessary, in order to attain a war outlay of $80 billion, to reduce consumption expenditures to $40 billion. The actual

amounts were $61, $91, and $97 billion, respectively, in 1939, 1943, and 1944. At a national income of, say, $110 billion, it would not have been practical to reduce consumption to $40 billion. It would have required a great inflation to reduce consumption even to the equivalent of $60 billion in 1943 prices. The government would have had to force consumers out of the market through the manufacture of much additional money and price competition.

We conclude, then, that the rise of output saved the country from a great inflation; but if a significant part of the additional income thus created had not been siphoned off through personal taxes and savings and if prices had not been controlled, the degree of inflation still would have been serious.

2. GROSS NATIONAL EXPENDITURE

It is the ABC of war economics that war resources are obtained from additional output and from a reduction of consumption and are secured at the expense of capital formation or investment and at the expense of foreign nations through a rise of imports and a reduction of exports. It is evident at first inspection that the major resources will come from additional output; a reduction of consumption and of capital for nonessential purposes may contribute an important, if not the largest, part of the supplies needed. Under the distribution of functions among the United Nations in the current war, the United States had to increase its exports and reduce its imports and, therefore, instead of gaining at the expense of foreign nations, it suffered losses.

A concise picture of the war economy is given in Table 25, which indicates that whereas 10 per cent of gross national expenditures in 1941 went for war purposes, the proportion for 1944 was 43 to 44 per cent. The term "gross national expenditures" may confound the uninitiated. Gross national expenditures or product include, in addition to net national income, output that is not technically part of national income, *e.g.*, expenditures to maintain capital and expenditures by governments which are transfer payments and are already included in national income. This concept of gross national *expenditures* or *product* should not be confused with gross national income which is discussed in the next chapter. The former, for example, is put at $152 billion and the latter at $159 billion for 1942. For 1943 GNP was $187 billion,[1] and for 1944 the total was $199 billion.

[1] The concept of the Department of Commerce is more inclusive than that of Dr. Kuznets. The latter obtains a smaller GNP. *Cf.* next chapter and Ch. I.

TABLE 25.—GROSS NATIONAL PRODUCT OR EXPENDITURES, 1939–1944

(In billions of dollars)

Year	Gross national expenditures * (1)	Federal government for war (2)	Output available for private use (3)	Private gross capital formation (4)	Consumer goods and services (5)	Durable goods (6)	Nondurable goods (7)	Services (8)
1939	88.6	1.4	72.6	10.9	61.7	6.4	32.6	22.7
1940	97.0	2.7	80.4	14.7	65.7	7.4	34.4	23.9
1941	119.6	12.8	93.6	19.0	74.6	9.1	40.1	25.4
1942	152.1	50.3	89.4	7.5	82.0	6.4	48.0	27.6
1943	186.5	81.3	93.1	2.2	91.0	6.5	55.2	29.2
1944	198.7	86.3	99.4	1.8	97.6	6.7	60.0	30.9

SOURCE: *S.C.B.*, April, 1944, p. 13; September, 1944, p. 4; February, 1945, p. 5.

* Column (1) does not equal the sum of columns (2), (3), (4), and (5) because expenditures of the government for nonwar purposes are excluded.

The reader will find two charts here which further clarify the general development (Charts 31 and 32). First, the distribution of GNP between

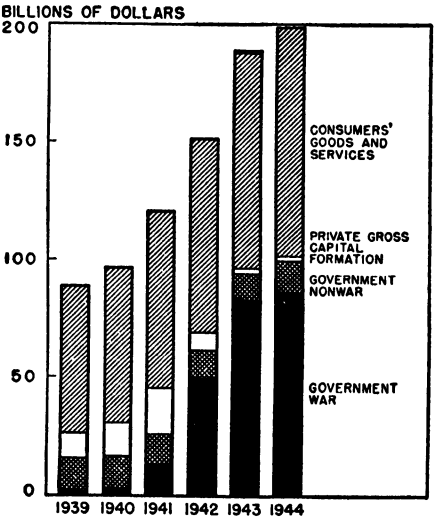

CHART 31.—Gross national product. (*Source: U. S. Department of Commerce.*)

government and private use is presented. Second, an interesting study by the National Resources Planning Board gives the details of allocation of GNP from 1939 to 1942 on a historical basis and 1943 to 1944 on a forecast basis. Actual allocations have been significantly different from those anticipated

in official circles in 1942. Total GNP has risen to an amount remarkably close to anticipations. Consumers' expenditures, however, have been about $10 to $15 billion yearly above anticipations in 1943 and 1944, and government war expenditures approximately $20 billion yearly below peak estimates. In part the difference represents a failure to control consumption as effectively as had been anticipated. (Chart 32 is on page 98.)

TABLE 26. PERCENTAGE OF GROSS NATIONAL PRODUCT, 1939, 1941, 1943, 1944

	1939	1941	1943	1944
Consumption expenditures	69.6	61.9	48.4	49.1
Private gross capital formation	12.3	16.1	1.1	0.9
War expenditures	1.6	11.0	43.9	43.4

SOURCE: Calculated from *S.C.B.* All items in GNP not included.

As an increasing *share* of GNP went into war needs, the *share* going into consumption and private capital formation declined. This is illustrated in Table 26.

TABLE 27.—GROSS NATIONAL PRODUCT IN CURRENT AND 1939 DOLLARS, 1939, 1943, 1944

(In billions of dollars)

	Rise of GNP, 1939–1944, billion dollars	Percentage rise, 1939 1944
In current dollars	108	123
In 1939 dollars	77	87

	GNP		Implicit price index
	Current dollars	1939 dollars	
1939	88.6	88.6	100
1943	186.5	155.3	120
1944	198.7	165.6	120

SOURCE: See Table 13. Part of that table is reproduced here.

Table 27 gives the rise of GNP in current dollars and in 1939 dollars (1939–1944).[1]

[1] The reader should be reminded that both Dr. Mills and Dr. Kuznets use a higher valued deflator and obtain smaller rises in GNP. *Cf.* F. C. Mills, *Prices in a War Economy*, pp. 8–10; S. Kuznets, *National Product War and Prewar*, NBER, 1944; and symposium in *R.E.S.*, August, 1944.

This bright picture of our expanding war economy should be toned own to some extent, however. Concentration on dollar-and-cents figures ves an exaggerated picture of the expansion of our economy and of re- urces made available for war. Failure to allow adequately for the rise ' prices yields an unduly high rise of real product in calculations by the epartment of Commerce. The figures in Table 28, however, taken from r. Kuznets' study, probably are on the pessimistic side.[1]

TABLE 28.—GROSS NATIONAL PRODUCT AND WAR OUTLAY, RISE, 1939, TO FIRST HALF OF 1943

(In billions of dollars)

	GNP	War outlay
In 1939 prices:		
Kuznets' assumption *a* *	37.3	43.6
Kuznets' assumption *b* *	46.7	53.0
Department of Commerce	66.0	70.1
In current prices, Kuznets	94.3	77.5

SOURCE: S. Kuznets, *National Product War and Prewar*, pp. 3, 29.

* Assumption *a*, relative efficiency in war industries in first half of 1943 = 80 per cent of that in non- r industries; assumption *b*, roughly 100 per cent. The percentage rise from 1939 to 1943 is from 48 to per cent for *a*, and from 60 to 100 per cent for *b*.

FAILURE TO CUT CONSUMPTION

There can be little doubt that consumption has not been cut so much had been hoped, and this is one important explanation of the failure of ilitary output to rise as rapidly as had been anticipated. (The reader is minded, as stated above, of the differentiation between actual expendi- res on consumption and those forecast. The difference was large indeed.) ntinued high production of consumption goods has also, of course, con- buted toward the moderation of the rise of prices of civilian goods,[2] but has also injured the war effort. Continued high consumption arises in rt from the failure to divert resources adequately and rapidly enough m consumption-goods industries to war industries, and in part from ailable inventories. Consumption in current dollars was approximately per cent higher in 1943 than in 1939, and about 58 per cent higher in 44 than in 1939, and that constitutes a real increase. (The general net ovement through 1944 is well indicated in Chart 31.)

The real value of expenditures on consumption since 1941 has been ghtly upward. Expenditures from 1941 to 1944 rose by about 30

[1] As pointed out earlier in this volume, the differences between Dr. Kuznets and the partment of Commerce are theoretical ones and not easily resolved. For our purposes e, the Department of Commerce results are used.

[2] A reservation is that the expansion in consumer expenditures is explained in part by ed shifts to higher priced items.

per cent and the cost of living by about 20 per cent. We should, however, allow for restrictions on expenditures, unavailability of desired goods, deterioration not measured by index numbers, and the like. We can conclude from the Department of Commerce figures that civilian consumers did well in the war and clearly vastly better than in the immediate prewar period. Some reservations are noted below. In 1939 dollars, the rise seems to be almost 20 per cent from 1939 to 1944.[1] Consumption in 1943 was $91 billion, whereas the government

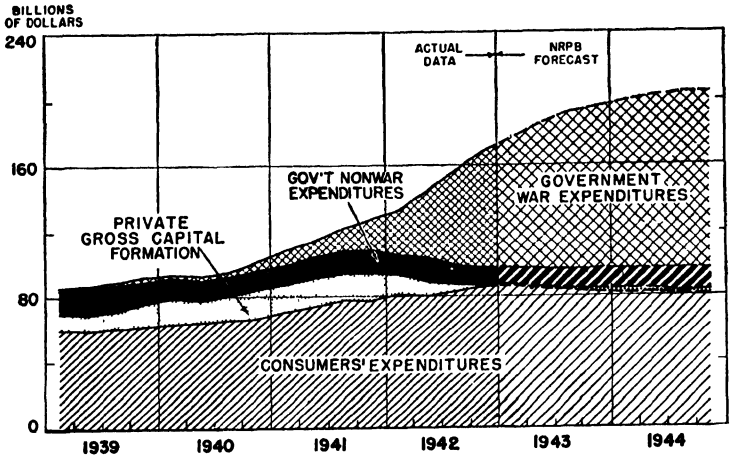

CHART 32.—Gross national product, 1939–1944, adjusted for seasonal variation, annual rates in billions of current dollars. (*Sources: U.S. Department of Commerce*, 1939–1942; *National Resources Planning Board, estimates for* 1943–1944.)

plans were for a much lower level of consumption. In 1944 consumption was $98 billion.[2] *This maintenance of consumption at a high level, insofar as it means an increased pressure on consumption markets, accounts in one sense for the rise of prices in the consumption-goods area.*[3] *Insofar as it reflects a failure of conversion to war industries or a success by the consumption-goods industries of obtaining undue amounts of scarce materials, the increased spending represents the effects of additional supplies made available to the civilian economy and, therefore, is a factor tending to reduce supplies for war.* Any such disproportionate use of resources by the civilian economy is, of course, at the expense of the war economy.

[1] *S.C.B.*, December, 1944, p. 2.

[2] Early in 1943, the official estimate for 1943 consumption was $70 billion. *Battle Stations for All*, 1943, p. 20.

[3] The rise in the cost of living was 5, 11, 6, and 1+ per cent in the years 1941, 1942, 1943, and 1944, respectively.

According to official figures, then, real consumption in the United States in 1944 was 20 per cent higher than in 1939, whereas in Great Britain there had been a reduction in personal expenditures on consumption of 19 per cent by 1942, and 21 per cent in 1943. The greater success of Great Britain may be explained in part by her aggressive war policy and in part by the fact that the United States could afford the luxury of increased consumption, since very large resources were made available to the war economy out of increased output and at the expense of capital. *In summary, the government did a remarkable job in bringing about an increase of GNP of more than* 120 *per cent by the end of* 1944 *and an increase of around* 70 *to* 90 *per cent in real terms. It failed, however, to reduce consumption, and that is explained by inadequate fiscal measures and by the slowness with which factors of production were drawn out of the consumption-goods industries.* These difficulties will become apparent when we discuss the man-power issue in later chapters.[1]

We should not leave the subject of consumption, however, without expressing some reservations concerning official estimates of consumption. *The net effect of these reservations is, in my opinion, that consumption probably did not rise so much as has so far been indicated.* Part of the difficulty is, however, that we do not define our terms precisely (see especially 2, 3, 4 below).

We observe the following:

1. It has been noted by Dr. Kuznets and others that the flow of consumers' goods was not so large as a series of consumers' expenditures deflated by a cost-of-living index show it to be. On this score a study by the Federal Reserve Board concluded that about one-quarter of the production of an important group of consumption goods was put at the disposal of the military inclusive of lend-lease; and that the production of consumption goods *available to civilians* was approximately 10 per cent less than in 1939.[2] (These include items in the production index and should not be mistaken for *consumers' goods and services.*)

2. [This is suggested by (1) above.] A series of consumption expenditures is not so significant in a period in which 11 millions are added to the armed forces as it might be. This fact explains in part the inconsistency of Department of Commerce figures and (1) above. Consumption expenditures (in 1939 dollars) certainly could not have risen by 20 per cent for the reduced number of civilians. Consumption

[1] See Chs. IX and XVII.

[2] *F.R.B.*, September, 1944, p. 842.

expenditures, in fact, include outlays by the government, but unfortunately not all. The Department of Commerce series, therefore, apparently does not cover civilians only, nor both civilians and military. Actually, it gives civilian expenditures on consumption, plus some part of expenditures for consumption for men in uniform.

3. Consumption expenditures are defined in one way by one investigator and in another by a second. Even within the Department of Commerce itself, definitions vary significantly. Mr. Shaw, for example, includes implicit expenditures for owner-occupied houses, food consumed on farms, etc. GNP of the Department of Commerce excludes these: Table 29 shows with what varying results.

TABLE 29.—CONSUMPTION EXPENDITURES, 1939–1943. TWO DEPARTMENT OF COMMERCE SERIES

(In billions of dollars)

	As used in GNP series	Shaw
1939	61.7	66.5
1941	74.6	80.1
1942	82.0	88.7
1943	91.0	97.7

SOURCE: W. H. Shaw, "Consumption Expenditures, 1929–1943," *S.C.B.*, June, 1944, pp. 6–11; *cf.* also September, 1944, p. 4.

4. We should distinguish consumption expenditures from actual consumption. In recent years consumers have been consuming durable goods purchased earlier. To that extent consumption exceeds expenditures on consumption.

5. Allowance should be made for inventories used up. (This in part explains the difference between consumers' goods produced and expenditures on consumers' goods.)

6. Figures should be corrected for subsidies and the $3 billion or $4 billion rise in excise taxes. Consumption may well be about $2 billion more than expenditures if allowance is made for subsidies paid to keep prices of consumers' goods down. An amount equal to the large rise in excise taxes, on the other hand, may be deducted from consumption expenditures. The fact is that consumption seems to have risen $3 billion to $4 billion more than it has: consumption expenditures now include transfers of $3 billion to $4 billion additional to the government. This

is, however, reflected partly in higher prices; and, therefore, consumption expenditures deflated by an index number should also reflect the increased excise taxes.

4. THE DRAINS ON NET NATIONAL INCOME

Another approach is to look at the problem of resources for war in terms of net national income. Whereas in 1943 our war expenditures of $81 billion accounted for less than one-half of our GNP of $181 billion, our war expenditures accounted for about $80 billion of our net national income of $148 billion in the same year. War expenditures in the calendar year 1942 were $50 billion, consumption expenditures approximately $80 billion, and national income in excess of $115 billion. The difference between national income and consumption was, therefore, $35 billion. How is it possible, then, to spend $50 billion for war purposes when actually only $35 billion seems to be available? It is possible because, for example, resources which are not included in national income (*e.g.*, depreciation funds) are put at the disposal of the government. The country then provides resources for the war economy through consumption of nonessential capital. Thus the sum of $35 billion and $15 billion for capital consumption would make up the total of $50 billion. But there are other possibilities. It is conceivable that the national income may be underestimated, or the output of war goods may be less than is indicated by the war expenditures, or consumption may be less than $80 billion. Any of these changes or a combination of them might well account for the $15 billion by which the $50 billion of war expenditures exceed the difference between national income and expenditures on consumption. The most relevant consideration, however, is the first.

Let us consider the problem in terms of the year 1944–1945. An official pronouncement was made that the government contemplated a war program of $90 billion for the fiscal year 1944–1945 and that the country was spending at the rate of $85 billion to $90 billion for war in 1944. Estimates of net national income in 1944 seemed to be around $155 billion to $160 billion, and we might estimate consumption expenditures at the peak of the war at $90 billion to $95 billion at 1943 prices.

Let us consider the lower of these limits. The $90 billion worth of consumption goods would correspond perhaps to about $72 billion at prewar prices. Our *actual* consumption in dollar terms was up more than 50 per cent, in real terms 20 per cent, exclusive of discounts for unrecorded deterioration. But by the summer of 1944 money income had increased by about 130 per cent over the 1935–1939 level, and real *net* income rose by about 90 per cent. Thus, consumption was held down in relation to income levels, although not so much as these figures suggest, because consumers held large inventories of durable and semidurable goods. *Dollar* consumption at the peak of the war effort was more than 50 per cent higher than at the 1939 level. This compares with a rise of net money income of at least 125 per cent.

What can be said, in a general way, of the distribution of the net national product along the lines assumed above? If national income rises to $160 billion, about $90 billion will represent a rise in the dollar value of output. Since the dollar value of consumption will not be reduced from the 1939–1940 level, no contribution to the war output is made by a reduction of consumption. In fact, $30 billion or more for consumption will come out of additional output (in dollar terms). The $90 billion war program will then be accounted for as follows:

1. A rise in the dollar value of output will account for $90 billion.
2. Of this increase in output, about $30 billion will represent an increase in the dollar value of consumption. Thus, the net gain for the war economy will be $60 billion.
3. Where will the additional $30 billion ($90 billion for war minus $60 billion available) come from? Perhaps $5 billion will come out of funds that in the late thirties might have been used for capital expansion. That leaves $25 billion or more to be accounted for by the allocation to war of resources not included in *net* national income. The remainder must come from various capital sources or out of gross income that does not become net income. For example, capital consumption in nonwar areas may account for a large part of the remainder.[1]

It is always possible that a particular program will not be achieved. This was the experience in the fiscal year 1943 1944. Consumption continued to rise, and war outlays did not attain anticipated heights.

A *substantial* rise of incomes above $160 billion in 1945–1946 is not likely unless prices increase markedly. If prices rise more than 5 per cent per year, the *real* program as planned will not have been achieved. We should be reminded once more that the analysis in real terms gives different results. For the years 1941, 1942, and the first half of 1943, Dr. Kuznets' estimate, it will be recalled, was a rise of war output of $37.8 billion (1939 dollars). The rise of output contributed less than one-half and other components (largely capital) more than one-half. According to the Department of Commerce, the rise in war output 1941–1943 was $59.7 billion (1939 dollars) and a rise of output in real terms accounted for roughly two-thirds of this increase in war production.[2] The general conclusion is that in real terms, the contribution of additional output to resources for war was not so great as in money terms; and that the rise of output as given officially was higher than Dr. Kuznets' estimate.

5. SUMMARY FIGURES: USE OF ADDITIONAL RESOURCES MADE AVAILABLE

For the years 1940–1944 *we relied first on a rise of output and to a substantial degree on a diversion of resources that had previously been used for*

[1] *Cf. S.C.B.*, April, 1943, p. 17.

[2] The period covered is not the same as that in Table 25.

capital.[1] Our experience (in dollars) for 1939–1943 is described succinctly in Table 30. (Again, the *real* results are different.) These figures are in dollars of current value. Even if allowance is made for the rise of prices, consumption was up about 15 per cent. It is unfortunate, moreover, that out of an additional $109 billion made available, more than 25 per cent were absorbed in a rise of dollar expenditures on consumption.

TABLE 30.*—RISE OF GROSS NATIONAL PRODUCT, TOTAL, AND VARIOUS CATEGORIES, 1939–1943 (FIRST HALF OF 1943, ANNUAL RATE)

(In billions of dollars)

Additional resources made available		Use of resources made available	
1. Rise of output	94	1. War expenditures	77
2. Reduction of private gross capital formation (nonwar)	15	2. Rise of consumption	28
		3. Additional depreciation and depletion, private and public	4
Total	109		109

SOURCE: Adapted from S. Kuznets, *National Product War and Prewar*, Table I, NBER, 1944.

* *Cf.* Table 26. It will be observed that the results for 1939–1944 conformed to those for 1939–first half of 1943. From 1939 to 1944 GNP was up by $110 billion; private gross capital formation down by $9 billion. A rise of war expenditures of $85 billion and of consumption of $36 billion roughly equals the $119 billion made available.

Table 30 suggests that the rise of output exceeded the rise of war expenditures. Examination of these series in 1939 dollars yields somewhat different results. Here, again, consumption is up. But for the 3½ years covered, rise of output was only 89 per cent of the rise in war expenditures under Kuznets' assumption *a* and 86 per cent under his assumption *b*. Nevertheless, as we shall see, this is a very high contribution out of output as compared to the British experience. Study of the problem in terms of 1939 dollars yields results at variance with those in Table 30. The contribution of the reduction of capital formation to the expansion of war expenditures is now substantial. For the period 1939 to the first half of 1943, other components (capital, except for the relatively unimportant reduction of nonwar governmental outlays) contributed almost one-third of the additional expenditures for war (under Kuznets' assumption *a*) and more than one-quarter under assumption *b*. For the period 1942 and the first half of 1943, the contribution of the *other components* is more than one-half (assumption *a*). Dr. Kuznets' calculations then suggest that in the year 1942

[1] Based on materials in *S.C.B.*, August, 1943; February, 1945.

and the first half of 1943 the contribution of capital may well have been greater relatively than in the British case for 1942, but not for the period 1940–1943 as a whole.

6. BRITISH EXPERIENCE

The British experience is summarized in Table 31.

TABLE 31.—SOURCES OF ADDITIONAL BRITISH GOVERNMENT EXPENDITURES AS PERCENTAGE OF BRITISH GOVERNMENT EXPENDITURES, 1940, 1942

	1940	1942
Rise of output	17	43
Reduction of consumption	23	25
Increase in overseas adverse balances	25	11
Reduction in private investment	35	21

SOURCE: Calculated from N. Kaldor, "The 1943 White Paper on National Income and Expenditure," *E.J.*, June–September, 1943, p. 272. *Cf.* League of Nations, *Wartime Rationing and Consumption*, 1942, p. 78. Also see H.M. Stationery Office: *An Analysis of the Sources of War Finance*, . . . , Cmd. 6520.

The British have relied more on capital resources (domestic and foreign) [1] than the United States, and they have reduced their consumption substantially. (The actual reduction in 1942 was 18 per cent: the figure in Table 31 merely gives the percentage of the contribution of a reduction of consumption to the additional real resources obtained *by the government.*) It will be observed that by 1942 an increase of output was making a substantially greater contribution to the war effort (or rather to the addition of resources put at the disposal of the government) than in 1940. Net national income (before taxes) had risen from £4,604 million in 1938 to £5,945 million in 1940, £7,604 million in 1942, and £8,172 million in 1943. Correspondingly, relative contributions of capital were reduced.[2]

The figures for 1943 show that in that year the main additional contributions originated in a rise of output. Consumption in current sterling (adjusted) was unchanged; but in stable currency it declined somewhat. A rise of central government expenditures of £672 million is matched by a rise of net national income of £568 million. Private and government net disinvestment was roughly at the 1942 level.[3]

In summary, the British have relied on a reduction of consumption, substantial increase in output, and savings in capital, whereas we have depended more on an expansion of output and have actually increased our consumption.

[1] Exclusive of lend-lease.

[2] H.M. Stationery Office, *An Analysis of the Sources of War Finance* . . . , Cmd. 6520, pp. 18–19. See also *F.R.B.*, July, 1944, p. 663.

[3] *An Analysis of the Sources of War Finance* . . . , pp. 5–21.

Reduction of capital formation on private account plays an increasing relative role in our war effort.

7. CONCLUSION

This chapter makes it clear that a progressively larger part of our national income each year was available for the war. The peak of 43 to 44 per cent was reached in 1943 and 1944; and the ratio then declined. The more that is diverted to war, the greater the pressure on the civilian economy. Total income and total gross national expenditures rise at a dizzy rate, but since the accompanying increase of purchasing power is not offset by a corresponding rise in the production of consumption goods, pressure on prices in civilian markets is therefore upward. Whereas the government takes measures to increase supplies for war as war demands increase, no such action is taken in the civilian field. The fact that in this process of militarization of our economy capital resources are denied more and more to our civilian economy contributes further to rising prices: prices per unit rise, or at least do not fall, so much as they otherwise will, when production suffers from inferior and reduced equipment.

Fortunately, the largest part of our war resources came out of additional output. In the absence of a truly heroic expansion of output, our price history would not have been so favorable as it was. Here, then, is the core of the inflationary problem: although civilian demands increase, supplies for civilians, once the all-out war effort is firmly launched, should barely be maintained at rising costs. On the supply side, to repeat, a favorable factor was the reliance on increases of output rather than on diversions. The civilian economy suffered, not from a reduction of output for civilians, but from the denial of capital which, nevertheless, was compatible with increased output, though at a reduced rate, of consumption goods.

We should also summarize the statistical analysis as follows:

1. Although the contribution to resources for war of a rise of output is unmistakably the most important, the net increase is reduced when the analysis is developed in dollars of stable purchasing power; and studies of the National Bureau conclude that output rose substantially less than the estimates by the government. They, therefore, find that the contributions associated with a virtual disappearance of investment on private account were more important than is revealed in the Department of Commerce figures.

2. As the war proceeds, a larger part of GNP goes to war and a reduced portion to civilian consumption and private capital formation.

3. According to official figures, consumption since 1939 rose by 20 per cent. Reservations are raised, however, in particular because the recorded flow of consumption goods does not confirm a large rise of consumption.

4. Finally, it is interesting to compare the rise of (1) net national income and (2) expenditures on consumption and war. The excess of (2) over (1) is explained by capital consumption and the inclusion in (2) of the counterpart of items included in GNP and excluded from net national income.

In Chapter VIII, to which we now turn, the contributions of capital to war resources are discussed in greater detail. These contributions are especially important because in reducing private capital formation, the authorities provide additional supplies for the military without reducing consumption in war by a corresponding amount. Effects are then similar to a rise of output.

Chapter VIII

Capital and Prices

1. INTRODUCTION

It has already been indicated that our main resources for war purposes have come primarily from a rise of output. A significant part, however, is obtained at the expense of capital, both through a reduction of new capital resources for nonessential purposes and also through capital consumption. The more resources are made available because of the failure to use them for capital purposes, the more supplies will be made available for war purposes, and the lower prices will be. In other words, resources will be diverted from areas where they are not required now to those where they are greatly needed. If entrepreneurs in non-vital industries are denied resources to replace worn-out equipment, more is thus made available to the war economy. It is necessary, however, that the authority be sure that labor and raw materials which have been denied for investment purposes in nonessential industries will become available for the war industries. If these factors cannot be moved into essential industries, the net effect will be a higher price level for civilians, with no corresponding gain for the war economy, and wastage. Undoubtedly the redistribution of economic factors in favor of the war industries will tend to depress prices or keep them from rising as rapidly as they otherwise would. But one should not leave out of account the fact that starvation of the nonessential industries will induce higher costs and higher prices for commodities that are still being sold and are still being produced even though they are not highly essential. In summary then, the net effect of the diversion of resources to essential war industries at the expense of investment and nonessential industries will be lower prices in general, with some upward pressure in the starved areas.

2. TOTAL AVAILABLE RESOURCES [1]

For the purposes of our discussion of capital and prices, it is essential to distinguish the gross income flow from what is generally termed "net national income" or "national income payments." The former variable includes all resources available in a given period for consumption, for business capital, and for the support of government. In addition to national income, the following are included in gross income flow: taxes paid by business (most of which are not included in national income), depreciation and other reserves which are obtained from the

TABLE 32.—ESTIMATED BUSINESS FUNDS, 1942

	Billion Dollars
1. Undistributed income of corporations minus their tax liabilities	3.6
2. Taxes and related payments by business to government	21.0
3. Excess of business tax liabilities over payments. (This sum of money is available for use in the current year although it represents a debt to the government which must be paid later.)	5.2
4. Depreciation and other allowances and reserves	10.3

SOURCE: *S.C.B.*, April, 1943, p. 17. Here, benefit payments are part of national income.

proceeds of sales of products and are set aside by business, pensions, social-security benefits, and relief paid from trust funds or government budgets. In the year 1942, for example, the total gross income flow was $159 billion as compared with incomes of individuals of $119 billion. The differences are accounted for in Table 32.

TABLE 33.—ESTIMATES OF NET NATIONAL INCOME AND GROSS NATIONAL PRODUCT, 1942–1944

(In billions of dollars)

	Estimates of net national income			Estimates of GNP		
	1942	1943	1944	1942	1943	1944
Department of Commerce	121.6	147.9	160.7	151.7	186.5	198.7
Dr. Kuznets	134.7	167.1	.....	144.2	178.1	.....

SOURCE: *S.C.B.*; S. Kuznets, *National Product in Wartime*, prelim. ed., 1944, pp. I-18, I-25.

As previously stated, estimates of income are not always in agreement. Dr. Kuznets obtains a much higher value for net income and a smaller value for gross national product (GNP) than the Department

[1] See especially C. Warburton, "Relation of Government Financing to Gross Income Flow," *S.C.B.*, April, 1943, pp. 17–22.

of Commerce. He assumes that net national income includes increases in corporate taxes during the war years. (The Department of Commerce excludes corporate taxes.) The Department of Commerce includes in GNP, on the other hand, all government expenditures as final product, whereas Dr. Kuznets excludes as payments for services prewar taxes paid by business enterprise. Table 33 shows the results of these two different methods of computation.

3. CAPITAL FOR ESSENTIAL AND NONESSENTIAL PURPOSES

It should not be assumed that because the use of capital for nonessential purposes is reduced substantially capital investment does not continue in the war period. From June, 1940, until December, 1943, government-financed construction accounted for $23.8 billion and government expenditures for machinery and equipment, $29.2 billion.[1] An official estimate puts government-owned industrial facilities at $15.5 billion and wartime additions on private account at $6 billion. The $15.5 billion are exclusive of $17.5 billion spent for nonindustrial construction and land.[2] These are, of course, capital resources and undoubtedly a large part of all governmental expenditures are for capital purposes.[3]

According to the President's budget message of January, 1944, the total war program as measured by appropriations, contract authorizations, and government corporation commitments from June, 1940, to December, 1943, amounted to $344 billion of which $264 billion had been obligated. War expenditures through December, 1943, rose to $153 billion and by the end of June, 1944, were estimated at $202 billion. War construction is a declining proportion of the total. More recently the President estimated war authorizations at $392 billion and expenditures at $289 billion by June 30, 1945; and authorizations at $450 billion and expenditures at $359 billion on June 30, 1946.[4] According to Dr. Kaplan, production completed or in place by the end of 1943 was $130 billion, of which $30 billion was for construction and equipment. The amount scheduled for 1944 was $75 billion, of which but $3 billion was for construction and equipment.[5]

War expenditures in general include many other capital items. This capital to a large extent, however, is consumed rapidly. The average life of a plane or a tank in actual combat must be considerably less than one year, and even for training purposes the life is brief; losses are heavy and machines become outmoded quickly. In this sense the net capital formation per year is not great in comparison with the actual expenditures for this capital.

That war outlays for capital are consumed very quickly is evidenced by the rapid amortization allowed on private expenditures for war purposes. The

[1] *S.C.B.*, October, 1944, p. 18.
[2] *President's Budget Message*, 1945, pp. vi, xi.
[3] A. D. H. Kaplan, *The Liquidation of War Production*, 1944, p. 14.
[4] *Budget*, 1946, p. ix.
[5] Kaplan, *op. cit.*, p. 9.

entrepreneur is then generally allowed to amortize over a period of five years (or less); *i.e.*, capital expenditures under war contracts by private enterprise may be amortized in that length of time. The business entrepreneur is thus allowed to include in this price a cost factor for the use of capital which is based on the assumption that the capital investment will be lost in a period of five years. According to one investigator, government plant is classified as shown in Table 34.

TABLE 34.—CLASSIFICATION OF GOVERNMENT PLANT

	Billion Dollars
Substantially inconvertible capacity with little civilian use	5.0
Same, more or less usable in civilian production	3.7
Capacity with limited convertibility	1.9
Reasonably convertible capacity	4.5

SOURCE: Machinery and Allied Products Institute, *Disposal of Government-owned Production Facilities*, 1943, pp. 3–4.

The conclusion to be drawn is that a large part of war plant will be almost valueless after the war.

Another investigator concludes that "the portion of government-owned plant and machinery that is physically convertible and lends itself to quick postwar disposal will not exceed one-third of the total investment." [1]

The amount of capital formation for civilian purposes in wartime is not actually so small as it might seem. Some of the industrial facilities constructed during the war with government money will retain value in the postwar period. The owners of airplane factories are beginning to talk about the use of their plants for the output of private planes, washing machines, and other products. In that sense the investment of capital for war purposes is to some extent an investment of peacetime capital. In another sense the government seems to be getting more capital for war purposes than is evident from figures for capital formation. I refer especially to the issue of conversion. It will be recalled that in 1942 approximately two-thirds of the rise of war output was explained by conversion of existing plant. This conversion, of course, involves some expenditure, but it also means that the government obtained the use of perhaps some $20 billion worth of capital plant for war purposes with the expenditure of only a fraction of that amount.[2]

4. HOW MUCH CAN BE OBTAINED THROUGH ECONOMIES OF INVESTMENT FOR NONESSENTIAL PURPOSES?

From 1932 to 1936, average depreciation of capital was $8.7 billion and total capital consumption $11 billion. These figures give an indication of the maximum savings through failure to keep up plant in the

[1] Kaplan, *op. cit.*, p. 99.

[2] The reproduction cost of prewar manufacturing plant is estimated at from $50 billion to $60 billion and plants constructed in war at $20 billion. In view of the large proportion of GNP taken by war, it must be clear that a substantial part of prewar plant has been converted or made available to the government without conversion.

early thirties. Failure to keep capital plant in repair, to replace worn-out machinery and equipment, and to repaint private residences can go on for a number of years but, of course, the effects are cumulative and a time comes when failure to spend on maintenance results in a cumulative decline in the value of private capital. This consumption of capital in nonessential areas was of small importance in 1942, but for 1943 and 1944, when gross capital formation for private purposes was estimated at but $2 billion annually, it might be of great significance. After three or four years of deferred expenditure for upkeep, however, the government might find it necessary to release more resources for the maintenance of capital, unless the country would wish to pay in the form of badly damaged industrial plants and much higher prices and costs for the postwar period. Actually, with the end of the Japanese war, adequate resources were then available for the maintenance and even improvement of private capital.

An indication of the extent to which the country relied on the consumption of capital may be gleaned from the following: of an increase in the gross income flow available to the military of $31 billion in 1942, roughly $11 billion may be accounted for by a reduction of gross capital investment in 1942 relative to 1941. The expenditures for business capital goods, including residences, were 17 per cent of gross income flow in 1941 and 6 per cent in 1942, according to the Department of Commerce.[1] The estimate for 1943 was $2 billion and an equal amount for 1944.[2] In 1942 the amount of capital expenditures necessary to keep up the civilian economy was probably in excess of $9 billion. Yet annual expenditures for private gross capital investment were less than one-quarter of that amount in 1943 and 1944; similarly for part of 1945. Our capital for civilian purposes was thus being consumed.[3]

There are necessarily limitations as to the extent to which the war economy can obtain resources at the expense of existing capital resources. An estimate of the wealth of the country by the U.S. government in 1922 of $320 billion and a more recent estimate by the Twentieth Century Fund in 1938 of $327 billion are relevant. It is obvious, for example, that real

[1] *S.C.B.*, April, 1943, p. 18. The respective figures were $21 billion and $9 billion.

[2] *Ibid.*, September, 1944, p. 4.

[3] Dr. Kuznets' treatment of the variables does not conform to that of the Department of Commerce. His estimate of the net capital formation (nonwar) in billions of dollars is 1939 = 6.0, 1942 = 0.5, 1943 = −9.1 (basis of first half of 1943). As compared with 1939, $15 billion was made available out of capital in 1943: $6 billion out of expansion and $9 out of consumption. But this was offset by a rise of depreciation of $1.8 billion. S. Kuznets, *National Product in Wartime*, prelim. ed., Table I.

property and improvements that account for $168 billion will depreciate at the very most at the rate of a few billion dollars a year. It is possible for several years to keep maintenance and repair expenditures down to a very small sum for this part of the national wealth. The gains, however, will not be large since this kind of property depreciates slowly. In other words, if $3 billion are the known expenditures for maintenance and replacement, that amount sets a limit to the maximum gain to the war economy. Other elements in our national wealth (*e.g.*, livestock, $6 billion; farm implements and machinery, $3 billion; manufacturing machinery, $15 billion;[1] railroads, street railways, etc., $35 billion) depreciate perhaps more rapidly but, on the other hand, must not be consumed or wasted in the course of war if the war effort is not to be seriously damaged. A limit on the gains for the war economy is set, then, (1) by the normal expenditures for upkeep of civilian plant and (2) by the difference between this variable and the expenditures that must continue if the capital plant is to be kept at a minimum working efficiency.

In order to estimate the diversions from capital to war, we might also estimate the gross capital formation in a normal year and then assume that this gives the maximum savings that could be made at the expense of private capital investment. For the years 1936 to 1940, for example, it was estimated that total gross capital formation (exclusive of consumers' durables) averaged $13 billion. In 1941, at the higher income levels that prevailed at that time, gross capital formation (private and public), exclusive of expenditures on new durable goods, was $28 billion; gross capital formation, inclusive of expenditures on new durable goods, was $38 billion.[2] At a national income of about $145 billion to $160 billion, gross capital formation, in the absence of interference on the part of the government, might well be $45 billion or more. This would include $15 billion of expenditures for durable consumers' goods which would be normal for this item at an income of this amount. With investment for private purposes but $2 billion in each of the years 1943 and 1944, it may be assumed that $43 billion were made available for the war economy at the expense of nonwar capital in each of these years. In other words, a peacetime economy with a national income of $150 billion would have spent $45 billion for capital purposes. If its expenditures for civilian capital uses were but $2 billion, it may be assumed that the government obtained $43 billion at the expense of capital. This amount and the $90 billion associated with an expansion of output are not usually additive; and if we include both the rise of output and the gross capital formation that are normal for this amount of income, we would be counting double.[3] (I leave out of account the possibility that the markets for capital goods might not absorb $45 billion of capital.)

[1] *Cf.* my estimate above of $50 billion to $60 billion for reproduction cost of manufacturing facilities.

[2] *S.C.B.*, February, 1942, p. 7. Dr. Kuznets' estimates are substantially lower.

[3] See my *Economics of America at War*, pp. 109–117, Norton, 1943, for a fuller treatment; also S. Fabricant, *Capital Consumption and Adjustment*, pp. 170–171, NBER, 1938; and U.S. Department of Commerce, *National Income*, 1929–1935, p. 22, 1936.

5. THE ACTUAL ECONOMIES

The reduction of private gross capital formation was not so great as was hoped. In 1942 private gross capital formation was still $7.5 billion as compared to $11 billion in 1939 and $15 billion in 1940. Especially diasppointing were the expenditures on durable goods which were as high in 1943 and 1944 as in 1939. The savings in these two areas were small absolutely, although they were large in terms of what they would have been if control had not been introduced and increased taxation imposed.

For the year 1943 private gross capital formation was $2.2 billion, while for 1944 the total was $1.8 billion. That private enterprise and consumers were obtaining so few resources for the maintenance of their industries and for their homes may puzzle the reader. The point is, however, that expenditures were being made for the upkeep of homes, factories, and machinery; but expenditures made for these purposes were being mostly offset by consumption of capital in other areas. In particular, we lost some of our gold and silver, we borrowed on current account abroad, and, of course, the value of inventories of goods was beginning to decline. In 1943 and the first half of 1944, private gross capital formation was $3.2 billion. Construction ($2.5 billion) and private durable equipment ($5.1 billion) accounted for $7.6 billion. Business inventories (−$0.8 billion) and net exports of goods, services, and gold (−$3.6 billion) account for net disinvestment of $4.4. The difference ($3.2 billion) was gross private capital formation.[1]

An important contribution to the resources required by war may be achieved through a reduction of inventories.[2] Business inventories had risen from below $20 billion in prewar to $27 billion by the end of 1941. This large rise reflected higher prices, anticipation of further increases, and the improvement in business activity. In the next two years business inventories showed little net change. Manufacturing inventories rose by $2 billion, or about 13 per cent; retail inventories declined by $1.6 billion, or 25 per cent; and wholesale inventories by $700 million, or 15 per cent. All business inventories rose by $3.5 billion in 1941 and then declined by $500 million, $600 million, and $1.7 billion in the years 1942, 1943, and 1944. The movements for business inventories are given in Chart 33 (*a* and *b*). In general manufacturers'

[1] *S.C.B.*, September, 1944, p. 4.
[2] *Ibid.*, January, 1944, p. 9; February, 1944, p. 5; September, 1944, p. 4.

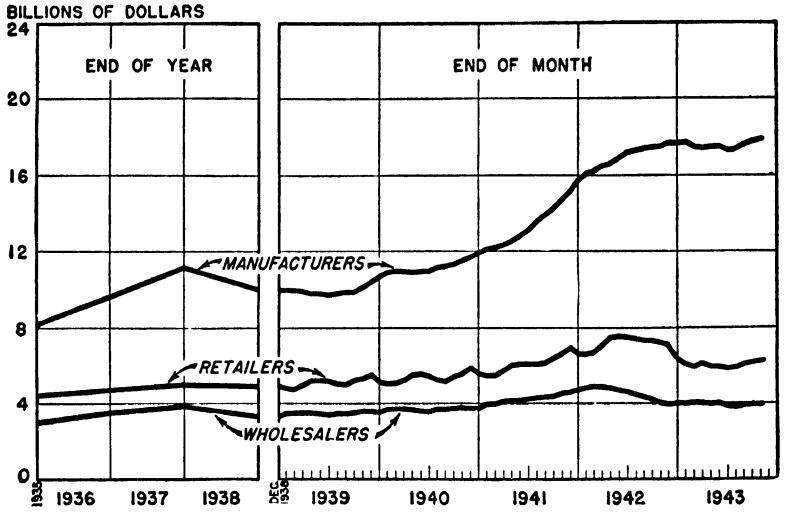

CHART 33*a*.—Inventories of manufacturers, wholesalers, and retailers, 1936–1943. (*Source*. U. S. Department of Commerce.)

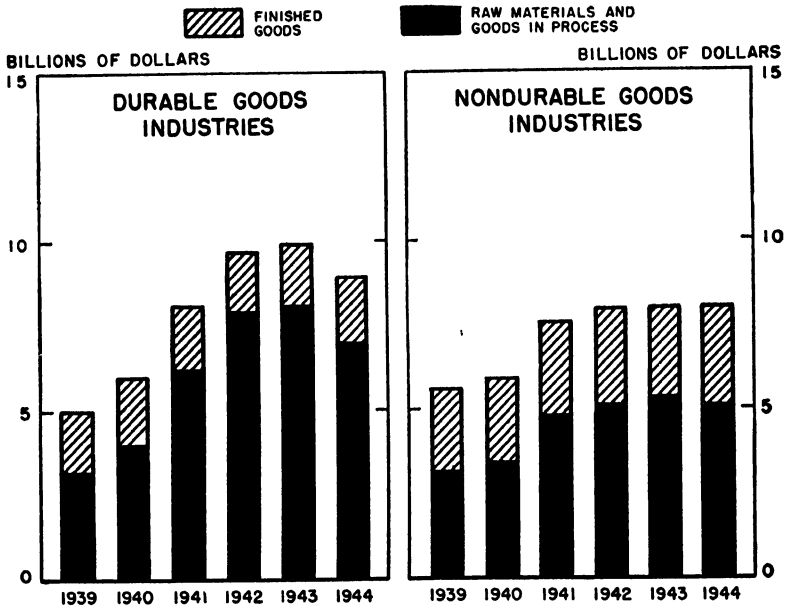

CHART 33*b*.—Manufacturers' inventories, end of year. (*Source: Survey of Current Business, February*, 1945.)

inventories of durable goods rose more than those of nondurable goods (Chart 33*b*).[1]

Although inventories were remarkably stable in 1942 and 1943 (net), this stability might well be interpreted as a large relative decline. In 1944 there actually was a substantial reduction. It should be recalled that net national income rose from $97 billion to $148 billion from 1941 to 1943; and expenditures on consumption from $75 billion to $91

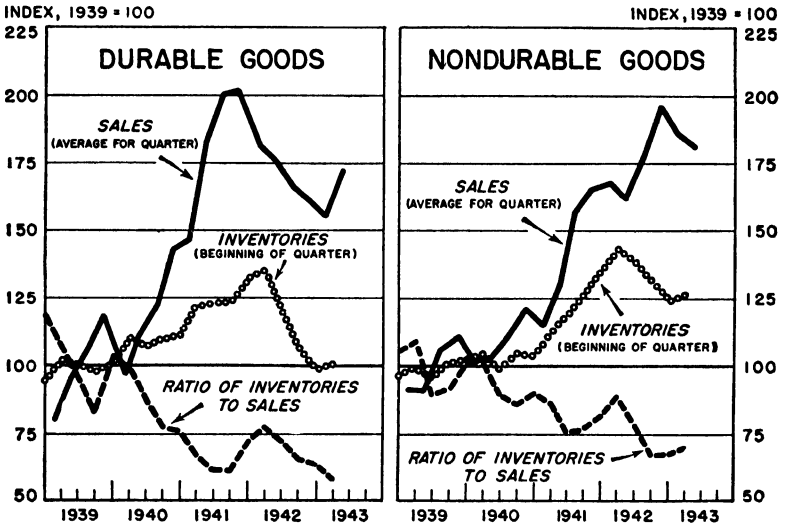

CHART 34.—Wholesale inventories of durable and nondurable goods in relation to sales, 1939–1943. (*Source: U. S. Department of Commerce.*)

billion. The ratio of inventories to sales dropped markedly, as is evidenced in Chart 34. Substantial absolute and relative declines may well account in part for the relative stability of prices in 1942–1943. Another indication of the economies in inventories is to be found in a comparison of war and nonwar manufacturers' inventories in 1941 and 1943. The former rose from $3 billion to $8 billion; and the latter but from $4.9 billion to $5.2 billion.

6. CONCLUSION

The contribution of capital to the total supply of goods available—and, therefore, to the maintenance of reasonably stable prices—was

[1] *S.C.B.*, December, 1944, pp. S-3, S-8, S-9; February, 1945, p. 5. It should be noted that there are marked discrepancies in the inventory figures as given by inventory studies (loss of $300 million in 1942 and 1943) and by the GNP study (a reduction of $1.1 billion for these two years).

not so much in the absolute reduction of investment for private purposes as in a reduction below what would have been made available for capital purposes in a free economy at the high incomes that have prevailed since 1940. For example, between 1939 and 1943 gross national expenditures rose by $100 billion; approximately $80 billion additional were diverted to war purposes; $20 billion additional were made available for private use. Of the total available for private use, $30 billion were made available for consumption and $10 billion less were available for private capital purposes than had been available in 1939. In 1944, GNP was up $11 billion over 1943, the government accounting for less than one-half of the increase.

What resources might have been available for the maintenance of private capital in 1942, 1943, and 1944 in a free economy were only in small part available, and what would have been available for capital expansion for nonwar uses was virtually not available at all. These losses will be recouped in part through a later conversion of war plant to civilian plant and in part through an acceleration in the rate of capital expansion in the postwar period when 25 to 30 million workers now in the armed services and war industries will once more be available for nonwar use.

The net effect of these savings of capital resources on prices in the war period has undoubtedly been favorable, although not so favorable as might have been hoped. This effect is twofold. (1) Resources are released to areas where commodities are greatly in demand. (2) The provision of new capital and new plants assures the most efficient and up-to-date method of production and hence low costs. In the immediate postwar period the effects on prices will likely be unfavorable in the sense that the postwar economy will be bequeathed run-down plant and, therefore, costs and prices will be higher than they otherwise would be. To the extent that war plants are made available for the output of civilian goods, this scarcity and deterioration will be corrected. Furthermore, the backlog of private investment in areas which have been starved since 1941 may contribute greatly toward the maintenance of a high level of employment for several years after the war. This stimulus toward increased demand will also contribute toward higher prices and to that extent will be a favorable factor in the situation. However, any contribution toward higher prices associated with the deficiency of capital and *resulting high unit costs* in the immediate postwar period should not be considered a favorable factor.

Chapter IX

Man Power

1. INTRODUCTION

When a country goes to war it is necessary to have available, *inter alia*, adequate supplies of raw materials, electric power, transportation, and man power. The government establishes priorities and controls the flow of materials, in this manner reducing demand for scarce materials. It also provides additional supplies of necessary materials through substitution, conversion, and the tapping of foreign sources of supply. Thus demand is kept down and supply increased with resulting favorable effects on prices. In the early period of our reorganization for war, allocation of scarce supplies proved to be the most effective type of price control in many markets. There were, of course, many difficulties in determining priority of needs and in synchronizing flows of raw material and semifinished products.[1] What should be emphasized is that a farsighted system of priorities and allocations excludes from the market nonessential demands and is an important weapon in the anti-inflationary fight.

Because the problem of man power is a most difficult one and also because of all scarce economic factors its allocation seems to be the most persistent and difficult problem, I discuss man power fully. We should not lose sight of the fact that denial of scarce materials or other resources for civilian production contributes indirectly toward a saving of man power. Late in 1944, Mr. McNutt acknowledged as much when he implied that man-power control would break down if material control were abandoned.

It is not easy to allocate man power because workers are not moved with the facility of raw materials: first, personal factors are involved and, second, housing may be unavailable in the areas where more

[1] These problems have been discussed in my *Economics of American Defense* and *Economics of America at War* and in Part VI of *Price and Related Controls in the United States.*

labor is needed. The government's defense housing program, moreover, has not been entirely successful. It is clear, then, why man power has been the most persistent and troublesome bottleneck.

Lack of man power retards the expansion of output and thus, through effects on supplies, tends to induce higher prices. Since the essential industries are favored, the deficiency of man power is felt more in nonwar than in war industries. Yet war industries do not obtain the required number of war workers. Failure to attract adequate numbers tends to increase prices of war goods. Costs are higher at a lower volume of output; and contractors in a relatively strategic position can obtain relatively favorable contracts. *This failure to attract workers from nonessential industries tends to keep the output of civilian goods up and their prices down, although any general scarcity of man power is an adverse factor for nonwar as for war industries.* But the problem is both one of total supply of man power and one of its distribution. And it is one of the paradoxes of war economics that the more successful the war-production program; *e.g.*, the greater the success in obtaining man power or other scarce resources for war use—the greater the threat to price stability of consumption goods.

We can thus understand the relevance of man power for our supply and price problems. Even as late as the spring of 1945, the government found it necessary to ask for man-power legislation which, *inter alia*, would restrict demand for labor in nonessential plants.

It is not necessary to discuss man-power controls here, for they are treated elsewhere.[1] On this point, however, this much might be said. *Once basic wage rates are fixed by authority, the government has interfered with the free movement of labor. Therefore, it becomes necessary to introduce direct controls over the movement of labor.* That is, controls of inflation make necessary increased controls of man power. The latter, however, would be required even in the absence of inflation control. In wartime the failure of monetary incentive to achieve the optimum distribution of economic factors is especially costly.

In brief, it was the task of the War Manpower Commission (WMC) to induce labor to move into areas where supplies of labor were deficient for war work; to reduce nonessential demands for labor; to urge the allocation of war contracts and materials at least in part according to the supplies of labor available; and to increase supplies of labor through such measures as a rise in man-hours of work per employee and the improvement of facilities for the distribution and training of

[1] *Cf.* Ch. XXIII of my *Price and Related Controls.*

labor. In accordance with these objectives, the WMC has adopted measures (*e.g.*, through improved transportation facilities) (1) to encourage movement of workers to areas short of labor; (2) to reduce nonessential demand (*e.g.*, through an employment referral system

TABLE 35.—ESTIMATED DISTRIBUTION OF THE UNITED STATES LABOR FORCE, 1930-1944

Classification	Thousands						Average for 1944, millions [b]
	July, 1930	July, 1940	July, 1941	July, 1942	July, 1943	July, 1944, assumed to be peak war effort [a]	
Total labor force	50,053	57,400	58,300	60,600	64,800	66,300	64.0
Unemployed [c]	3,253	9,300	5,700	2,800	1,200	1,000	0.840
Total civilians employed, plus armed forces	46,800	48,100	52,600	57,800	63,600	65,300	63.1
Armed forces [d]	263	500	1,700	3,800	9,300	11,300	11.4
Civilians employed	46,537	47,600	50,900	54,000	54,300	54,000	51.8
Agricultural employment [e]	12,193	10,800	10,700	11,700	12,100	12,000	
Nonagricultural employment [f]	34,344	36,800	40,200	42,300	42,200	42,000	43.7
Nonagricultural employees [g]	28,517	30,638	34,939	37,234	38,364	38,600	38.7
Manufacturing	9,005	10,411	13,087	14,641	16,136	17,200	
Metals, chemicals, and rubber	[h]	4,114	5,822	7,481	9,207	10,300	
Other	[h]	6,441	7,265	7,160	6,929	6,900	
Mining	966	907	961	923	830	800	
Construction	1,718	1,660	2,100	2,108	1,218	500	
Transportation and public utilities	3,675	3,059	3,362	3,519	3,683	3,700	
Trade	6,025	6,462	6,837	6,504	6,290	6,200	
Finance and service	3,982	4,140	4,300	4,335	4,359	4,300	
Government	3,146	3,999	4,292	5,184	5,848	5,900	
State and local	[h]	3,068	3,040	2,996	2,962	2,962	
Federal	[h]	931	1,252	2,188	2,886	2,938	
Balancing item [i]	5,827	6,162	5,261	5,066	3,836	3,400	

SOURCE: *Factors Determining Post-war Job Transfers and Unemployment*, p. 1. BLS Serial *R* 1620 (from *M.L.R.*, February, 1944). Last column, *S.C.B.*, February, 1945, p. 22.

[a] Estimates of peak war requirements prepared jointly by the BLS and WMC.

[b] *Cf. average* results in last column with *anticipated* results for summer peak in next to last column.

[c] 1930 from NICB; 1940–1943 from Bureau of the Census.

[d] 1930 from BLS; 1940–1943 from joint estimates of BLS and WMC.

[e] 1930 from BAE (average of estimates for July 1 and August 1); 1940–1943 from Bureau of the Census.

[f] 1930 from BLS; 1940–1943 from Bureau of the Census.

[g] Nonagricultural employees and components exclude proprietors, self-employed, and domestic servants; 1930 from BLS unrevised series; 1940–1943 from BLS revised series.

[h] Not available.

[i] Difference between estimates of total nonagricultural employment and estimates of nonagricultural employees. Includes proprietors, self-employed, and domestic servants, but it is not an accurate measure of this group.

and ceilings on employment); and (3) to adjust contracts and distribution of materials on the basis of supply and demand for labor (*e.g.*, cutbacks were encouraged where labor was scarce).

2. MAN-POWER SUPPLIES AND REQUIREMENTS

The following is a summary of the man-power problem. The general picture is presented well in Table 35.

A. THE RISE IN THE LABOR FORCE. It will be observed that from July, 1940, to the peak of war output, the total labor force rose by almost 9 million. Where did these 9 million come from?

TABLE 36.—ABNORMAL INFLUX INTO THE LABOR MARKET, BY APRIL, 1944

(In millions)

Females		Males	
Girls and young women normally students	1.1	Boys and men normally students	2.2
Young women, 20–24	0.4	Handicapped and other marginal workers	0.7
Women over 35	1.5	Older workers who postponed retirement	0.8
Total	3.0	Total	3.7

SOURCE: W. Haber and E. Welch, "The Labor Force during Reconversion," *R.E.S.*, November, 1944, p. 198.

The normal increase in the labor market would be a little less than 2 million. An abnormal increase of 7 million is to be accounted for. For a period not exactly coinciding with the above, Dr. Haber accounts for the abnormal influx as shown in Table 36. For the period ending October, 1943, the Department of Labor presented somewhat similar figures (Table 37).

TABLE 37.—ABNORMAL ACCESSIONS

(In millions)

	Females	Males
Total	2.6	3.2
From schools	0.9	2.1
Nonworkers	1.6	0.7
Retired	0.1	0.5

SOURCE: *Factors Determining Post-war Job Transfers and Unemployment*, BLS Serial *R* 1620, p. 4 (from *M.L.R.*, February, 1944).

B. THE SOURCES OF ADDITIONAL MAN POWER FOR WAR. Table 35 also may be broken down as shown in Table 38 for purposes of analysis.

TABLE 38. - CHANGES IN LABOR FORCE

(In millions)

	July, 1940–July, 1942 (1)	July, 1942–July, 1944 (official estimates for latter) (2)	July, 1943–July, 1944 (3)
1. Total civilians employed, plus armed forces	+9.7	+7.5	+1.7
2. Unemployed	−6.5	−1.8	−.2
3. Total labor force	+3.2	+5.7	+1.5
4. Civilians employed	+6.4	No change	−0.3
5. Armed forces	+3.3	+7.5	+2.0

SOURCE: *Factors Determining Post-war Job Transfers and Unemployment*, BLS Serial *R* 1620 (from *M.L.R.*, February, 1944).

We may draw the following conclusions from Tables 35–38:

1. In the first two years of the war effort, 9.7 million additional men and women became available for employment and the armed services. *Approximately two-thirds had previously been unemployed, and one-third were new accessions to the labor market.* Approximately two-thirds of the additional members found employment, and one-third were added to the armed forces.

This was the period in which a large expansion of output was possible without putting heavy strains on the economy: a substantial proportion came out of the ranks of the unemployed. *The pressure on prices should not, therefore, have been too great.* It should be noted, however, that the flow of goods was not likely to be commensurate with the additional man-hours of employment. In these early years a large proportion of war output was in plant and equipment.

2. In the next two years (1942–1944), the pressure on man power was more clearly revealed. *Of a gain of* 7.5 *million, the previously unemployed accounted for less than one-quarter; the armed services absorbed* 7.5 *million additional, the total of new recruits, inclusive of the numbers transferred from the ranks of the unemployed to the employed.* Civilian employment was barely maintained.

That income payments rose by more than 40 *per cent in these two years has indeed been remarkable when one considers that civilian employment was unchanged and wholesale prices rose but* 5 *per cent.* The increase in the armed forces of 7.5 million could not account for so much as one-quarter of the rise of income. Undoubtedly an increase of man-hours of employment, upgrading, a rise in overtime, a small rise in basic wages, the shift to higher paying war industries, the rise of productivity in these industries, the greater significance of overtime, an increase in profits—these must account for a rise of national income at the annual rate in excess of $20 billion. We could easily conclude that either the rise of national income in current dollars was not so large as was suggested by the government or that the increase of prices was larger than 5 per cent.

TABLE 39.—CHANGES IN LABOR FORCE, JULY, 1940–JULY, 1944
(In millions)

Requirements		Sources	
Armed services	11.1	Unemployed (8.4 to 1.0)	7.4
Munitions industries	5.5	Rise in labor force (56.9 to 66.6)	9.7
Other manufacturing	0.5	Reduction in agriculture	0.9
Federal war agencies	1.5	Reduction in construction	1.3
Transportation and public utilities	0.8	Reduction in mining, etc.	0.1
Total	19.4		19.4

SOURCE: W. Haber and E. Welch, "The Labor Force during Reconversion," *R.E.S.*, November, 1944, p. 195.

3. The pressure on available man power in the last year under consideration was clearly evident. Only 1.5 million additional workers became available; and an increment of 200,000 came from the unemployed. In order to provide 2 million for the army, 300,000 had to be found elsewhere.

4. Over-all figures of a more recent date are presented by Drs. Haber and Welch.[1] These give actual figures for July, 1944, instead of (Table 35) anticipated figures. The latter are not far off, however. These figures give the net changes over the four years. (Chart 35*a* gives, for the last quarter of 1943, the distribution of workers as between war and nonwar industries, and Chart 35*b* gives a clear picture of increased numbers available, the sources of the increases, and their use from 1939 to 1944.)

[1] *Op. cit.*, *R.E.S.*, Nov., 1944, and see Table 39.

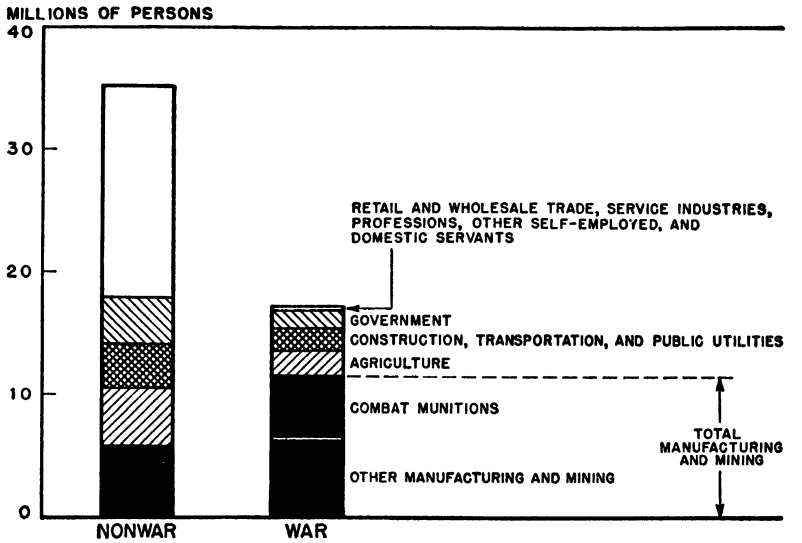

CHART 35*a*.—Civilian employment in war and nonwar production, fourth quarter of 1943. (*Sources: U. S. Department of Commerce and U. S. Department of Labor.*)

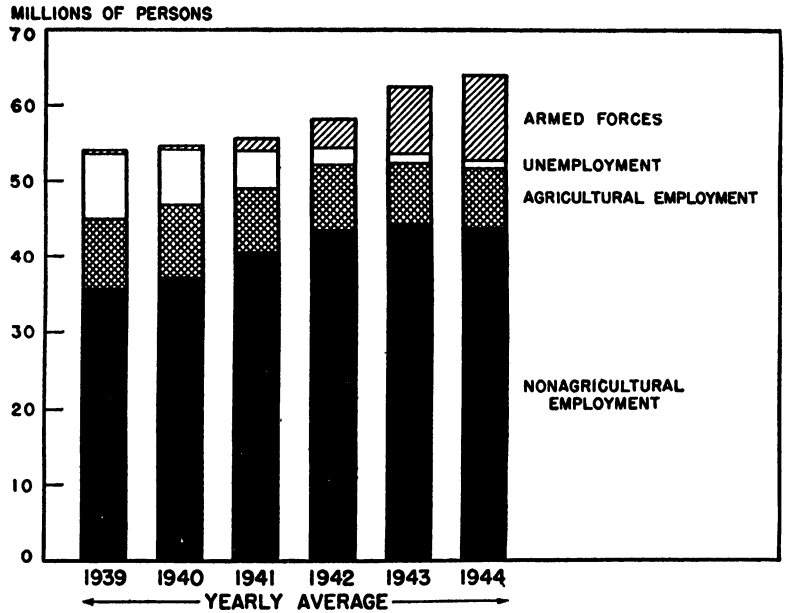

CHART 35*b*.—The labor force. (*Sources: U. S. Department of Commerce, and U. S. War and Navy Departments.*)

It will be noted that over the whole period the rise in the labor force contributed about one-half of increased requirements; the unemployed, about three-eighths; and diversions from other industries, about one-eighth.

C. NUMBERS IN WAR WORK. By the middle of 1944, the total employment in nonagricultural war production was 15.3 million. Table 40 shows the distribution of these war workers.

TABLE 40.—NONAGRICULTURAL EMPLOYMENT IN WAR PRODUCTION, FOURTH QUARTER OF 1943

	Millions
Aircraft, ships, tanks, etc.	5.2
Raw materials, machinery, food, textiles, etc.	6.0
Mining	0.5
Transportation, public utilities, trade, and services	1.6
Construction	0.5
Government war agencies	1.5
Total	15.3

SOURCE: S. M. Livingston, "Magnitude of Transition from War Production," *S.C.B.*, August, 1944, p. 6.

One interesting observation should be made here: Although there were 15 million in war work at the end of 1943, it was, according to the investigation of Drs. Haber and Welch, necessary to add but 8.3 million to various industries for war work. In other words, existing industries and man power contributed greatly to war output.

An indication of the extent of the man-power problem faced by the government in 1940 is given by the fact that in the second quarter of that year (the beginning of the war program), there were only 29 million workers in nonwar industries and only 55 million workers (inclusive of unemployed) in the whole labor force. The government's estimated need for 20 million workers in war industries and 10 to 11 million for the military forces had to come from the labor force of 55 million, and largely from the unemployed and the 29 million operating in nonwar industries, as well as from any new recruits that could be drawn into the armed forces or into the labor market.[1] Actually, as we have noted, there were but 15 million in war industries late in 1943.

3. DIVERSIONS

As will be noted below, the government increasingly had to rely on diversions for additional man power. The main additions at first

[1] House Hearings on *Investigating National Defense Migration*, 77th Congress, Part 27, Book 1, 1942, pp. 10, 270. This figure of 29 million is probably the counterpart of 30.6 million of nonagricultural employees in Table 35.

came from the ranks of the unemployed and then from the influx of new members. When both of these sources began to dry up, it was necessary to starve nonessential industries.

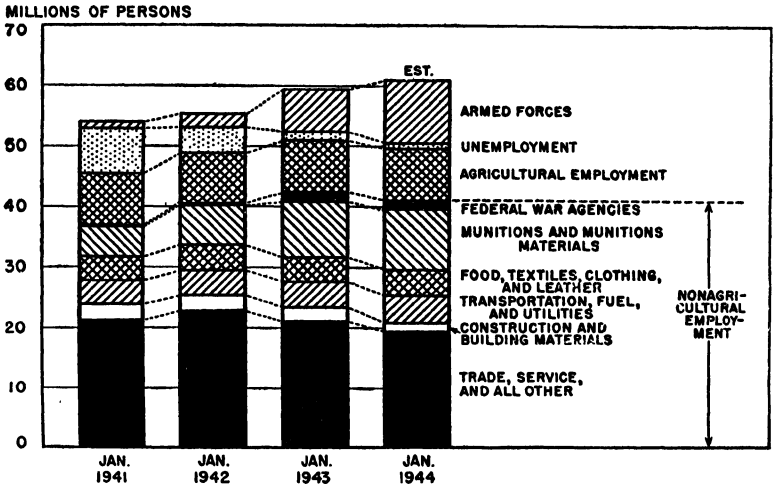

CHART 36.—Total labor force. (*Sources: War Manpower Commission, U. S. Department of Labor, and U. S. Department of Commerce.*)

From Chart 36, it will be observed that diversions from nonessential industries were not large. An examination of Table 35 yields the following results.

TABLE 41.—CHANGES IN LABOR FORCE

(In millions)

	July, 1940–July, 1944	July, 1940–July, 1942	July, 1942–July, 1943	July, 1943–July, 1944 (est.)
Net change of employees in agriculture, construction, trade and finance, and services.....	Negligible change	+1.5	−0.6	−0.9

SOURCE: Based on Table 35, BLS Serial *R* 1620.

In short, these relatively nonessential occupations released as many workers in 1942–1944 as they had absorbed in 1940–1942. The largest gains of workers in 1940–1942 were made in construction. Employment was maintained at a high level in 1941–1942 as a result of large war demands. Postponement of nonessential building and the tapering off

of the public construction program made it possible to release large numbers in 1943 and 1944.

Available statistical material does not indicate, moreover, that large savings of man power were made at the expense of selling, advertising, and servicing industries. The reader will recall the protests raised by these groups when the Office of Price Administration introduced policies only incidentally, if at all, inimical to them. Yet, on all counts, advertising is one of the industries that could forego man power in wartime. The *Printer's Ink* Combined Index of Advertising was 8 per cent higher in June, 1943, than for the average of 1941 and by July, 1944, it was up 4 per cent additional. According to *Ad-*

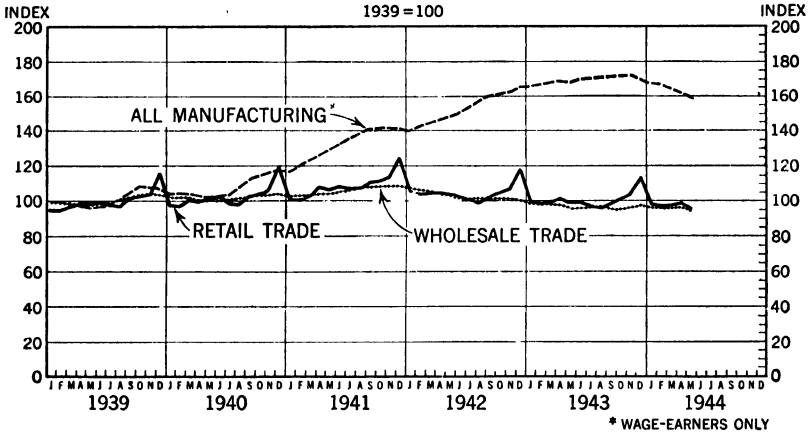

CHART 37.—Employment in manufacturing, wholesale, and retail trade. (*Source: BLS.*)

vertising Age (Jan. 24, 1944), national magazines carried 34 million lines of advertising in 1943 as against 26 million in 1942. Retail trade, despite all the grumbling concerning the effect of the loss of man power and government controls, had a larger volume of employment in June, 1943, than in 1941, and bankruptcies were at a record low level. In the year ending July, 1944, employment there, however, fell by 1½ per cent. Similar results are found in the service industries. Charts 36 and 37 reflect the trends in man power for these. Dyeing and cleaning establishments, power laundries, year-round hotels, all employed a substantially greater number in June, 1943, than in 1941. In the former two, however, a decline of several per cent was registered in the year ending July, 1944.[1] Chart 37 reveals that wholesale and retail trades have been able to hold on to their employees with some success.

[1] Figures from *S.C.B.*

Yet the *redistribution* of man power in the war has on the whole been along expected lines. (Agriculture is a notable exception.) On this point Table 42 is of interest.

TABLE 42.—TOTAL EMPLOYED LABOR FORCES—PERCENTAGE DISTRIBUTION BY INDUSTRIAL CATEGORIES, 1939 AND 1943

	1939	1943
Agriculture	20.6	13.5
Manufacturing	22.5	27.9
Trade	17.5	13.5
Government	9.6	24.1
Service and miscellaneous	16.6	11.0

SOURCE: Adapted from S. Kuznets, *National Product in Wartime*, prelim. ed., p. III-21, 1944.

Further light is thrown on the problem of diversions from nonessential industries by the following. An official estimate early in 1943 put the increased man power required in that year at 6.4 million of which roughly two-thirds were for the armed services. These 6.4 million were to be obtained to the extent of 3.2 million by diversions from less essential industries, 500,000 from the unemployed, and 2.7 million from new accessions to the labor market. In contrast to the developments in the years 1940–1942, the unemployed were expected to provide only about 8 per cent of the additional man power required, as compared to two-thirds in the earlier period; labor accessions were to contribute 40 per cent, and movements from less essential industries roughly one-half.[1] Results did not measure up to these anticipations. In the first half of this period, only one-third of the required diversions and new accessions were obtained.[2] *Shifts* from nonwar industries and from the unemployed to employment in war industries and to the military services were especially important.

A later estimate by the WMC of the requirements for the year ending July, 1944, put the additional demands at almost 4 million. For this year almost two-thirds were to come from diversions from nonessential industries and one-third out of new recruits. The Army and Navy were to absorb one-half of the increase made available. In short, in the early period the dependence was largely on unemployed labor; in a later stage, almost equally on diversions and new recruits into the labor market, while unemployed labor played a secondary role; finally, in the last stages, reliance was mainly on diversions. At this point the ranks of the unemployed had been thinned out and it became increasingly difficult to obtain new members for the labor market.

[1] *S.C.B.*, March, 1943, p. 3. These figures were revised later in the year, the required number then being put at 6.7 million. The proportions to be contributed from the various sources were not changed materially. *Ibid.*, September, 1943, p. 3.

[2] *Ibid.*, September, 1943, p. 3.

4. DEMOBILIZATION IN WAR INDUSTRIES DURING WAR

A serious reduction in personnel available for civilian employment began in the second half of 1943. Dr. Haber, in the article quoted above, estimates that from November, 1943, to July, 1944, employees in munition industries declined from 10.4 to 9.5 million, or 9 per

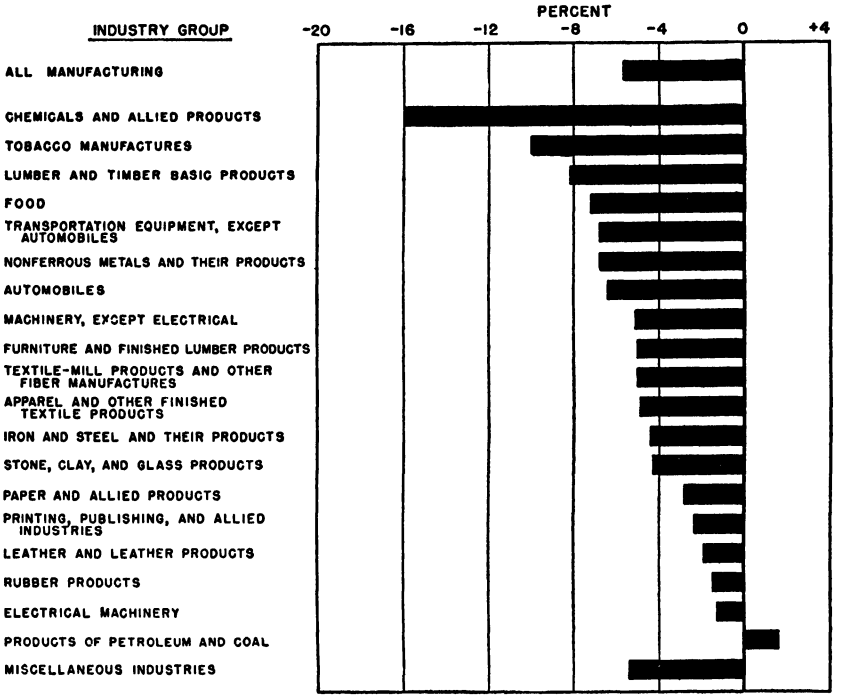

CHART 38.—Percentage change, April, 1944, from April, 1943, in wage earners in manufacturing industries. (*Source: U. S. Department of Labor.*)

cent. Output, nevertheless, remained remarkably steady. Chart 38 gives some indication of the decline of labor in manufacturing. In this period, serious shortages of man power were to be found for the following: high-octane gas, synthetic rubber, landing vessels, heavy trucks, fractional horsepower, forge shops, textiles, etc. Total supplies of man power by 1944 may well have been adequate but measures were required to improve its distribution, both occupationally and regionally.

By the fall of 1944, it seemed that the man-power problem was largely solved. In a few industries—those paying relatively low wages

and/or requiring arduous labor—scarcities still prevailed. The pay incentive was not allowed to operate in favor of these industries; and man-power control had not been carried far enough to provide the necessary help to these industries. By October, 1944, the WMC was ready with a plan for the removal of most controls following Germany's defeat: The restraints on hiring of new men and employment ceilings were to go unless regional authorities requested their retention; some help would be given to plants continuing to produce war goods.

In the last months of 1944, with the Germans making a counter-attack, it seemed increasingly evident that we had been too optimistic. On Dec. 23, 1944, the government in a press release announced that priorities and allocations would be withdrawn or modified should employers not abide by employment ceilings and hiring regulations set by the WMC. Persistent scarcities, referred to above, and large replacements requested by the military were the occasion for widespread appeals for a national service act. In January, 1945, Congress had under consideration a work-or-fight bill which proposed to force draft registrants not now in essential occupations, into these occupations.

With the end of the war in Europe, man-power shortages began to be reduced; and, with the end of the Japanese war, the problem became one of excess of supply rather than demand.

5. REGIONAL ASPECTS [1]

The problem of man power is one not merely of the movement of laborers available but also of distribution, geographically and industrially. In late 1942, of 270 industrial areas 102 were short of workers, 77 anticipated shortages, and 91 had surpluses.[2] Shortage areas increased from 11.4 per cent of all labor markets on Jan. 1, 1943, to 17.4 per cent on Sept. 1, 1943.[3] Mr. McNutt estimated in 1942 that the Philadelphia metropolitan area needed 100,000 workers, the Detroit area 86,000, and several other areas from 45,000 to 78,000 workers. Early in 1943, Seattle had increased its working force to 170,000, or three times the number employed a year earlier.[4] It is well known that the war economy developed with varying intensity in different sections of the country. I refer the reader, for example, to a chart published by the Department of Commerce which shows the consumption of electric power according to geographical regions. During the course of the war, the rise of kilowatt-hours for the Northeast was about 5 to 6 per cent, whereas in the East South Central states the rise was almost

[1] *Cf.* especially Ch. XXXII for latest developments.
[2] *Victory*, Dec. 22, 1942, p. 6.
[3] *S.C.B.*, September, 1943, p. 4.
[4] J. J. Corson, *Manpower for Victory*, p. 75, 1943.

25 per cent.[1] A study presented by the Federal Reserve Board revealed that in 1942 there were a number of states in the central part of the country in which deposits had risen by 75 per cent or more. In the Northeast, on the other hand, the rise was less than 15 per cent, and over the country actually 15 counties experienced declines. From Apr. 1, 1940, to Mar. 1, 1943, the civilian population declined by 655,000 in New York.[2] From 1940 to 1943, according to Drs. Haber and Welch, 3½ million moved across state lines; and a larger number moved within states. California gained 1.4 million and Michigan 300,000. These studies indicate the extent to which, as a result of the war, some areas were under greater pressure than others. These studies suggest that, even if there is an excess of labor for the country as a whole, there may still be unfilled jobs in some regions.

6. CONCLUSION

1. At first the main additions to man power came from the unemployed; in the two years ending June, 1944, new accessions provided the largest additions; more recently, it was necessary to depend to some extent on movements from nonessential to essential industries. But these were, on the whole, disappointing.

2. In the first two years of the war effort, civilian employment gained rapidly; and the increased use of unemployed resources was compatible with rising output and moderate increases in prices.

3. What is not easy to explain is an increase of about 40 per cent in both net national income and gross income expenditures from the first half of 1942 to the first half of 1944. In real terms this increase seems to have been even greater than in the preceding two years: in 1940–1942 the gain of money income was in excess of 50 per cent, but prices rose substantially more then than later. The increase, let us note, in GNP of 40 per cent in the first half of 1944 over the first half of 1942 occurred despite the fact that over a closely related period total civilian employment did not rise at all.

4. This suggests the possibility that GNP did not rise so much as was officially estimated, or that prices rose more. To a substantial degree, however, the explanation is the increase in GNP associated with 7 million additions to the military; a continued rise of productivity in war industries; a small increase in hours of work; upgrading and shifting to better paying war industries; a small rise of prices; and an increase of profits.

5. The man-power problem would have been serious indeed had

[1] *S.C.B.*, September, 1943, p. 11.
[2] *S.C.B.*, October, 1943, p. 12.

there not been large pools of unemployed available in 1940 and 7 million abnormal accessions to the labor market. A secondary factor was the various controls introduced which brought about a better distribution occupationally and regionally, and in particular reduced demand in nonessential areas.

6. Another chapter of the man-power problem—the final one of the war—was written early in 1945. Strong measures were proposed to force workers into essential occupations and more thoroughly to allocate scarce man-power resources as between essential and nonessential uses; and through denials of materials to nonessential industries, to create pools of unemployment which would then drain into essential occupations. But pools of unemployment would not have righted the man-power shortage: to get man power into war industries, those employed in nonessential industries must be *directed* into the proper channels. Creation of pools of unemployment would not suffice. Actually nothing came of these proposals made early in 1945.

Chapter X

International Aspects of Supplies

1. INTRODUCTION

In a war economy the principal objective in trade is to export as little as possible and import as much as possible. The more that is imported and the less that is exported, the more goods will be available and the smaller will be the inflationary gap. In World War II, unfortunately, we had to export much more than we were able to import. This large excess of exports was, however, part of the resources made available for war and in the estimate of diversions to war should not be counted *in addition* to resources made available for war.

In order to conserve exports, our government introduced comprehensive export controls.[1] They were intended not only, as we shall see, to restrict exports but also to assure the exportation of those commodities which were needed by friendly nations or which through their association with these imports would give the maximum aid to our war effort. If, for example, the workers on a rubber plantation in Liberia needed textiles as a condition for the production of rubber, then textiles ought to be sent to Liberia.

2. COMMERCIAL TRADE

In our commercial trade, the excess of cash exports in the interwar period was converted during the war into an excess of cash imports. An average excess of cash exports of $1.1 billion for the years 1938–1940 is to be compared with an average excess of cash imports of $600 million in 1942–1944 and of $1.3 billion estimated for 1944 [2] (see

[1] These are discussed fully in my volume, *Price and Related Controls*. See especially Chs. XV and XXIV.

[2] FEA, *Sixteenth Report to Congress on Lend-lease Operations for Period Ended, June* 30, 1944, p. 15. Figures for 1944 in this section are based on results for the first 6 months.

Chart 39). Although total cash exports declined, commercial exports (in dollars) to non-Axis areas rose by a substantial amount (see Chart 40). This figure is significant as a refutation of the charge that this

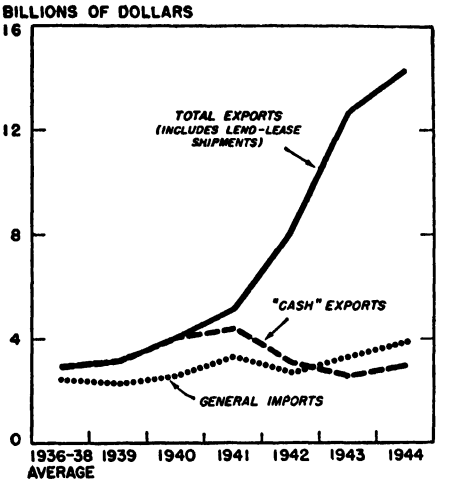

CHART 39.—United States foreign trade. (*Source: Foreign Economic Administration.*)

country sacrificed the economies of friendly nations while it maintained its own consumption standards at a high level. Our exports to these countries were well kept up although the comparative rise was, of course, not nearly so great as that in gross national product. The

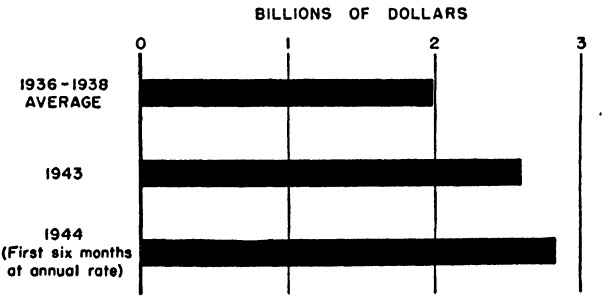

CHART 40.—Commercial exports to non-Axis areas, prewar and war. (*Source: Foreign Economic Administration.*)

relative rise of exports to non-Axis countries was, however, not much less than the proportionate rise of consumption expenditures in this country.

In a discussion of commercial trade, our relations with Latin America are of especial interest. Latin America carried a significant

part of the war burden. Whereas in 1936–1938 our average imports from Latin America exceeded our exports by $46 million, in 1942–1944 the excess averaged more than $500 million. In the years 1941–1944 they provided us with goods valued at $1,700 million more than our exports to them—goods which they sorely needed for themselves. This refutes the charge made by Senator Butler and others that, in relation to Latin America, we were the milk cow.[1] We, on our part,

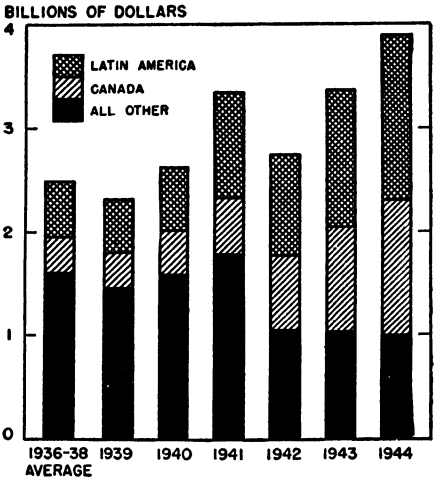

CHART 41.—General imports into the United States by geographic areas. (*Source: Survey of Current Business.*)

increased our exports from an average of $489 million in 1936–1939 to $929 million in 1944. (Chart 41 reveals the extent to which we relied upon Latin America and Canada.)

3. LEND-LEASE

Our largest exports have, of course, been under lend-lease. In 1943, lend-lease exports were $10.1 billion, or almost 80 per cent of total exports in that year; and the estimated amount for 1944 was $11.6 billion, or 80 per cent of estimated total exports. For 1942–1944, lend-lease exports were estimated at $26.6 billion, or 76 per cent of total exports of $35.1 billion.[2]

[1] *Report to Congress on Operations of the Foreign Economic Administration*, Sept. 25, 1944, p. 39. *Report by Senator Hugh Butler and Reply by Senator Kenneth McKellar*, Senate Doc. 132 (1943); and *Economic Problems of Latin America* (edited by Seymour E. Harris), Chs. I, II.

[2] *Sixteenth Report on Lend-lease*, p. 15.

Actually, total *expenditures* under lend-lease exceed the amount *exported* for lend-lease. Thus, from Mar. 11, 1941, to Dec. 31, 1944, lend-lease supplies and services valued at $35.4 billion were provided to our allies under the Lend-lease Act. In addition, $788 million were consigned to United States commanding generals in the field for subsequent lend-lease transfer to allied forces. In this period, $31.4 billion of goods were transferred and $4.0 billion of services rendered: rental, servicing, and repair of ships,

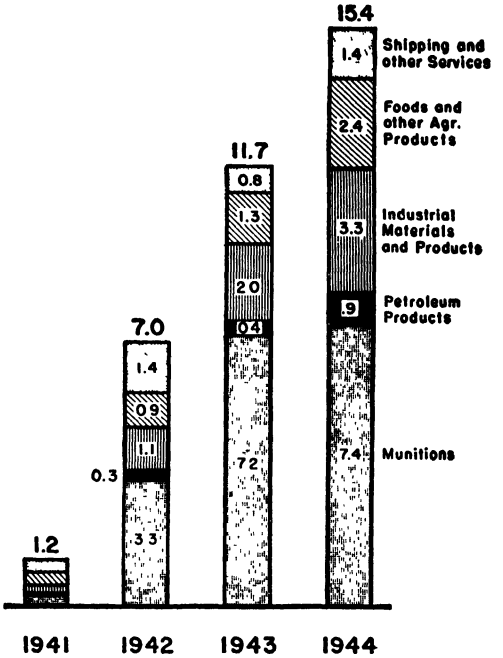

CHART 42.—Lead-lease aid, billions of dollars, 1941–1944. (*Source: Eighteenth Report to Congress on Lend-lease Operations, for the period ended Dec.* 31, 1944.)

ferrying of aircraft, production facilities in the United States. (Chart 42 breaks down the total by categories through 1944, and Chart 43 breaks it down by monthly periods.) Of the total aid given for the period March, 1941, to December, 1944, the United Kingdom received more than two-fifths, and the U.S.S.R. more than one-quarter (Chart 44). Reverse lend-lease, on the other hand, amounted to $3.9 billion for the period to Oct. 1, 1944.[1]

In the 3¼ years ending Apr. 1, 1944, our allies received 18 per cent of total United States munitions production: 15 per cent by lend-lease and 3 per cent by purchase.[2] With the exception of munitions, the *aid* given

[1] *Eighteenth Report to Congress on Lend-lease Operations for the Period Ended December* 31, 1944, pp. 8, 29, 43.

[2] *Sixteenth Report on Lend-lease*, pp. 10-11, 40.

in particular products or *classes* of products was a relatively small percentage of our production (see Chart 45). But when foreign purchases are added to lend-lease, the percentage becomes substantial in many cases. Besides, larger percentages for particular items for lend-lease shipments are buried

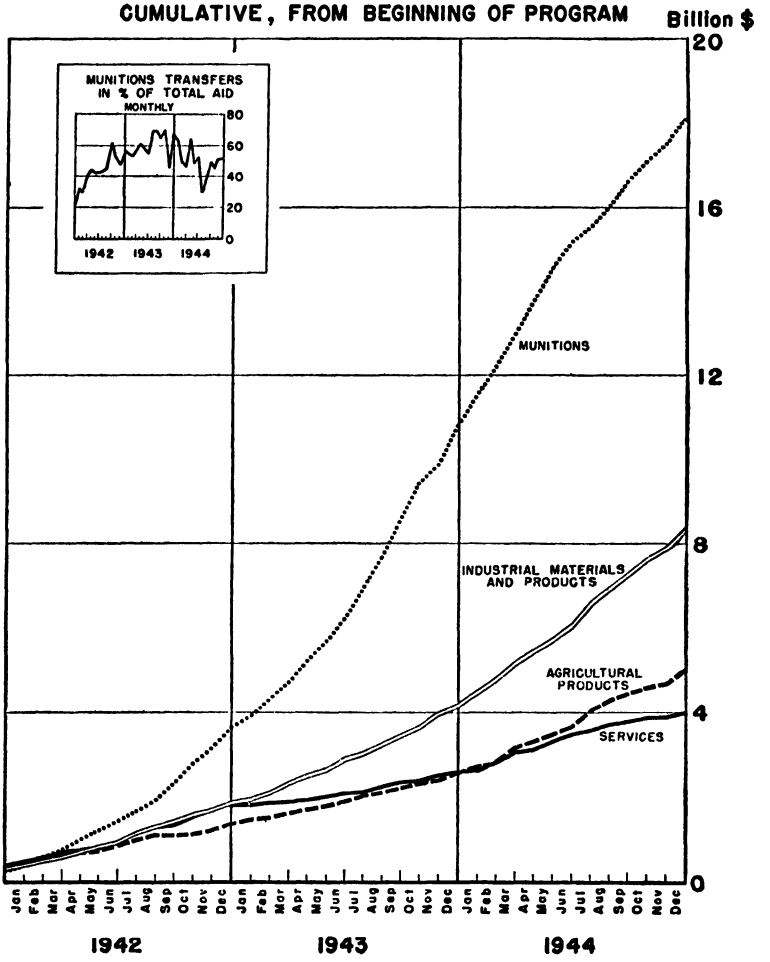

CHART 43.—Lend-lease goods transferred and services rendered. (*Source: Eighteenth Report to Congress on Lend-lease Operations, for the period ended Dec.* 31, 1944.)

in these over-all figures: canned fish, 26.5 per cent; dried fruits, 19.2 per cent; dry skim milk, 40.9 per cent; pork, 14.6 per cent.[1] When, moreover, demand is highly inelastic, the loss of 5 to 10 per cent may, in the absence of strong measures of conservation and control of demand, be responsible

[1] *Ibid.*, p. 8.

for strong inflationary pressures. These diversions in some cases account for the need of rationing or, in the absence of rationing, contribute toward substantial pressure on these markets. Of course in the present circumstances this is not an argument against their export.

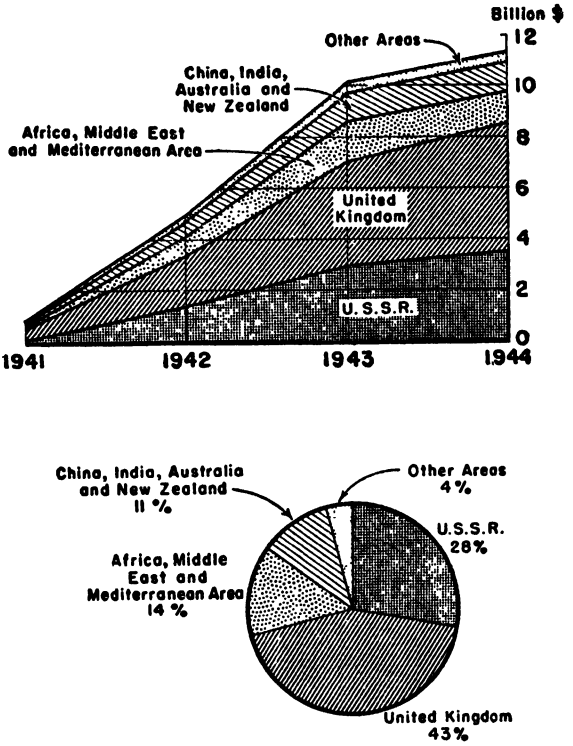

CHART 44.—Distribution of lend-lease exports. (*Source: Eighteenth Report to Congress on Lend-lease Operations, for the period ended Dec.* 31, 1944.)

4. PARITY PRINCIPLE

Scarcities prevail in a war economy. It is necessary, therefore, to scrutinize carefully what is allowed to be exported. There is general agreement that military and political considerations must be decisive. We export when the war effort is aided; and we refuse to export when retention of scarce supplies at home will further our war effort. *In the course of the war, a parity principle gradually emerged which proposed some kind of equal treatment. Its application was stressed in our relations with Latin America; but (as we shall see) the question of the applicability of the principle was raised in relation to other countries as well.*

The Foreign Economic Administration is a claimant agency for exporters for commodities subject to programing, and has quotas in numerous cases even when distribution for domestic use is relatively free.

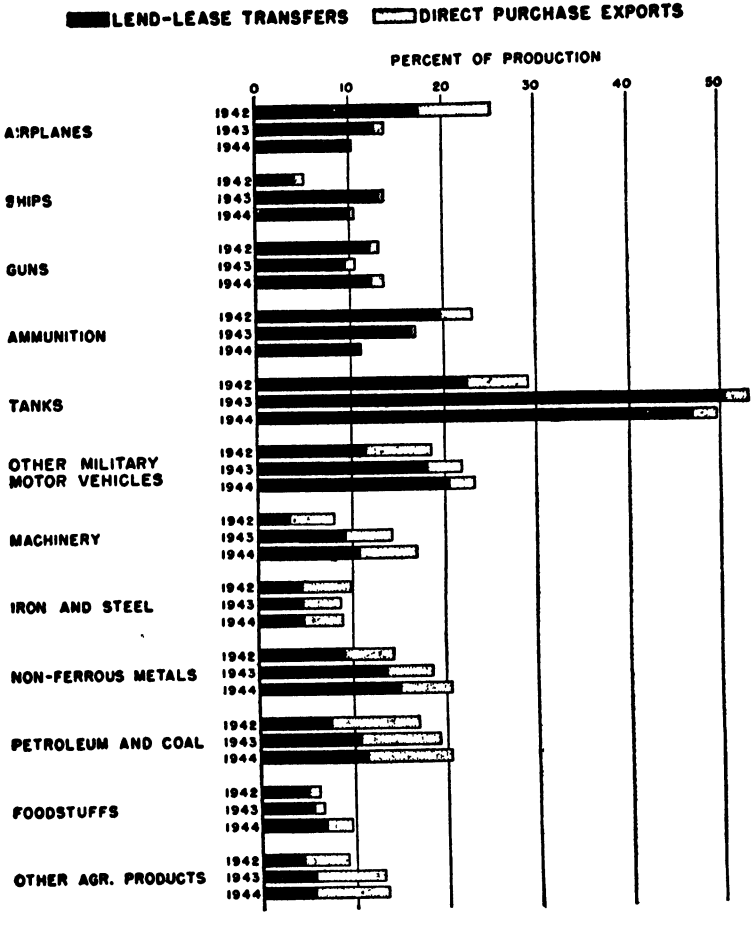

CHART 45.—International aid in per cent of total U. S. production. (*Source: Foreign Economic Administration.*)

Its responsibility is to see to it that minimum foreign requirements are met; that the most effective use is made of the exports of scarce commodities; and that scarce commodities are conserved. To the Office of Civilian Requirements (OCR) falls the responsibility of providing the civilian economy with minimum requirements of these scarce commodities. In degree of urgency the military, the War

Shipping Administration (WSA), and lend-lease are likely to take precedence over OCR and other claims of FEA. Claims for what is left are, therefore, a special matter of debate between these agencies. Impressed especially by political considerations, the State Department will tend to press for larger allotments for foreign use, while another agency, the Office of Price Administration (OPA), is primarily interested in keeping prices of exports down since excessive prices for exports tend to increase pressures to export excessively and raise questions of justice (and administration) between sellers at home and abroad.

The details of the principles of parity are as follows:

1. *Latin America, exclusive of the Argentine. The parity principle seemed to have stemmed largely from the Rio Conference, where it was agreed that supplies necessary to maintain the minimum essential economy of other American republics should be granted on basis of equal treatment with our own domestic economy.*

2. *British countries and thirteen other United Nations.* Under lend-lease (supplemented in many cases by reciprocal aid agreements) countries were not granted parity with the United States in the civilian area. We were to supply materials useful to the prosecution of the war to the extent of our ability to supply. *Urgency of need in relation to our respective wartime efforts was to be decisive.*

The following criteria were to be applied in cases where requirements were scheduled, subject to supply availability, and without relation to parity.

Material and equipment required to maintain public health and safety and the general living conditions of the population on a level consistent with the wartime economy; materials and equipment required for production of strategic materials for the war effort and to maintain essential transportation and utility services; materials necessary for the armed services, not procured through military channels; materials necessary to maintain the minimum essential civilian economy in the Near East—these were to be provided insofar as supplies were available.

3. *Canada.* Following the Hyde Park Conference of 1941, the Canadian and United States economies were virtually merged. Raw materials and goods which one country required from the other were to be allocated in a manner to make the maximum contribution to the war effort.

4. *Russia.* Russian requirements, for programing purposes, were determined on the basis of military considerations. We were to provide as much of our production as shipping requirements allowed.

5. *Liberated Areas.* These countries were to receive supplies required for essential relief and rehabilitation within the limits of supply and shipping availability. Requirements for these purposes were to be treated equally with the needs of the basic civilian economies of other United and Associated Nations.

The application of the concept of parity to the problem of the allocation of products between domestic and foreign use has been unfortunate. At the outset we should say that parity was a goal; there is much evidence that in practice it was not attained.

Let us run over possible interpretations. Our best known experience with parity was in relation to farm prices and (more recently) farm incomes. Government policy was to be directed to giving the farmer a parity (fair) price for the products he sold in relation to what he bought, the ratio to be compared with the purchasing power of what he sold in a base period. Increasingly it became a parity of standards of living.

This would be the most obvious interpretation. Yet this interpretation leads to absurd results. Our national income is about one-third of world income; but our population is only 6 per cent of the world's total. Per capita annual income is $1,200 in this country as compared with $50 to $100 in Latin America. Equality of living standards is out of the question. We would be denuded of all our supplies long before the average income of the other United Nations attained anything like our present per capita income. This approach has, I believe, never been seriously considered.

A second approach is to grant equal treatment according to the end-product criterion.[1] This, however, raises numerous difficulties. It may, for example, suggest equality of standard of living as the objective. In this country application of end-use criteria is supplemented by conservation and limitation orders. Similar restrictions are not in vogue abroad. *At any rate, the end-use criterion is not applicable unless supplemented in various ways.*

A third attack is that of parity on the basis of the proportion of imports of particular products into country A in relation to our total output or export of these products. In determining requirements, the Requirements Committees of our government abroad pay some attention to the normal ratio of imports to output and to our total exports.

This relatively simple approach raises many problems. In many cases, exports must be cut intensely; and, of course, with limited supplies, a less crude index is generally required. Essentiality of use, contributions to the war effort, etc., etc., are considered by the Requirements Committees abroad. At best the ratio of imports to output is part of the evidence.

Fourth, parity might be interpreted as entitling the foreign claimant to equally high priorities as the domestic claimant. If the American receives an AA-2 rating to produce tin to build houses, then the foreign claimant would receive an AA-2 rating. Yet this would also lead to absurd results. Equal priorities for equal uses would, given differing standards of living and differing war needs, provide foreign nations (particularly in the area of civilian goods) with excessive supplies. No such parity of treatment was or could be provided. Since priorities are generally given to the FEA in relation to allocated supplies, this particular attack might be considered as an implementation of programing.

[1] The use of end-product criteria means that scarce materials are distributed according to the essentiality of the end product (*e.g.*, automobile or tank).

Fifth, and finally, scheduling is a way out. This makes the most effective contribution, though when the Rio Conference proposed equal distribution, programing as practiced today was unknown. It is especially important because priorities are even less useful and effective in the determination of relative distribution between domestic and foreign uses and many alternative foreign uses than they are for purely domestic purposes; and they play a limited role when not tied up with programing. *Programing can take into account, at least to some extent, prewar trade, the differences in standards of living, minimum requirements here, requirements abroad in terms of essentiality of use, etc.* This fits in best also with the usual interpretation of parity, namely *equal sacrifice in relation to prewar standards.*

As regards the future of parity, we might emphasize the following:

1. *Above all, it is necessary to try to give more precise meaning to parity and the areas to which the principle is to apply.*

2. *Serious consideration will have to be given to the modification of the parity principle which will be required as supplies become more plentiful and controls are gradually lifted. Parity applies when supplies are not equal to demand.*

3. *The treatment of surpluses is one of the vexing problems.*

Many would encourage exports of surpluses in order to safeguard the American postwar market against price pressures. Others fear that excessive exports in the reconversion period will have inflationary effects here. Clearly the distribution must be determined, commodity by commodity, in terms of relative supplies here and abroad. Some checks must be had against excessive price bidding by foreigners though export price control, so long as it continues, will be helpful here. When purchase certificates are required domestically, they should be for "surpluses" in export.

5. IMPORTS

As was stated in my book on controls, it is also necessary in wartime to control imports.[1] This is necessary not in order to conserve exchange as in the British case but rather to make the most effective use of limited shipping available.[2] This means the exclusion of nonessential imports when shipping is scarce and the examination of essential products imported, with a view to assuring their most effective use for war.

One effective manner of controlling imports has been government purchase.[3] In the year ending September, 1944 alone, the government bought abroad $800 million worth of strategic materials, exclusive of commodities purchased preclusively by the United States government to keep them from the Axis. Among the commodities in which the FEA has been especially interested were cinchona bark sufficient for many millions of antimalarial treatments and quartz crystals for elec-

[1] Chs. XVI, XXIV.

[2] See especially FEA, *First Annual Report to Congress*, pp. 18–25.

[3] The control through shipping licenses is discussed in *Price and Related Controls.*

tronic equipment adequate to meet an increase of military requirements from 31,000 pounds to 2,000,000 pounds a year.

Wartime imports of some commodities essential for the effective prosecution of the war increased substantially (see Chart 46). The government was, moreover, able to keep the prices of important commodities down, since it frequently entered markets as a monopoly buyer. Even where importation or trading was carried on by private interests, the government often restrained the rise of prices through the determination of buying and/or selling prices (*e.g.*, sugar and

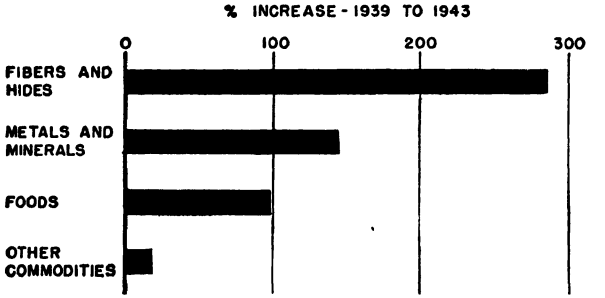

CHART 46.—Wartime increase in U. S. imports. (*Source: Foreign Economic Administration.*)

coffee). Chart 47 shows the remarkable success achieved in keeping prices of metals stable in World War II as compared with World War I. Especially significant is the recent price history of tea and coffee. For the purchase of many commodities this government cooperated with the British and thus averted expensive competition.

Of the many reasons adduced for government purchases, the price factor has clearly been an important one.

"Purchases have been made with government funds generally when wartime needs for strategic commodities were urgent or unpredictable or the military deadline for delivery stringent; when it was difficult or impossible for private importers to buy materials in a country where there was inflation and to bring them in and sell them under the Office of Price Administration ceilings; when shipping and insurance rates were up; when the output of submarginal mines and high-cost plantations was needed; when new aggregations of labor had to be recruited and housed; when it was necessary to pay high prices to keep strategic materials in neutral countries out of Axis hands; when it was necessary to build insurance stock piles both in this country and in foreign parts; and when problems arising out of the liberation of Axis-dominated areas created situations which private trade could not meet." [1]

[1] FEA, *First Report to Congress*, p. 24.

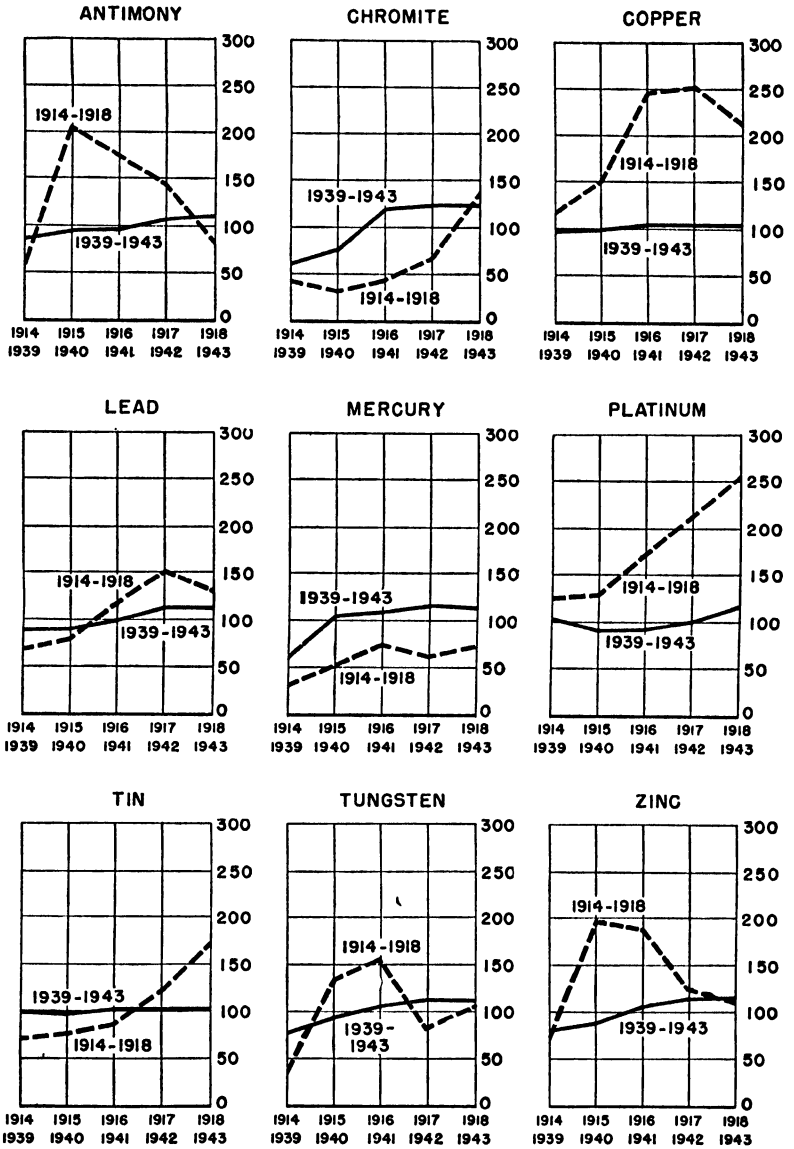

CHART 47.—Metal prices in World War I and World War II. (*Source: Foreign Economic Administration.*)

By way of conclusion, we may say that the material supplies we sent abroad, particularly under lend-lease, added greatly to the strains on our economy and to inflationary pressures. Lend-lease expenditures over the 39 months ending June, 1944, of $28 billion were 13 per cent of all Federal expenditures; and lend-lease accounted for 15 per cent of munitions production. Most of these lend-lease expenditures represented exports, and thus increased pressures on our production capacity. *Clearly much more would have been available to the civilian economy, or incomes in relation to the supplies of civilian goods would have declined greatly, if it had not been necessary to provide allies with these supplies. Against the diversions under lend-lease, the gain of imports relative to exports dollarwise was not of great importance.* We were, however, able to shift a significant part of the war burden on Latin American and Canadian economies. Our pricing and buying policies were also helpful in that they made possible purchases at relatively noninflationary prices; and our war effort would have suffered greatly without foreign tin, lead, copper, magnesium, wool, fats and oils, etc.

By April, 1945, total lend-lease aid attained almost $39 billion. These expenditures accounted for 15 per cent of our war expenditures.[1]

[1] *Nineteenth Report to Congress on Lend-lease Operations for the Period Ended March* 31, 1945, pp. 9, 23.

Part III

DEMAND

INTRODUCTION

In Part II we paid particular attention to the problems of supply, especially to productivity, the contribution of capital, the effect on supplies of our international economic relations. The higher the supplies, the lower (*ceteris paribus*) are prices. *But it is partly a question of what is produced: war or civilian goods. It is also important to inquire whether additions come from unemployed resources, increases in productivity, diversions from capital or consumption, or from abroad.* How much output rises will depend also on the number and persistence of bottlenecks. We therefore discussed in Part II some of our bottlenecks and, most important, man power.

Our most important conclusion is that our largest contributions to the output of war goods originated in rises of output; but it may well be that the gains were not quite so large as official estimates suggested. We probably increased our consumption standards and therefore nothing was available from that source. Capital disinvestment and the postponement of new investment in nonessential areas made more resources available for war. In short, prices were lower than they otherwise would have been because (1) *output expanded and* (2) *diversions from nonwar capital formation were of some importance. Prices of civilian goods did not fall, however; and the explanation is the large rise of income and demand, which were not accompanied by a corresponding rise of supplies for the civilian economy.*

Part III deals, therefore, with the problem of income: (1) its distribution, (2) the amounts exacted by the government or contributed by the public in purchases of war bonds, and (3) with what is left for consumption. The crux of the problem is the relationship between two magnitudes: (1) the supply of goods made available and (2) the purchasing power used to buy these goods.

Chapter XI on the Inflationary Gap more or less summarizes the whole inflationary picture, because the inflationary gap provides the means for a study of composite supply and demand. Since the statistics of the inflationary gap provide us with a measure of the supply of goods

available and the expected demand for these goods at the price level prior to the period under consideration, it can, at the same time, provide us with the opportunity for a study which takes into account the important variables in the situation. This type of study deals with the relationship between money and the supply of goods and, therefore, implicitly, the extent to which the economy is put to use. Again implicitly, it considers the distribution of income because the larger the gains of low-income recipients, the greater is the expectation of spending, and therefore the greater the pressure on commodity markets and the higher the inflationary gap. In this chapter we consider also the theoretical basis of the concept of the inflationary gap, the extent to which we can rely on it, the mistakes we have made in the past in estimating the gap, and the reasons for those mistakes.

In Chapters XII and XIII we follow the usual old-fashioned method of studying inflation, *i.e.*, the study of the relationship between money and prices. The greater usefulness and efficiency of the approach via the inflationary gap as against the old-fashioned money approach is obvious. Nevertheless, we cannot completely dismiss the issue of the supply of money, and it is important to consider our monetary policy as part of the general inflationary problem. For example, if the monetary authorities made our monetary system very inflexible and rigid, no doubt prices would be lower than they are. On the other hand, the financing of the war would also have been much more difficult and, therefore, a rigid monetary policy would be unwelcome. Most authorities would agree that in a war of this magnitude the maximum degree of flexibility in monetary policy is desirable. In other words, the expansion of money provides the wherewithal by means of which the necessary spending is accomplished.

Chapter XIV may seem a digression. But since price history is discussed at numerous points throughout this volume, with index numbers relied on for evidence of price movements, it is not altogether inappropriate to dwell on the meaning of index numbers and to draw some conclusions concerning the relationship of the actual value of money to that indicated by index numbers. Obviously we cannot be confident of the degree of the inflation attained unless we appraise the index numbers.

Chapters XV and XVI deal with taxation and government borrowing. These are the most effective means of holding down spending. In Chapter XV the limits of tax capacity, the inflationary aspects of

our tax program, the inadequacy of our program absolutely and in relation to the British program, receive attention. An even more important issue is the volume of savings and whence they come. The higher savings are, the less the pressure on commodity markets.

Of particular interest is the issue of the extent to which the government should rely upon inflationary sales of bonds—either to the banks or to the public, insofar as the latter pays for them out of balances that otherwise would have been idle—and the extent to which the government should rely upon an increase in the rate of interest in order to sell the necessary supply of bonds. Clearly it is preferable to keep the rate of interest down as long as the net effect is not a very large rise of prices.

National income is reduced through taxation and savings, the remainder being available for consumption. This variable is to be compared with the supply of consumption goods at current prices. If income available for consumption exceeds the supply of consumption goods at prices of the base period, prices will rise. Chapter XVII is concerned primarily with a study of consumption demand and its contribution to higher prices.

Chapters XVIII–XXIII deal in some detail with the various shares of national income. Much has been made of the point that the rise of capitalist income—or wages or farm incomes, depending on the commentator and his particular ax to grind—has brought about inflation. In these six chapters, we consider the rise of various kinds of income, their contributions to higher prices via costs and demand, and the mistakes that account for the failure to keep these incomes from soaring.

Chapter XI

The Inflationary Gap

1. THE RELATIONSHIP OF DISPOSABLE INCOME TO THE SUPPLY OF GOODS AVAILABLE

As was stated in the introduction to Part III, before the present war a study of inflation would have concerned itself with the relationship between additional supplies of money and of commodities. In some cases the government deficit and the resulting expansion of money would be considered, and on the basis of these variables conclusions would be drawn concerning the inflationary aspects of government finance.

In the present war, British economists early gave an impetus to the study of the relevant and broader problem of the relation of total supply and total demand. In particular, their studies pointed out that under conditions of full employment the acquisition of resources obtained by the government through government spending will increase total demand unless corresponding resources are released by the civilian economy.[1]

Our problem here is, then, the manner in which the resources which the government requires are made available, and the extent to which the new demand by the Treasury is superimposed upon

[1] See the following references for further consideration of the problem of the inflationary gap: H.M. Stationery Office, *An Analysis of the Sources of War Finance . . .*, Cmd. 6438, 1943, *passim;* W. L. Crum, J. F. Fennelly, L. H. Seltzer, *Fiscal Planning for Total War*, pp. 154–155, NBER, 1942; *The General Maximum Price Regulation*, OPA Bull., Apr. 28, 1942; R. V. Gilbert and V. Perlo, "The Investment Factor Method of Forecasting Business Acitivity," *Econometrica*, June–October, 1942; Seymour E. Harris, *Economics of America at War*, pp. 171–181, 1941; A. G. Hart, "What It Takes to Block Inflation," *R.E.S.*, August, 1942, pp. 101–111; House Hearings, Ways and Means Committee, *Revenue Revision of* 1943, Part I, pp. 23–43; F. W. Paish, "The Budget and the White Paper," *London and Cambridge Economic Services Report on Current Economic Conditions*, May, 1941, pp. 10–15; W. A. Salant, "The Inflationary Gap: Meaning and Significance for Policy Making," *A.E.R.*, June, 1942, pp. 308–314; C. Shoup, M. Friedman, R. P. Mack, *Taxing to Prevent Inflation*, 1943, especially Parts I, III; C. Warburton, "Measuring the Inflationary Gap," *A.E.R.*, June, 1943, and "Who Makes the Inflationary Gap?", *A.E.R.*, September, 1943; Grover Wm. Ensley and Richard Goode, "Mr. Warburton on the Gap," *A.E.R.*, December, 1943; finally, Mr. Warburton's rejoinder, "Monetary Expansion and the Inflationary Gap," *A.E.R.*, June, 1944.

existing demand. Insofar as the government succeeds in obtaining a release of resources or a subtraction from private demand through the imposition of additional taxes (or through additional savings by the public or through the public's failure to maintain capital), the net effect of a rise of government spending will not be higher prices. If there is not full employment or if with full employment more intensive use of economic resources is effected, then the resulting expansion of output may provide part of the resources made available to the government. In this case, however, the additional output is accompanied by an expansion of money income and, therefore, the seeds of inflationary growth are planted; under the circumstances much will depend on fiscal measures.

Nowadays, discussions of the inflationary gap deal with the relationship of disposable income to the supplies of goods available. It is frequently said that if at prices current during the initial period under study, the disposable income exceeds the available supplies of goods for which the income is to be spent, the excess is the inflationary gap and measures the probable rise of prices. A more advanced approach is to say that the excess measures the upward pressure upon the current price level. In most discussions of the gap a relationship is established between disposable income of individuals and the supply of consumer goods made available to them. An example of this approach is given in Chart 48. It would be appropriate, however, to allow for *expected*

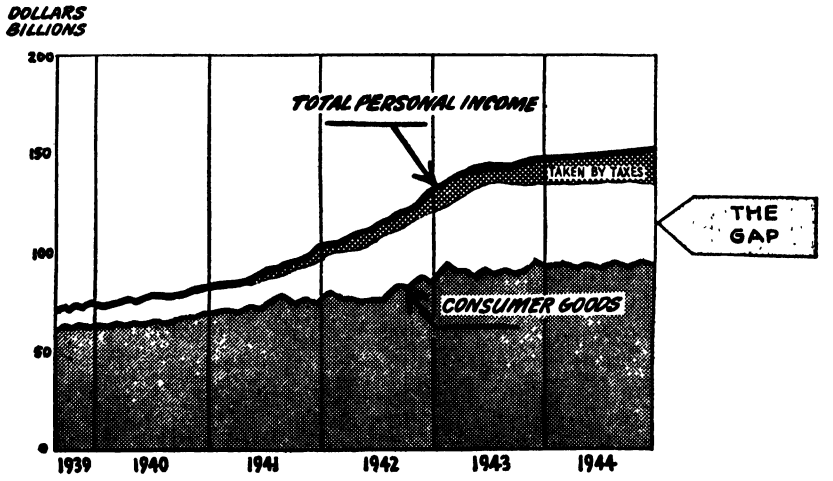

CHART 48.—The inflationary gap. (*Source: Office of Price Administration.*)

savings as well as personal taxes. (Chart 48 does not cover savings.) In more recent formulations another approach has been taken. The total funds available are given by the gross income flow and the source of expenditures include those for consumption, for capital, and for the support of government.

2. ESTIMATES OF THE GAP

There have been many estimates of the gap. I shall mention but a few. In presenting its budget for 1941–1942 the British government discussed a gap of £500 million which had to be closed through an increase of savings or taxation if inflation was to be averted.[1] For the United States, in the early part of 1942 the inflationary gap became a matter of frequent discussion both in government and private circles. At the time of the formulation of the General Maximum Price Regulation (GMPR) of May, 1942, the Office of Price Administration (OPA) estimated the gap for 1942 at $17 billion. According to a press release by the OPA of Aug. 20, 1942, the gap had been reduced to $9 billion by August. Economic Stabilizer Byrnes in November, 1942, estimated it at $15 billion for 1943. But by February, 1943, the Office of War Information (OWI), in a careful survey of the inflationary picture, raised Byrnes's estimate to $20 billion.[2] More recent official discussion has been silent on the gap. Justice Byrnes commented on a rise of individual income receipts of $79 billion from 1941 to 1944. Additional taxes siphoned off $16.7 billion and savings $31 additional. The result was that only $96.5 billion of total incomes of $155 billion were spent.[3]

3. THE OFFICIAL VERSION OF THE GAP

Here I quote (1) the President's statement which was given in 1943, in his budget address for 1944 and (2) a statement by OPA issued in *Bull.* 1 of the GMPR.

"Financing expenditures which will exceed $100 billion is a task of tremendous magnitude. By meeting this task squarely we will contribute substantially to the war effort and clear the ground for successful reconstruction after the war. An adequate financial program is essential both for winning the war and for winning the peace.

"Financing total war involves two main fiscal problems. One problem is to supply the funds currently required to pay for the war and to keep the

[1] *The Economist* (*London*), Apr. 12, 1941, p. 477.

[2] OWI, *Battle Stations for All*, p. 20.

[3] *First Report by the Director of War Mobilization and Reconversion*, Jan. 1, 1945, pp. 18–19.

increase in Federal debt within bounds. The second problem is caused by the disbursement of $100 billion a year to contractors, war workers, farmers, soldiers, and their families, thus adding many billions to the people's buying power, at a time when the amount of goods to be bought is declining steadily. A large portion of this excess buying power must be recovered into the Treasury to prevent the excess from being used to bid up the price of scarce goods and thus undermine the stabilization program by breaking price ceilings, creating black markets, and increasing the cost of living.

"We cannot hope to increase tax collections as fast as we step up war expenditures or to absorb by fiscal measures alone all excess purchasing power created by these expenditures. We must, therefore, provide a substantial portion of the needed funds by additional borrowing, and we must also use direct controls, such as price ceilings and rationing, for the protection of the consumer. Nevertheless, the more nearly increases in tax receipts follow increases in expenditures, the better we safeguard our financial integrity and the easier the administration of price control and rationing. All of these measures are interrelated. Each increase in taxes and each increase in savings will lessen the upward pressure on prices and reduce the amount of rationing and other direct controls we shall need." [1]

The OPA statement follows:

"A gap has appeared between the supply of goods and services which is available and the purchasing power or demand of the people who wish to buy these goods and services. This gap is widening. Both military and civilian demand have increased vastly in recent months. War expenditures, which totaled $1,000,000,000 in March, 1941, and $2,000,000,000 in December, 1941, rose to nearly $3,000,000,000 in March, 1942. In December, 1942, on the basis of present authorizations, these expenditures will exceed $6,000,000,000.

"Civilian demand has its source in income payments to individuals by the Government and by industry. The rate of monthly increase in these payments has advanced from one-half of one per cent in the months immediately following the outbreak of the war in September, 1939, to 1 per cent, to 1½ per cent, and since March, 1941, to 2 per cent. There is evidence of a further acceleration in this rate of increase in the future.

"The supply of civilian goods and services available for purchase from this income is diminishing. Manpower, materials, and machinery are being devoted to the production of planes, ships, tanks, and guns instead of to the production of civilian goods and services. The supply of such civilian goods and services will be progressively reduced by approximately 1 per cent per month for the balance of this year.

"During 1941, it is estimated, individual income totaled $92,000,000,000. Of this amount $18,000,000,000 was accounted for by personal taxes and individual savings, and $74,000,000,000 was spent on consumers' goods and services.

[1] *President's Budget Message*, Jan. 6, 1943, pp. xv–xvi.

"During 1942, at the present rate of increase of income payments, individual income will total $117,000,000,000. Of this amount, it is estimated that $31,000,000,000 will be saved or paid to the Government in personal taxes and $86,000,000,000 will be spent.

"The supply of goods and services available for civilian use totaled $74,000,000,000 in 1941. During 1942, the supply will total $65,000,000,000, computed on the basis of 1941 prices. Making allowance for the increase in prices which took place prior to April 1, 1942, the supply will total $69,000,000,000.

"Thus, demand in 1942, unless limited, will exceed supply by $17,000,000,000. . . .

"The gap between the total purchasing power available for disposal by the people of the United States and the total supply of goods and services available for them to purchase has caused, in recent months, a general advance in prices and an advance which is accelerating in rate. It has made the advance common to services, and to all classes of goods, whether farm products or industrial commodities, raw materials or merchandise in wholesalers' or retailers' stocks.

"The $17,000,000,000 by which projected demand will exceed the supply of goods available during 1942, if left to itself, would force an estimated increase of 25 per cent in the cost of living this year. But price increases build on each other. Increases in the cost of living lead to wage adjustments. These in turn augment purchasing power at the same time that they increase industrial costs. Therefore, by the time prices had risen the 25 per cent necessary to raise the value of the available supply of goods up to the total dollar demand now forecast, the total demand would itself have increased. Left to itself, the process has no definite end. It can be stopped only by measures which will eliminate the occasion for increased income payments on one hand and narrow the gap by withdrawing excess purchasing power on the other. The alternative is inflation." [1]

4. OTHER VERSIONS OF THE GAP

As we noted above, there are many definitions and versions of the gap. The usual procedure in the investigation of it is to compare the total income available for spending with the goods which that income is to buy at the price level fixed as of the end of the preceding period. Dr. Hart investigated along these lines. His objective was to estimate the inflationary gap for the calendar year 1942 and the fiscal year 1943: he estimated income payments and from these deducted his estimate of personal taxes and normal savings. The remainder was the normal expenditures at this income level, which in turn were compared with the consumption goods made available. These computations yielded a gap of $13 billion in 1942 and $23 billion in the fiscal year 1943. From this gap he then deducted an amount equal to the reduction of installment credit outstanding and new taxes expected under pending revenue bills. The residual gap was then found to be $8 and $16 billion,

[1] "The General Maximum Price Regulation," *OPA Bull.* 1, pp. 20–21, 1942.

respectively. The problem was to reduce this anticipated gap to zero. Dr. Hart proceeded to whittle down the residual gap by allowing for normal savings due to intensified effects of a rise of income, a shortage of durable goods, tax accruals, and the effects of savings bond campaigns. He anticipated that for fiscal 1943 the gap might be reduced by $8 billion in this manner. The remainder must be taken care of by an increase of tax rates and a reduction of exemptions.

A simpler version of this technique was given by Justice Byrnes's estimate for 1943 which was presented in November, 1942.[1]

TABLE 43.—ESTIMATES OF THE INFLATIONARY GAP

(In billions of dollars)

	Justice Byrnes, 1943	Treasury, 1944
Income payments	125	150
Personal taxes	15	20
Savings	25	?
Available for expenditure on consumption	85	130
Consumption goods and services available at prices of November, 1942	70	90 *
Inflationary gap	15	40

SOURCE: OWI release and House Hearings on *Revenue Revision of* 1943.
* Prices of 1943.

Still another estimate, by the Department of Commerce, is given in Table 44.

TABLE 44.—DEPARTMENT OF COMMERCE ESTIMATE OF THE INFLATIONARY GAP, 1943

	Billion Dollars
Income payments to individuals	142
Personal taxes	16
Disposable income of individuals	126
Consumption goods available at Jan. 1, 1943, prices	88
Gross inflationary gap	38
Disposal of gap:	
Higher prices	2
Savings	36

SOURCE: *S.C.B.*, September, 1943, p. 5.

It will be observed that new concepts are introduced in Tables 43 and 44. These refer not only to the gap but to the gross gap and also the residual gap.

[1] In the second column of Table 43 I present an estimate by the Treasury Department for 1944 which is along similar lines. Savings must still be deducted, however. House Hearings, *Revenue Revision of* 1943, p. 24.

This approach (the gap) was concerned with the relationship of consumer demand and the supply of consumption goods and services made available. For the popularization of this concept of the gap we are indebted for the most part to the experts who were closely associated with the OPA, they having been especially interested in the prices of consumption goods.

Dr. Warburton,[1] on the other hand, was concerned especially with the problem of gross income flows, and he proceeded to deal with the problem of *total* demand and *total* supply. He starts with the amount of gross income flow which is the amount available to individuals and business enterprises for the acquisition of consumer goods, capital, and support of government. From this sum he deducts the taxes paid by individuals and business; the balance yields what he calls the "potential inflationary gap."

	Billion Dollars
1941	9
1942	36
1943	65

He then adjusts these figures for (1) Federal government obligations acquired by individuals and business, minus the estimated reductions in the holdings by state and local governments; (2) increase or decrease of debts to banks of individuals and business units; (3) cash received for existing property or prepayments by the government. The resulting inflationary gap is as follows:

	Billion Dollars
1941	6
1942	14
1943	17

This inflationary gap corresponds to the rise of cash and deposits in the period under consideration. For the time being individuals and business hold additional cash and deposits of a total of $37 billion acquired in these three years. It is not clear whether these are savings which the public intends to invest or whether these are savings which the public, in possession of unanticipated income, is not as yet prepared to spend. The total increase of $6, $14, and about $17 billion measures not only the rise of deposits and currency held by individual or business units, but also the borrowing from banks by the Treasury, minus reduction of debts with the banks by others and adjusted for changes in the cash balance of the Treasury. This inflationary gap so defined also is measured by the excess of the gross income flow over (1) expenditures for consumption, for capital goods, and for business use, (2) taxes, (3) purchases of public securities, and (4) the reduction of indebtedness to banks.

In a second and very interesting article, Dr. Warburton developed his position further. Here he espoused the cash-balance as against the income

[1] *A.E.R.*, June, 1943, p. 367.

approach. In his view, the relationship of expenditures to cash balance is more stable and easier to forecast than the relation of income and consumption expenditures. He is perhaps justified to some extent in his doubts concerning the possibility of forecasting expenditures and incomes. But he is wrong to claim that the cash-balance approach will yield the accurate forecasts of consumption expenditures and prices. And his conclusions that consumption and prices in 1941, 1942, and 1943 were about what would have been expected in the absence of price and rationing controls and, therefore, that these controls had little influence on the aggregate of expenditures, cannot stand up.[1]

5. ERRORS OF FORECASTING

The large errors made in previous forecasts [2] are apt to create puzzlement and skepticism in one who studies the inflationary gap

TABLE 45.—ESTIMATES OF THE INFLATIONARY GAP AND ERRORS OF ESTIMATES

(In billions of dollars)

	Byrnes estimate, November, 1942, for 1943	Estimate of disposition, September, 1943		Errors of estimate	Estimate and disposition, 1944	
	(1)	(2)	(2a)	(3)	(4)	(4a)
Income payments to individuals	125	142	(142)	−17	155	(155)
Personal taxes	15	18	(18)	+3	23	(20)
Individual savings	25	36	(33)	+8	36	(39)
Net	85	90	(91)	−6	96	(96)
Consumers' goods available	70	90	(91)	+21	95	(96)
Gap	15	0	(0)	+15	+1	(0)

SOURCE: Adapted from *S.C.B.*, September, 1943, Table 5; *S.C.B.*, December, 1944, p. 2, *First Report by Director of War Mobilization and Reconversion*, pp. 18–19.

(which really is a gap only when seen in prospect but a gap no longer when seen in retrospect). I present as an example of such error the Byrnes estimate of late 1942, which was based on official material [column (1) of Table 45].

[1] Warburton, *op. cit.;* J. L. Mosak and W. S. Salant, "Income, Money and Prices in Wartime," *A.E.R.*, December, 1944, pp. 828–839. The latter point out well the weakness of Dr. Warburton's position.

[2] *Cf.* Shoup and others, *op. cit.*, Parts I and III, where the difficulties of predicting the gap and the onset of inflation are ably discussed.

The figures in column (2) of Table 45 are estimates for 1943 as of September, 1943, and those in parentheses in column (2*a*) are the values ex post facto for 1943. It will be noted that the actual values did not diverge greatly from those anticipated in September, 1943. Personal taxes were $2 billion higher, and this rise was more than offset by a decline of savings, approximately $3 billion below the figure estimated in September. Column (3) compares estimates for 1943 as of November, 1942, with the actual values.

Columns (4) and (4*a*) are based on estimates of income, taxes, savings, and consumers' goods in the first half of 1944, and actual results for 1944, respectively. It might well be said that the inflationary gap for 1944 was close to zero. That, despite a rise of income payments of $13 billion. An increase of personal taxes of $2 billion, of individual savings of $6 billion, and of consumption goods of $5 billion—all factors absorbing additional income—roughly offset the inflationary pressures resulting from the rise of income. Since, however, there was a net rise in the cost of living of 1 per cent, the gap was not entirely eliminated. (The figures may be assumed to be in error to this extent.) It will be noted, however, that after the inaccurate estimates in 1942 and 1943 (as we shall see), official estimates of the gap in 1944 were not given much publicity.

It will be observed that whereas the gap was estimated at $15 billion in November, 1942, an estimate based on material available in September, 1943, yields a zero gap. The explanation of the more favorable results of the later data is that although Justice Byrnes underestimated income by $17 billion, he also underestimated taxes by $3 billion, savings by $8 billion, and consumption goods available by $21 billion.

Similar large errors were also made in the report on inflation by the OWI.[1] The estimate of the gap by the latter was $20 billion, but here, again, the supply of consumption goods available was underestimated by no less than $20 billion. *Insofar as the gap was closed by a rise of prices instead of by an increase of taxes and savings or of consumption goods made available, the official government estimates should not be held to have been in error.* But only a small part, perhaps $3 billion of the total error in the gap, is to be associated with higher prices. From December, 1942, to July, 1943, the cost of living rose by 3 per cent; for the whole year (December to December) it rose 3 per cent. This increase in prices

[1] *Battle Stations for All*, p. 20.

accounted for no more than $3 billion of the additional consumption goods made available. The unexpected increase in the dollar value of consumption as compared with an anticipated reduction was the most important factor accounting for the failure of prices to rise as much as might have been expected from the earlier estimates of the gap. Ingenuity in finding substitutes, the slowness of conversion to war industries, the using up of inventories, all help to explain the increased consumption goods made available. It is also possible that the trend toward higher priced consumption goods conceals, to some extent, the true magnitude of the rise of prices. The net effect of the availability of such large supplies of consumption goods was a moderation in the rise of prices, which on the whole was desirable. But against this must be put the deprivation of resources suffered by the war economy. It may also be noted that if it were not for the large savings as compared with anticipated savings, the rise of prices would have been much greater.

6. COMPLEXITIES OF THE INFLATIONARY GAP

Many intricacies perplex the student. First of the complexities concerns the problem itself. There are many concepts of the gap. We may, for example, compare consumer income and consumption goods available at base period prices. And right here difficulties may arise because we may compare incomes of individuals with *total* consumption goods made available, instead of incomes of individuals and consumption goods made available to individuals or incomes of civilians with consumption goods made available to civilians. If we are studying the problem of all consumption goods, we should compare individual incomes available for the purchase of consumption goods, plus the purchases by the government and institutions. If the objective is to be the one suggested by Dr. Warburton, then we should balance total supply and demand. Instead of looking forward and anticipating an excess of purchasing power, following Warburton, we look backward and find that the value of sales is equal to the total amount of money spent; and the gap is then given by the rise of cash and deposits. This concept has its pitfalls, for we are not told how much of the excess of purchasing power was in fact absorbed in higher prices and how much was siphoned off. This particular approach, moreover, would not tell us what our price policy should be in relation to anticipated incomes: What should the tax burden be? the volume of savings? the degree of

controls required? This is an approach reminiscent of the World War I attack which put the emphasis primarily on the expansion of money.

Some of the complications of using the estimates of the inflationary gap as a guide to policy will be evident from what follows.[1] In looking forward in 1943, the government may, on the basis of anticipated income, taxes, and savings, estimate the gap for 1944 at $20 billion. The government, confronted with this large gap and a probable pronounced rise of prices, may put on a large savings campaign in the hope that the anticipated gap may be closed partly by additional savings. It will, however, also try to increase its tax revenues. It may estimate that savings will rise by $5 billion. Will a rise of taxes of $15 billion then be required? This does not necessarily follow, because any change in savings will have repercussions on the yield of taxes already in existence.

Or let us assume that $15 billion of additional taxes will be required when we allow for the effects of additional savings on taxes. Unfortunately, even then the $15 billion estimate of additional taxes required may prove to have been erroneous. First, a rise of taxes will affect income adversely. This adverse effect on income will reduce demand and to that extent reduce the inflationary gap; but it will also reduce the supply of goods available to the civilian economy, and to that extent increase the gap. We may, however, assume that the net effect here will be favorable. Second, the increase of taxes is likely to bring about some rise of prices. In this sense the new taxes have a double effect in wiping out the gap. Unfortunately, a reduction of the gap through a rise of prices is not what was wanted because the elimination of the gap was held to be desirable in order to prevent a rise of prices.

Finally, any increase of taxes will tend to have a cumulative or a multiplier effect in cutting income, and on this score it may be anticipated that to reduce a gap of $\$n$ billion only (say) $\$n/2$ billion of taxes will be required. This is the position taken by Prof. Shoup and his collaborators. It is necessary, however, to take into account the effect on supplies as well as on demand, because the reduction of supplies tends to increase the gap. On the other side, it should be noted that any large increase of taxes is likely to reduce savings substantially. The amounts which would be siphoned off through a rise of savings and a rise of taxes are not additive because these two are not independent

[1] *Cf.* especially Shoup and others, *op. cit.*, Parts I and III.

variables. Further, the net effect on the reduction of the gap by taxation will vary according to the nature of the tax. A given increase of the income tax in the higher brackets will be largely at the expense of savings and thus will not greatly reduce the demand for consumption goods. A sales tax, on the other hand, will contribute greatly toward a reduction of demand on commodity markets but will also have the unfortunate effect of raising prices. A rise of prices brought on through commodity taxes has, however, for the inflationary problem a meaning somewhat different from a rise of prices brought on by an excess of demand over supply.[1] In short, the secondary effects of fluctuations in taxes and savings complicate the problem of corrective action.

A good example of rather expert use of estimates of the gap as a guide to policy was given in a memorandum to the Ways and Means Committee submitted by the Treasury in October, 1943. This memorandum reveals many of the difficulties discussed above and the results are presented in Table 46.

TABLE 46.—TREASURY ESTIMATE OF THE INFLATIONARY GAP

	Billion Dollars
National income, 1944	150
Personal taxes, 1944	20
Consumption goods available	90
Gap	40

SOURCE: *Revenue Revision of* 1943, p. 24.

The next question, then, is how much additional taxation will be required. In 1941, savings were less than $15 billion. After considering the factors likely to bring a rise of savings above the 1941 amount and those likely to reduce them, the Treasury seemed to conclude that the latter forces were likely to be more powerful. (Actually, savings in the fiscal year 1944 were $34 billion.) Without rationing and price control, it was held, net savings might fall to $5 billion. On this assumption, $35 billion additional of personal taxes would be required. But since price control and rationing would help, the conclusion was reached that only $17 billion of additional taxes was required.[2] It will be recalled that virtually no increase of taxes was provided by Congress in 1943. In view of the Treasury's low estimate of savings, Congressional refusal to heed the fears of the anti-inflationists can be understood.

[1] *Cf.* discussion in Ch. XV on Taxation.
[2] *Revenue Revision of* 1943, pp. 24–27.

The Treasury then tried another attack. The percentage of disposable income to supply of consumer goods and services in the United States for 1943–1944 was 147. For the last year in which figures were available (1942), the British ratio was only 124. The Treasury forthwith suggested that additional personal taxes of $17 billion would be required to bring up to the British ratio our ratio of disposable income to the value of consumer goods available. It was held that the British proportion "comes nearer to being a genuine gage of the strain a rationing and price control system can prudently be exposed to. . . ." [1]

The Treasury realized, however, that the levy of $30 to $35 billion of additional taxes might not be adequate because, as taxes rise, savings would be reduced. "Thus taxes to eliminate entirely the net gap, the threatened excess spending, must exceed the net gap itself." [2] Finally, the Treasury extricated itself from this difficult position by pointing out that, since price control and rationing are available, it is not necessary to close the gap entirely. Many, of course, hold that unless a significant part of the gap is closed, price control and rationing will not work.

We turn to another point. Income associated with an expansion in the war industries tends to increase the inflationary gap and has further cumulative effects. A given rise of income may bring about a secondary and tertiary rise with accompanying increases of prices and wages, thus cumulatively increasing the gap. On the other hand, certain offsets must be considered: automatic increases of taxes, expansion of savings, and perhaps ultimately an increased availability of consumption goods. These forces will tend to reduce the gap. If the former factors weigh more heavily, the balancing will be at a higher price level. If the latter factors carry more weight, the balance of supply and demand will be at a more moderate price level.

That many mistakes were made can easily be explained by the difficulty encountered in estimating income, savings, and especially consumption. The relationship of savings, consumption, and taxation to income is abnormal in wartime, and relationships that prevailed in the past cannot be assumed to prevail in war. Dr. Friedman has well shown the large variations of the relationships of marginal consumption to marginal income.[3] His collaborator, Prof. Shoup, makes clear how complicated these problems are. The amount of savings depends upon such considerations as the effectiveness of the savings bond campaigns, the unavailability of consumers' goods, the lag of spending as income rises

[1] *Ibid.*, p. 27.
[2] *Ibid.*, p. 28.
[3] Shoup, *et al.*, *Taxing to Prevent Inflation*, p. 120.

rapidly, and its changing distribution. The proportion of additional savings out of a marginal rise of income cannot, therefore, be estimated with any high degree of accuracy. It has furthermore been demonstrated that estimates of income on the basis of additional governmental war expenditures are not easily obtained.

7. CONCLUSION

The inflationary gap is a useful concept but it was greatly misused both by government officials and particularly by the press. It marks an advance from the rather simple discussions of inflation that were presented in the previous war. Not only must we consider the government's demand or civilians' demands, but we should look at the total picture. The concept is especially useful in a prospective view of the inflationary threat. It is helpful as a guide to policy. Most discussions of the gap concept concerned themselves with the relation of supply and demand for consumption goods and services at a base period price. In my opinion this is its most useful application.

Estimates of the gap have been dishearteningly inaccurate. At best, they can be used as a very rough guide to policy. They indicate that strong measures must be taken to correct the inflationary propensities of a given economic situation. To some extent official errors of estimation were unexpectedly but luckily offset, and to this extent the estimates did not set off so much damage as they might have. Officials seriously underestimated savings and on this score they overestimated the gap. But they also underestimated the supply of consumption goods made available and to that extent overestimated the gap. Another error was a serious underestimation of income. Consumption was greater than anticipated, and yet savings were much larger than anticipated.

The economist treads on thin ice when he states, as a basic policy, that $\$n$ billion of new taxes or new savings is required in order to wipe out the inflationary gap. Tax policy in war should be based on the fiscal needs of the government and the requirements of its anti-inflation program. An economist or official will do well, however, not to state specifically that in order to eliminate the inflationary gap a given amount of additional taxes or savings or a reduction of capital formation for civilian purposes is required. He would do better to indicate that a severe tax program and a vigorous savings campaign are required, and no additional use of capital for nonessential purposes will be tol-

erated. *This limited usefulness of the gap stems from the difficulties of estimating the variables which yield the final answer and particularly because of the interrelationships of savings, taxation, income, and prices.* A change in savings (say) affects the other variables, and they in turn react on savings. The net result is not easily determined by the forecaster.

Early in 1943, for example, the case for a tax program of at least $10 billion additional might easily have been justified on the ground (1) that the public debt was rising too rapidly and (2) that any increase of taxes would reduce inflationary pressures, the latter being evident in, first, a rise of wholesale prices of about 10 per cent per year and, second, increasing violations of price and rationing regulations. These inflationary threats would become more serious in the future, it might have been contended, with the continued growth of incomes, of money and demand, and the growing scarcity of civilian goods. Specific estimates of the gap did not strengthen the case and in fact proved to be a boomerang. Estimates of tax potential were based on such considerations as how much more might be imposed without affecting morale seriously or jeopardizing the political fortunes of Congress.

Finally, it would be better if the economist adhered to a concept widely used, namely the relationship of income available for purchases of consumption goods and services, and supplies of these goods and services at the base-period price. Those who wished to use some other concept should clearly define their terms and give the particular gap a specific name. It would also be well if we distinguished among the various gaps and reserved for the inflationary gap the figure which results from estimating the difference between income disposable for the purchase of consumption goods and the supply available, after we have deducted not normal taxes and savings but our best estimate of actual taxes and actual savings.

Chapter XII

Prices in a War Economy

1. INTRODUCTION

A study of the inflationary gap gives an indication of the main inflationary pressures originating in expanding incomes. *Against this expansion is to be put any rise in taxes, personal savings, and the supply of consumers' goods.* These subjects will all be discussed more fully in later chapters. *Our discussion in Chapter XI must, however, make it clear that inflation would have been much greater had not taxes and savings risen greatly and had not the flow of consumers' goods increased.*[1]

We now pass on to a few brief sections on price history. We are especially interested in the rise of prices, the relative movements of

TABLE 47.—PERCENTAGE RISE OF PRICES, 1939–1944

	1939–1940 *	1940–1941 *	1941–1942 *	1942–1943 *	1939–1943 *	1939–1944 †
Cost of living, BLS.....	1	5	11	6	24	26
Wholesale prices, BLS.....	2	11	13	4	34	35

SOURCE: Based on *F.R.B.*

* Average of one year to average of next or later year.

† Estimated.

the cost of living and wholesale prices; relative movements here and abroad in World Wars I and II; the contribution of rising farm prices to price inflation; and the gains to the government and consumers of restraints on the upward movement of prices.

2. THE HISTORY OF PRICES

A summary of prices is given in Table 47.

[1] It should be observed that at higher prices (and hence higher incomes) savings and taxes would have been higher.

The reader will observe that the cost of living rose by 26 per cent from 1939 to 1944, and wholesale prices in the same period rose 35 per cent. At first, wholesale prices rose much more rapidly than the cost of living, the rise being roughly twice as much in 1940 and 1941 in wholesale prices as in the cost of living, and 34.6 per cent more for the period 1939 to 1944. In 1942, however, the rise was 11 per cent for the cost of living and 13 per cent for wholesale prices; and in 1943,

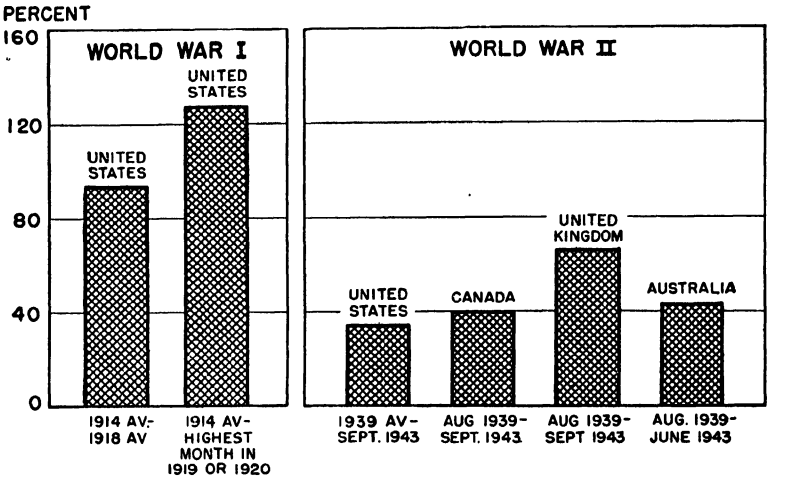

CHART 49.—Per cent increase in wholesale prices of all commodities during World War I and World War II. (*Sources: U. S. Department of Labor; Canada, Dominion Bureau of Statistics, United Kingdom, British Board of Trade; Australia, Commonwealth Bureau of Census and Statistics.*)

6 and 4 per cent, respectively. From the hold-the-line order, of April, 1943, to the end of 1944, the cost of living rose only 2 per cent.[1] For the whole period, the greater rise in wholesale prices is to be explained in part by the more sensitive nature of wholesale than of retail markets. The rise in wholesale prices relative to the cost of living was not, however, so great as in World War I.

Why did the cost of living in 1942–1943 tend to rise more rapidly than wholesale prices—or at least more rapidly relative to the movement of wholesale prices—as compared to the earlier years of our war effort? *In* 1942 *and* 1943 *control played a much larger part in the determination of prices than in the earlier years; and the explanation of the less rapid rise of prices in the wholesale market*[2] *may be the increased importance of controls and the relatively greater significance and effectiveness of controls in these markets*

[1] *Budget Message of the President for Fiscal Year* 1946, p. xxiii.

[2] Really not prices in wholesale markets but rather (largely) prices of basic commodities.

than in the retail markets. A second and related explanation is the fact that the pressure of increased demand was felt especially in the retail market since the difficulties of control were much greater in this market than in the wholesale market. Finally, farm prices were not controlled to the same extent as other prices, and their influence on cost-of-living items is much greater than their influence on the wholesale index. This follows from the fact that wholesale prices include minerals, raw materials of all kinds, imported commodities, etc., which are not so closely tied to our farm prices as many of the items entering in our cost-of-living index.

A second problem for consideration in this section is the relative movement of prices in the United States and other countries during the war period. In Table 48 I submit figures for wholesale prices and the cost of living for 1944 as compared with the average for the first half of 1939. (Also see Chart 49.)

TABLE 48.—PERCENTAGE PRICE RISE, 1939–1944
(First half of 1939 = 100)

	Wholesale	Cost of living
United Kingdom	73 *	31 *
Canada	40 †	18 ‡
Japan	50 §	39 ‖
United States	36 ¶	24 ‡
Germany	10 ‡	12 ‡
Argentina	102 ‡	9 **

SOURCE: Royal Economic Society, *Memorandum* 100, October, 1944, p. 9.

* September, 1944.
† June, 1944.
‡ May, 1944.
§ March, 1944.
‖ February, 1944.
¶ August, 1944.
** April, 1944.

Some interesting conclusions may be drawn from Table 48. Wholesale prices in the United Kingdom rose about 80 per cent more than in Canada, almost one-half more than in Japan, twice as much as in the United States, and seven times as much as in Germany. The rate of the price rise in Argentina was greater than that in the United Kingdom; in general, prices in Latin America rose more than in the United States, in some cases more than in the United Kingdom. (The rise of prices in the United States was more rapid in 1941, 1942, and the first half of 1943 than in the United Kingdom, Canada, and Japan; since the hold-the-line order, however, the rise has been less rapid in this country.) What is perhaps the most interesting feature of Table 48

is the fact that the rise of prices in the United Kingdom, although much greater in the wholesale area, was not relatively so large in the retail or cost-of-living area. (The cost of living in Canada, Germany, and Argentina, however, did not rise so much as in the United Kingdom.) Argentine figures are puzzling: while wholesale prices are up 102 per cent, the cost of living rose only 9 per cent.

We may pause for a moment to consider this problem of the greater relative rise of wholesale prices in the United Kingdom as compared to the cost of living. Why did the wholesale level rise so much more than in the United States, though the cost of living rose little more? It should also be observed that Canada, too, experienced a larger rise in its wholesale prices relative to its cost of living as compared to the relative rise in the United States for wholesale prices and the cost of living. *For both the United Kingdom and Canada the explanation is the great dependence on imports, the prices of which rose greatly and, secondly, the greater reliance on subsidies which made it possible to allow wholesale prices to rise and yet prevented this rise from being translated into a rise in the cost of living.* Again, in both the United Kingdom and in Canada the influence of the farm groups is not so great as in the United States and to that extent one would expect the smaller rise in the cost of living in these countries. A final consideration of some importance is the more stable wage policies pursued in these two countries as compared to the United States.[1] An increase in wages is likely to play a larger part in the determination of the cost of living than in the level of wholesale prices, since the cost of living measures the prices of products prepared with much labor.

Why was Germany, with its ambitious war program, able to stabilize wartime prices more or less from 1939? The increase of 10 per cent was certainly a very small one. Undoubtedly regimentation and a very rigid control of prices (on paper) accounted in part for the relatively stable prices. Another explanation of the relatively low prices is the fact that consumption by civilians was cut drastically through the imposition of controls. In addition, their price indices are probably of little value because of deterioration of product, black markets, etc.

Prices in the United States in the recent war rose not nearly so much as in the previous one. Table 49 (also Chart 50) reveals the following relative changes for the years 1914–1918 and for the period

[1] The British government announced in April, 1944, that in response to wage increases, prices would be allowed to rise moderately in 1944–1945.

August, 1939, to July, 1944. (The comparison in Table 49 is for four years in the former and for five years in the latter.) [1]

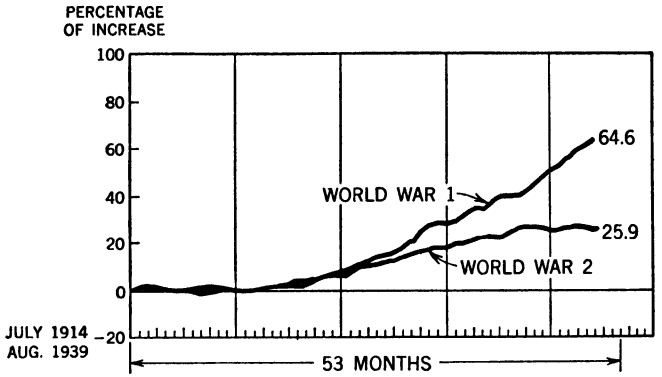

CHART 50.—Living cost rise, World War I and World War II. (*Source: Office of Price Administration.*)

1. Cost of living in World War I rose twice as much as in World War II.
2. Wholesale prices rose 2½ times as much.
3. Farm products rose roughly by the same proportion.

TABLE 49.—PRICE INCREASES IN THE TWO WARS

	Per cent increase	
	World War I *	World War II †
Cost of living	49.7	25.3
Food	64.3	39.6
Clothing	82.7	37.3
House furnishings	75.3	37.0
Wholesale prices, all commodities	92.8	38.8
Farm products	107.9	103.4
Other than farm products	87.3	27.9
Other than farm products and foods	87.7	23.0
By economic classes:		
Manufactured products	83.9	27.6
Raw materials	100.9	70.8
Semimanufactured goods	119.7	26.0

SOURCE: U.S. Department of Labor.

* Average for 1918 over average for 1914.

† July, 1944, over August, 1939, except for cost-of-living groups for which September, 1939, price indices are used.

[1] *S.C.B.*, September, 1944, p. 6.

This significantly better record in World War II is especially deserving of attention since the inflationary pressures were much greater:

1. War costs by June 30, 1945, were estimated at close to $300 billion. This was in fact a $300 billion war, whereas World War I was a $30 billion war. (And the dollar bought less in World War I.)[1]

2. War expenditures reached a peak of about 44 per cent of national product in World War II against 25 per cent in World War I.

3. Disposable income after taxes was $58 billion in 1918 and was estimated at $135 billion in 1944.[2]

4. By the end of World War I, the total of currency and deposits had risen by about one-half. By the end of World War II the increase was about 1½ times.[3]

3. CONTROL AND PRICES

In general prices rise less in controlled than in uncontrolled markets.[4] Chart 51 reveals that the longer prices of foods were uncontrolled, the more they rose in price.

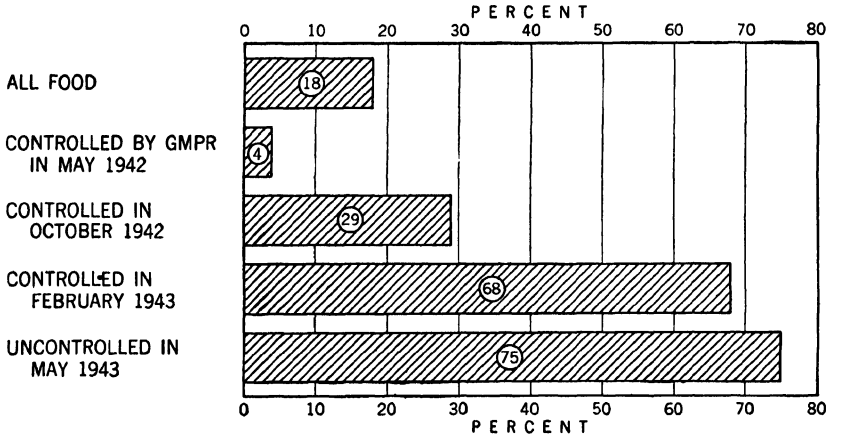

CHART 51.—Rise in retail food prices, May, 1942–May, 1943. (*Sources: Office of Price Administration and Bureau of Labor Statistics.*)

[1] The President estimated war expenditures at $360 billion by June 30, 1946, and the public debt at $292 billion. *The Budget for Fiscal Year* 1946, pp. ix, xix.

[2] *The Budget for Fiscal Year* 1946, p. xxv.

[3] *Cf.* OPA, *Renewal of Price Control Act.* Presentation by C. Bowles before the House on Apr. 12, 1944; *S.C.B.*, September, 1944, p. 4; *F.R.B.*, September, 1944, p. 895; *F.R.B.*, December, 1944, p. 1205.

[4] These issues are discussed more fully in my *Price and Related Controls*, Ch. I. *Cf.* OPA, *Price Control Report* 13, October, 1942, p. 3; *Report* 14, February, 1943, p. 11; *Report* 15, June, 1943, p. 1.

Chart 52 adds further light. In general, the largest rises in the cost of living were in the uncontrolled areas or in those in which control was not overly effective. Thus, the Office of Price Administration (OPA) had one of its greatest successes in the control of rent; and prices scarcely rose. Fuel and electricity prices were subject to vigorous controls: the rise was small. Large rises in the price of food are associated with difficulties of control and special exemptions for farmers. (These

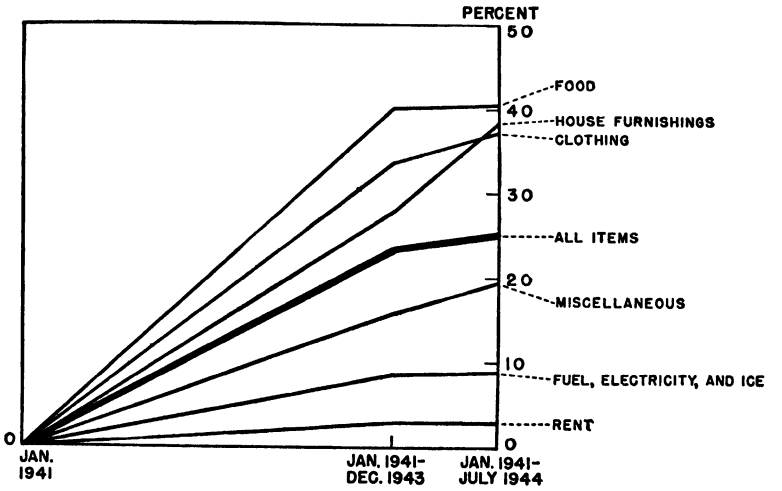

CHART 52.—Percentage increase in the cost of living, 1941–1944. (*Source: U. S. Department of Labor.*)

exemptions are discussed in a later section.) Similar considerations relate to clothing, though here the weakness of controls weighs more heavily than in the case of food.

A study by periods also suggests that the smallest rises occurred in periods in which controls had been imposed or strengthened. One need, for example, merely compare price history prior to the General Maximum Price Regulation (GMPR) with that of the period after the GMPR, and particularly after the hold-the-line order of April, 1943.[1]

We should not leave this subject without a brief comment on a theoretical issue. If we were, for example, to compare prices of controlled and non-controlled commodities up to June, 1943, we might very well find that since 1939 the former had risen more than the latter. This should not, however, be accepted as evidence that the controls

[1] *Cf.* the excellent study by Prof. F. C. Mills, *Prices in a War Economy*, pp. 19–22.

tended to raise prices, but rather that the government imposed controls for commodities the prices of which were rising too rapidly. It is, therefore, necessary to use a chain index for the purpose of studying the effects of control. This chain index includes link relatives chained to a fixed base, the base being the month preceding the introduction of control. As commodities are brought under control, the composition of the index changes. This type of index reveals the rise of prices of controlled items only after the controls have been introduced, while prices for the uncontrolled items reflect the price rises in these commodities for periods of non-control that occurred in the commodities that were subsequently controlled.

It is easy to overrate the contribution of controls to the stabilization of prices or to the moderation of their rise. Prices in the controlled area are not independent of prices in the uncontrolled area. That, therefore, prices in this chain index rise less in the controlled area than in the uncontrolled area does not necessarily prove that to that extent control contributed toward a moderation in the rise of prices. As controls are introduced and extended, the excess of purchasing power is diverted to other markets. *The wider the field of control and the more effective this control, the greater the resulting pressure on the remaining free fields. In part, therefore, the rise of prices in the uncontrolled areas stems from the extension of controls.*

Those who supported the policy of selective price control are inclined to argue, not that the expansion of the controlled area makes for higher prices in the uncontrolled area, but that any extension of control will tend to depress prices in the remaining free areas. This particular approach is taken when the authorities fix the price of a finished product in the hope that in this manner the prices of the raw materials or (in fixing the price of steaks) that the prices of live animals will be kept down; or, again, when the prices of the primary products are fixed, in the anticipation that this will result in lower prices all along the line. Unfortunately, the adherents of selective price control do not find much evidence in history to support their policy of selective price control. Keeping down the prices of raw materials alone does not assure lower prices to the ultimate consumer. Where there is a scarcity, the net effect of controlling prices of raw materials will be almost certain to increase profits for distributors, processors involved in the distributive process, and others. Certainly the price history of 1941 and 1942, which witnessed large increases for finished goods despite

widespread control of raw materials, proves that point. Moreover, the fixing of prices of finished products did not prevent large increases in their prices at the earlier stages. Where supplies are inadequate at the legal prices, middlemen under strong pressure from their purchasers compete vigorously for the scarce supplies and thus boost prices of the supplies they purchase. The result is that the retailers are confronted not only with an inordinate demand but also with increased costs as the distributors insist on being compensated for the high prices paid. That these prices are illegal does not alter the case greatly for many of the middlemen. Experience in the meat market certainly confirms this theory; and in the control of import prices we find that the fixing of the prices of the finished product in the United States does not prevent the payment of excessive prices by either importers or other distributors. By excessive prices I mean those that are too high to allow the resale to the consumer at the legal price.

4. FARM PRICES AND INFLATION [1]

It is no secret that rising farm prices in recent years have made a substantial contribution to the inflationary process. In Chart 53, the reader

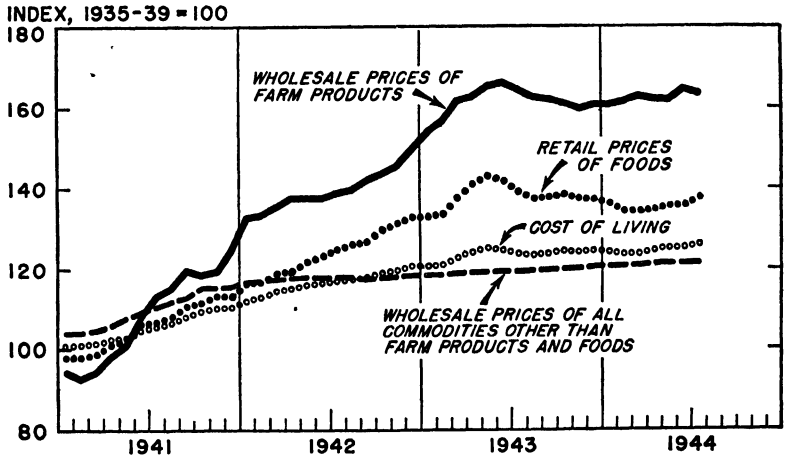

CHART 53.—Price trends. (*Sources: U. S. Department of Labor and Department of Commerce.*)

should compare the rise in the wholesale prices of farm products and of all commodities other than farm products and foods, and the retail prices of foods and the cost of living. In a report to the President, Justice Byrnes pointed out that Congress was committed to support a price program for

[1] See also Ch. XXIII.

agriculture which would require appropriations of $2 billion for the year 1945.[1]

The gains to farmers as well as some indication of increased costs to consumers from 1939–August, 1944, are evident from Table 50.

TABLE 50.—PARITY RATIO

(August, 1909–July, 1914 = 100)

1939	77
1943	119
August, 1944	114

SOURCE: *The Agricultural Situation*, September, 1944; and 1944 *Agricultural Outlook Charts;* Senate Hearings *To Continue CCC*, p. 188.

In other words, prices of farm products rose about 50 per cent more than the products purchased by farmers; *i.e.*, 114 is almost 50 per cent more than 77.

TABLE 51.—PERCENTAGE RISES IN PRICES OF FOOD,* 1939–AUGUST, 1943

Farm	103
Wholesale	51
Retail	41

SOURCE: OPA, *Price Control Reports.*

* The OPA put the rise in the retail price of foodstuffs from the outbreak of the war to May, 1943, at 57 per cent. OPA, *Price Control Report* 15, p. 6.

TABLE 52.—FARM INCOME

(In billions of dollars)

	1939	1943	1944
Gross farm income	10.6	22.7	
Net income of farm operators	4.4	11.9	11.8

SOURCE: OPA, *Price Control Reports; S.C.B.*, February, 1945, p. 5.

TABLE 53.—PERCENTAGE PRICE RISE OF SELECTED FOODS AT FARM AND AT RETAIL, YEAR ENDING MAY, 1943

	At farm	At retail
Lettuce	95	79
Potatoes	66	74
Eggs	29	23
Apples	56	72

SOURCE: OPA, *Price Control Report* 15, pp. 2–4.

[1] *Reconversion: A Report to the President from the Director of War Mobilization*, Sept. 7, 1944, p. 14.

All these statistics (Tables 50–53) point to substantial rises in farm prices. Marketing charges remained relatively stable, the result being that by October, 1943, the farmer's share of the consumer's dollar had risen by 49 per cent.[1]

Where the increase in the retail price was almost as large as that in the farm price (*e.g.*, lettuce), or larger (*e.g.*, potatoes), middlemen and processors increased their margins significantly. In some cases the farmers seemed to be well enough organized and well enough protected by parity prices and the like to have obtained maximum gains at the expense of the consumer. In other cases, where not the farmers but the distributors and processors were well organized, the main gains of higher prices seemed to go to the middlemen. It is not easy to explain, for example, why retail prices of oranges in the year ending May, 1943, rose 34 per cent and the farm prices of oranges 114 per cent, whereas in the case of apples the respective figures were 72 and 56. In addition to the factors already mentioned, the application and enforceability of price control were relevant considerations. The conclusion seems to be that if prices to consumers are to be kept down, it is necessary to maintain not only control of prices at the farm, but also effective price control all along the line. In some cases the large rise of consumers' prices resulted from the strong political influence of the farmers. This accounted to a high degree for the marked rise in the prices of foodstuffs in 1941–1942. The tremendous rise of prices in certain food products is to be explained in no small part, however, by absence of control. The prices of fresh and frozen fish, apples, and sweet potatoes rose 106, 193, and 226 per cent, respectively, from the outbreak of the war to May, 1943. In certain other cases the rise is to be explained by poor, or lack of, enforcement. There is little use in reducing prices for fresh vegetables at the farm unless an effective system of control all along the line can be introduced. Not only did the retail price of fresh vegetables rise by 73 per cent from May, 1942, to May, 1943, but the farm price rose as much as 76 per cent. In this case both farmers and middlemen had windfalls.

By 1944, the OPA controls began to be effective. From November, 1943, to November, 1944, the farm prices of truck crops declined by 17 per cent and fruit prices were unchanged; and in the year ending September, 1944, fruit and vegetable prices to consumers were almost exactly at the level of the preceding September.[2]

5. SAVINGS TO THE GOVERNMENT AND CONSUMERS FROM REDUCED PRICES

My book on controls deals with the subject of savings that result from a successful attack on inflation. One might estimate, for example, that the war would have cost $78 billion more by December, 1943, if prices had followed the pattern of World War I; and consumers in

[1] *Cf.* Ch. XXIII for further discussion of the position of agriculture.

[2] *The Agricultural Situation*, December, 1944, p. 24; *S.C.B.*, November, 1944, p. S-4.

addition were saved $22.7 billion by December, 1943.[1] Savings continued to be made in 1944 and 1945. These savings, of course, contribute toward moderating the rise of public deficits and of prices. But savings to the government may be overestimated. First, it is necessary to take into account the fact that with stabilized or controlled prices the income of the government suffers. Under stabilized or controlled prices, incomes in general do not rise so much as they otherwise would and, therefore, the yield of taxes is reduced and also sales of government bonds to savers. Second, the comparison of the cost to the government of the present war on the bases of World War I prices and World War II prices is misleading for another reason. Indices of wholesale prices over the years 1939–1945, as given by the Bureau of Labor Statistics (BLS), are not at all an accurate index of the cost of the war to the United States government. Most of the purchases undertaken by the government were for highly nonstandardized commodities like tanks, planes, ships, and also various kinds of services—all items not covered in the BLS wholesale price index and not moving closely with it. Assume that prices rose 50 per cent in this war and 100 per cent in the previous war. Are we justified, then, in estimating the saving on a Liberty ship or a plane at one-quarter of its cost? [2] Finally, even the gains for consumers are not accurately stated in terms of the difference between actual prices and prices that would have prevailed if, in a period of equal length, they had risen as much as in World War I. Consumers may spend more despite lower prices; and hence their gains are not accurately measured by price changes. Goods may not be available; and hence the gains may be fictitious. What people save, moreover, will depend on what they can later buy and at what prices, with their "saved" money.

6. CONCLUSION

A few elementary points should be repeated:

1. Prices have not risen nearly so much as in World War I and this despite much stronger inflationary pressures.

2. Our record on prices was good in comparison with those of some other countries.

[1] OPA, *Price Control Report* 12, Jan. 15, 1943, p. ii.

[2] A plane, it is assumed, cost $150,000. If this should represent a rise in price of 50 per cent instead of 100 per cent as in World War I, the savings on this reasoning would be $50,000, the difference between $150,000 and $200,000.

3. It was not, however, so favorable in the net change in the cost of living as in wholesale prices. Foreign countries relied more on subsidies and depended more on high-priced imports. This explains the relatively more rapid rise in the cost of living here, *i.e.*, relative to wholesale prices.

4. Where controls were imposed, the price situation improved; but an offset was the unfavorable effects on non-controlled areas.

5. Rising farm prices contributed substantially to rising prices in general.

6. Estimates of gains to government and consumers resulting from the moderation in the rise of prices should be accepted with strong reservations.

Chapter XIII

Money and Prices

1. INTRODUCTION

So far, in our study of inflation we have approached the problem of prices primarily through a consideration of the national *income* and the supply of *goods* made available to the civilian population. If the civilian population receives $160 billion income and if at prices of the preceding year $95 billion of goods are made available, prices will rise in the absence of a strong tax program and a very large rise of savings. (This approach is concerned largely with the prices of civilian goods, not with the pricing of the commodities and services purchased for war.)

In this chapter, I deal with a narrower approach to the problem of inflation, an approach that had the exclusive attention of economists in earlier wars. Then, as stated in Chapter XI, inflation used to be discussed in terms of the supply of *money* and the supply of *goods*. If the money supply were increased, prices would rise; if the supply of goods were reduced, the price rise would be even greater. Conclusions concerning the price history of World War I were expressed primarily in terms of changes in the total money supply.

There can be little doubt about the increase of the money supply in the present war (*cf.* Chart 54). The more important figures are quoted later. *What is relevant here is that the increase of incomes was accompanied by a very large expansion in the total supply of money; and if monetary supplies had not been allowed to increase, the rise of income would have been less than it was.* In the years 1941–1944, the expansion of monetary supplies averaged $24 billion per year. The increase was $21, $23, and $27 billion in 1942, 1943, and 1944, respectively. For demand deposits adjusted, the respective rises were $10, $14, and $8.5 billion. (The last is the rise to October only.) These give the best indication of changes in bank money [1] (*cf.* Chart 54).

[1] *F.R.B.*, January, 1945, pp. 6, 47.

This expansion results from the fact that the government cannot obtain adequate spending funds through taxation and borrowing out of existing supplies of money. What cannot be obtained in this manner the government secures through selling securities to the banks with the resulting expansion of bank deposits. Inflationary propensities may be measured, then, by any expansion of deposits (net) associated with loans, by purchases of government securities by banks, and, in addition, with any

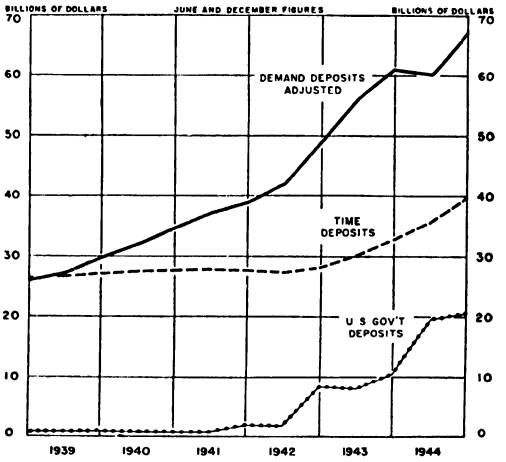

CHART 54.—Bank deposits. (*Source: Federal Reserve Board.*)

use of what otherwise would have been inactive money to purchase government securities. (This is further developed later in the chapter.)

In general, the main changes were in holdings of government securities. In the first four years of the war effort the government financed itself as shown in Table 54.

TABLE 54.—SOURCES OF WAR FINANCE, JUNE, 1940–JUNE, 1944

	Billion dollars	Per cent of total
1. Taxes	87	36
2. Borrowings from individuals and nonbanking institutions	89	37
3. Loans from banks	64	27

SOURCE: *F.R.B.*, September, 1944, p. 871.

The significance of the expansion of monetary supplies may be put as follows: The government borrowed at a rate in excess of $60 billion per year in the fiscal years 1943 and 1944 [1] and, despite these large sales of government securities, the Treasury was able to maintain their prices. In other words, despite a rise of public debt of around $210 billion in fiscal years 1941–1945, the rate of interest did not go up. At the peak of the war effort, individuals were saving $39 billion out of a national income of $161 billion, or out of $141 billion after payment of personal taxes.[2] *Yet, despite these large savings (plus funds made available out of gross savings exclusive of net savings, e.g., depreciation funds) and the heavy taxes, the government had to rely on an expansion of money to obtain part of the required funds.*

Gross savings seem almost large enough to have provided the government with required funds. Gross private savings are estimated (in billions of dollars): 1941 = 27; 1942 = 44; 1943 = 53, 1944 = 58.[3] The difficulty is that only about one-half of the savings of individuals were invested in government securities. At least this was so for the calendar years 1943 and 1944.[4] The degree of inflationary financing by the government, however, seems to be on the wane. In 1943, taxation provided but 38 per cent of total expenditures; in 1944 (again the calendar year), the percentage was 46 per cent. The rise of public debt was $64 billion in the fiscal year 1944 and was estimated, respectively, at $51 and $40 billion in the fiscal years 1945 and 1946.[5]

Our wartime program is to allow the expansion of money required, thus assuring to the government supplies of funds not only adequate but also at current rates. Insofar as the additional money increases the inflationary danger, the government counters with increased pressure to save an increasing proportion of the national income and also, through rationing and price control, keeps prices down and forces people to some extent either to hoard their savings or to invest in government securities.

[1] The estimates for fiscal years 1945 and 1946 were $51 and $40 billion, respectively. *Budget*, 1946, pp. A-2 and A-3, and *Tr. Bull.*, October 1944, p. 5. With the end of World War II in August, 1945, the borrowing for the fiscal year 1945–1946 will be considerably less than $40 billion. The *actual* rise of debt in 1944-1945 was $58 billion.

[2] *Budget*, 1946, p. xxv, *S.C.B.*, February, 1945, p. 5.

[3] *S.C.B.*, April, 1944, p. 11. Figures for 1943 and 1944 are estimated on the basis of the relation of individual savings and gross savings in earlier years.

[4] *First Report by the Director of War Mobilization and Reconversion*, Jan. 1, 1945, p. 19; and *F.R.B.*, January, 1945, p. 1.

[5] *Budget*, 1946, p. A-3.

2. THE INCREASE IN THE SUPPLY OF MONEY

In my *Economics of America at War*[1] I presented two tables which give a general picture of the relationship of money and prices. It was observed there that an increase in the supply of adjusted demand deposits to 197 in 1940 and 231 in 1941 (1932 = 100) did not bring about the rise of prices that might be expected from the application of even a very crude version of the quantity theory of money. The rather moderate rise of prices has been explained first and foremost by the large contribution made to existing supplies and flows of goods by the accompanying expansion of output and, second, by the failure of each dollar to become income as frequently as this happened in the late twenties.

A concise history of deposits and currency is given in Table 55.

TABLE 55.—INCREASE OF DEPOSITS AND CURRENCY, 1940–1944

	(1) Total deposits, adjusted, plus currency in circulation		(2) Demand deposits, adjusted, plus currency in circulation	
	Billion dollars	Per cent	Billion dollars	Per cent
June, 1940–June, 1944.....	69	103	42	109
June, 1940–June, 1942.....	15	22	14	37
June, 1942–June, 1944.....	54	66	28	53

SOURCE: *F.R.B.*

It will be observed that series (2) in Table 55, which corresponds roughly to our monetary supplies, rose somewhat more rapidly than series (1), and that the rate of increase was close to one-half greater for the "monetary" series in the last two years than in the first two years.

In Chart 55 it will be noted that after a marked decline in the turnover of demand deposits in the years preceding 1941, the rate of turnover was relatively stable in 1941 and 1942. In other words, the expansion of money was no longer offset by a decline in the rate of use of deposits.[2]

[1] Pp. 155, 168.

[2] *Cf.* W. F. Fellner, *A Treatise on War Inflation*, pp. 74–76, 1942.

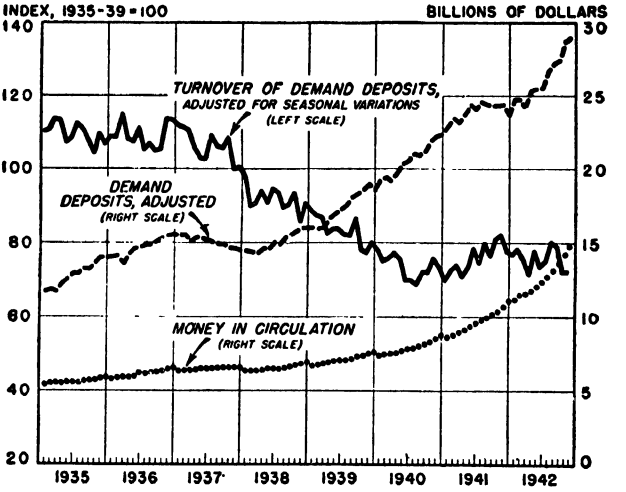

CHART 55.—Demand deposits and turnover of demand deposits in reporting member banks (101 leading cities), and money in circulation, 1935–1942. (*Source: Federal Reserve Board.*)

TABLE 56.—PERCENTAGE RISE OF DEMAND DEPOSITS AND BANKING DEBITS, 1941–1944, AND TURNOVER OF DEMAND DEPOSITS, 1940–1944

	Demand deposits adjusted	Banking debits			Annual rate of turnover of demand deposits †
		Total *	New York City	100 other leading cities	
1941/1940	17	21	16	24	18.6 (1940)
1942/1941	12	10	3	14	19.4 (1941)
1943/1942	34	23	29	20	18.4 (1942)
1944/1943	7	12	16	9	17.4 (1943)
					17.3 (1944)

SOURCE: *F.R.B.*, March, 1945.

* Banking debits to demand deposits in New York City and 100 other leading cities.

† Of 100 leading cities excluding New York. This is based on demand deposits except interbank and government.

In Table 56, I investigated the problem of relative changes in monetary supplies and rate of use somewhat further. In 1941 banking debits rose more than demand deposits adjusted; in 1942 and 1943 the latter rose more rapidly, the percentage rise increasing in the later year but declining markedly in 1944. Observe, further, that the increase in debits outside of New York was larger in 1941 and 1942 than for *all* banking debits (and less in 1943 and 1944)—allowance being made for the less rapid expansion of debits in New York City in 1941 and 1942 (and more rapid expansion in 1943 and 1944). In general, with the exception of 1943, the percentage rise of banking debits outside of New York City—the best index of monetary activity available—has more than equaled that of demand deposits.

In this connection, it is of some interest to compare the regional movement of adjusted demand deposits in June, 1940, with those of December, 1942. Total deposits rose by 74 per cent; deposits of banks in New York City by 17 per cent and in Chicago banks by 35 per cent. In early 1942, for example, the increase for all banks was $8.8 billion or more than 25 per cent, and for New York City banks only $1.14 billion or a little more than 10 per cent.[1] This relatively slow expansion for the New York area indicates (1) that the war expansion was at a very rapid rate outside of the New York area and (2) that the war was financed in part by heavy drains on financial institutions and wealth in this area, which in turn were transferred to other parts of the country. High prices and high incomes for agricultural areas are not without significance for the regional distribution of deposits. Chicago's midway position in the rate of expansion results from drains similar to those suffered by the New York financial district and gains associated with its closer connection to the economic interests profiting from the war effort. This continued withdrawal of funds at a more rapid rate than they return through government disbursements explains why it was necessary to reduce reserve requirements for the New York and Chicago banks.

Financial centers, however, did not continue to lose deposits in 1943. Deposits' growth by Federal Reserve districts in 1942 varied from 4 per cent in New York City to 37 per cent in the Kansas City district; but this range in the percentage rise of deposits by districts was narrowed in 1943 to from 15 to 32 per cent.[2] In the year ending June 30, 1944, New York City member banks lost $300 million of demand deposits adjusted; Chicago bank

[1] *Cf.* C. R. Whittlesey, *The Effect of War on Currency and Deposits*, pp. 8–12. Prof. Whittlesey finds that demand deposits of member banks increased by 87.7 per cent from June, 1939, to December, 1942; that the highest increases were for banks in the San Francisco, Richmond, and Atlanta districts (157, 137, and 132 per cent) and the lowest for Philadelphia, Boston, and New York (83, 72, and 57 per cent); and that the rises for central reserve city banks, reserve city banks, and country banks were 53, 105, and 127 per cent, respectively. *Cf. F.R.B.*, December, 1943, pp. 1139–41.

[2] *F.R.B.*, June, 1944, p. 527.

deposits remained relatively unchanged; reserve city banks gained $1 billion and country banks $2 billion. For the 4 years ending June 30, 1944, the country banks made the largest gains, reserve city banks next, Chicago and New York City the smallest. Percentage rise of member bank adjusted demand deposits was country, 144; reserve cities, 110; Chicago, 62; New York City, 29.[1]

What about the relative rise of income, money, and prices? The rise of prices was much smaller than the increase in the supply of money.[2] This generalization holds both for the period 1939–1941 and for 1942–1944. *That the expansion of money did not bring about a greater rise in prices may be explained by the control of prices, by the rapidly approaching fuller and more intensive employment of economic resources, and by an increased propensity to hoard cash.* The rise of money and deposits in recent years exceeded that of gross national income. That gross national income did not rise more rapidly in relation to the supply of money may be explained by controls of prices and the limited supplies of economic resources. From 1939 to *late* 1944, gross national income rose more than 120 per cent, the total supply of money (adjusted demand deposits and currency in circulation) by around 150 per cent (estimated), and wholesale prices by 36 per cent.

Let us consider net national income. In the early period of expansion, *i.e.*, through 1941, national income rose much more rapidly than prices and about as rapidly as the supply of money. Output, too, expanded rapidly. As the rate of expansion of output slackens, the increase in the supply of money brings either an expansion of monetary income and a reduced rise of real income, or an increase of unused monetary balances. From 1939 to 1942 the rise of national income was large as compared to the increase in prices; and even larger than the expansion of adjusted demand deposits. In 1943 national income continued to expand much more rapidly than prices; but an increase of national income of 21½ per cent was less than the expansion of demand deposits of 24.3 per cent. In 1944 the monetary rise was even greater, relative to income expansion, than in 1943. The respective rises for 1942, 1943, and 1944 relative to 1939 are shown in Table 57.[3]

[1] *F.R.B.*, January, 1945, p. 51.

[2] *Cf.* Chs. I and XXXII.

[3] Year-end figures for 1944 showed that currency in circulation was $23.5 billion, or 25 per cent in excess of the amount outstanding in 1943, and demand deposits, adjusted, were $66.9 billion, or 10 per cent above those in December, 1943.

TABLE 57.—RISE OF NATIONAL INCOME, PRICES, AND MONEY, 1939–1942, 1939–1943, AND 1939–1944

	1939–1942, per cent	1939–1943, per cent	1939–1944, per cent
National income	73	111	127
Wholesale prices	28	34	35
Cost of living	18	25	27
Currency in circulation	118	194	267
Demand deposits, adjusted	64	104	125

SOURCE: *S.C.B.* and *F.R.B.*

3. ACCOUNTING FOR THE INCREASE OF MONEY

The monetary history of 4 years is concisely presented in Table 58 and Chart 56. *Roughly, the rise of adjusted demand deposits corresponded closely with the expansion of government securities held by banks.* Net movements in loans were unimportant compared to the rise in government securities. It is held by some economists that the rise of government

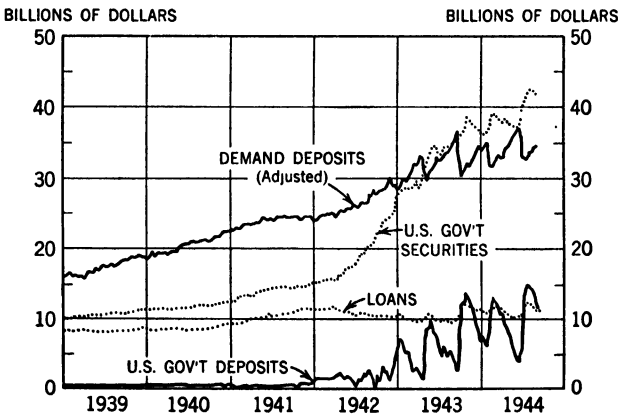

CHART 56.—Deposits and various assets of member banks in leading cities. (*Source: Federal Reserve Board.*)

deposits should be deducted from the total increase if the increase in monetary supplies is sought.[1] I do not subscribe to this view. At the war's peak in 1944–1945, the government accounted for almost one-half of the spending in the country. Yet its cash balances were but 15 per

[1] *Cf.* E. T. Weiler, "Wartime Savings and Postwar Inflation," *S.C.B.*, July, 1943, pp. 13–18.

cent (June, 1944) of total adjusted deposits and 13 per cent of deposits plus currency. One might more effectively take the opposite position, namely, that the rise in deposits understates the inflationary expansion since the government, relatively to others, economizes so much on its cash balances.

TABLE 58.—RISE IN DEPOSITS, LOANS, AND INVESTMENTS IN U.S. GOVERNMENT SECURITIES, ALL BANKS, JUNE, 1940-JUNE, 1944

(In billions of dollars)

U.S. government securities	Loans	Deposits, adjusted	Demand deposits, adjusted	U.S. government deposits
56.1	3.1	55.4	28.1	18.7

SOURCE: Computed from *F.R.B.*, March, 1945.

Deposits, of course, fluctuate with other variables. A rise in Federal Reserve credit, for example, accounts for an increase, and a rise of money in circulation accounts for a reduction of deposits. These roughly offset each other.

1940 1944 (Middle of Year)	Billion Dollars
Rise of money in circulation.....	15
Rise of Federal Reserve credit.....	13

Again, an outflow of gold was at the expense of deposits, and an inflow accounted for an increase. The net change of the gold stock was relatively small. (From the middle of 1940 to the middle of 1944 there had been a rise of about $1 billion.) *Purchases of government securities were, then, the item that accounted for the large net change.*[1]

A somewhat different classification is made in Table 59 (only the main items are listed).

In this analysis the contributions of Federal Reserve credit are added to the loans and investments of banks as expansive items. Here, again, the expansion of all loans and investments accounts for the rise of deposits and currency outside of the banks.

A more recent tabulation is the following: From the end of 1941 to the end of 1944, the increase of United States government securities held by all banks was $77 billion. Against this rise are to be put (1)

[1] For an analysis of changes in deposits in 1941 and 1942, see Weiler, *op. cit.*, and Whittlesey, *op. cit.*, p. 18.

$18.4 billion of contractive items (primarily $14.1 billion rise in currency in circulation, $2.1 billion loss in gold stock; and $1.5 billion decrease in holdings of other securities) and (2) $58.8 billion expansion of bank deposits. In short, the purchase of government securities made possible a vast rise in deposits.[1] These in turn were drawn down through withdrawal of currency and gold by an amount equal to about 20 per cent of the gross rise in deposits associated with sales of securities to the banks.

TABLE 59.—DEPOSITS AND CURRENCY IN THE UNITED STATES AND PRINCIPAL FACTORS AFFECTING THEIR VALUE, DEC. 31, 1940–DEC. 31, 1943

		Million Dollars
1. Expansive items, total		+53,497
Monetary gold stock		−57
Treasury currency outstanding		+1,007
Loans and investments (includes Federal Reserve banks, commercial banks, mutual savings, etc.)		+52,547
2. Contractive items		+1,021
Bank capital	+736	
Treasury cash and deposits	+301	
3. Expansive minus contractive		52,476
4. Deposits and currency		52,051
a. Currency outside banks	+11,512	
b. Demand deposits, adjusted	+25,870	
c. U.S. government deposits in commercial banks	+9,671	
d. Time deposits	+4,898	

SOURCE: *F.R.B.*, June, 1944, p. 539. Some minor items are ommitted.

This expansion of deposits is made possible by the provision of additional cash through purchases of securities by the Federal Reserve banks. I reproduce here a chart from the *F.R.B.* (*cf.* Chart 57). From the middle of 1940 to the end of 1944 the money in circulation increased by about $15 billion. This is, of course, a drain on the reserves of the banks since from their cash reserves with the Reserve banks comes the money that goes into circulation. In 4½ years of a war economy, the banks of the country have required, therefore, $15 billion worth of cash to pay for the additional money in circulation and also an additional $6 billion to cover the increased reserve requirements for the larger volume of deposits. Purchases of $17½ billion of securities by the Reserve banks provided the banks with a large part of the necessary cash and an inflow of gold of approximately $1 billion provided the banks with part of the remainder. Banks, how-

[1] *F.R.B.*, February, 1945, p. 108.

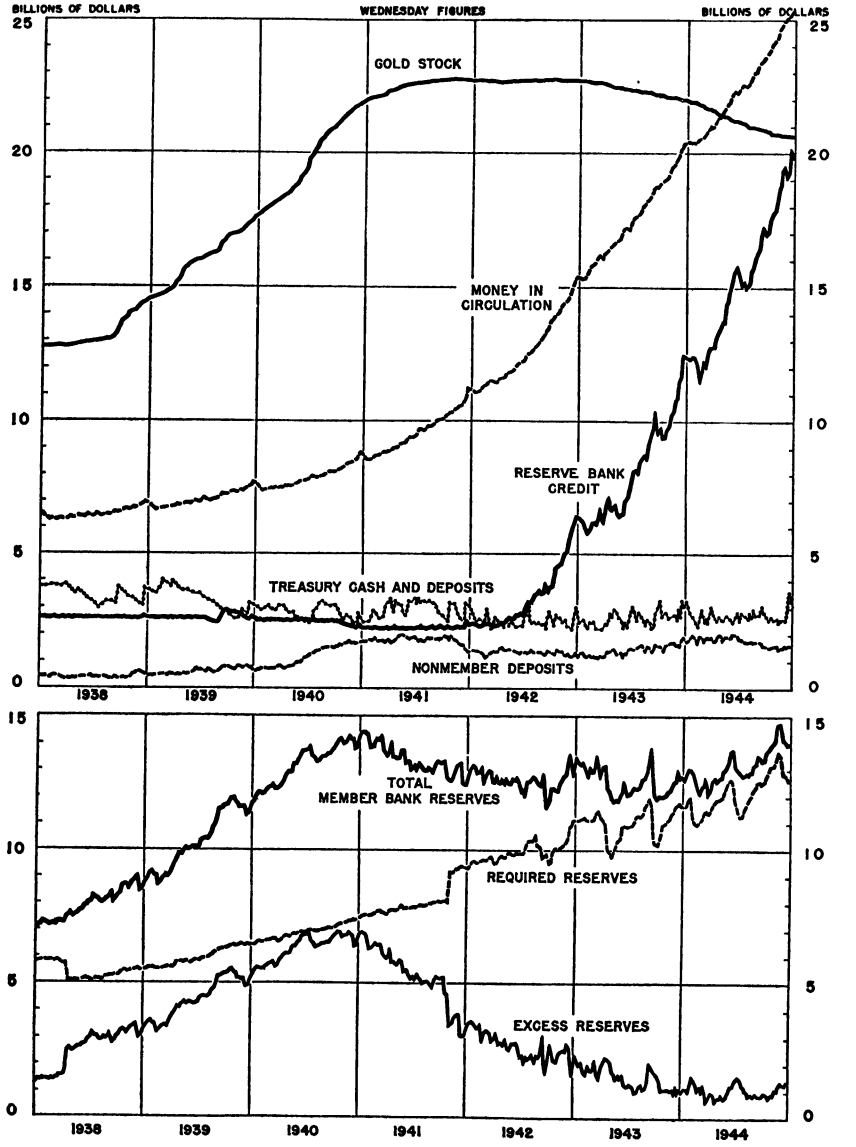

CHART 57.—Reserves of member banks and related items. (*Source: Federal Reserve Board.*)

ever, had to draw heavily on their excess reserves and were helped by changes in reserve requirements.[1] Whereas in 1940 the banks relied largely on an inflow of gold and in 1941 on excess reserves, in 1942–1944 they had to obtain help through intervention by the Federal Reserve banks which purchased securities and reduced reserve requirements. Roughly, the reduction of excess reserves offsets the increase in reserve requirements. Open-market operations provided the banks with the major part of the cash needed to pay for additional money put into circulation. A reduction of reserve requirements and the inflow of gold in 1940–1941 also helped. Open-market operations continued to play a significant part in 1944.

4. CURRENCY EXPANSION

We should not leave this subject without a word concerning the expansion of money in circulation.[2] Table 60 presents the changes from 1939 to 1944.

TABLE 60.—MONEY IN CIRCULATION AND CURRENCY OUTSIDE BANKS, 1939–1944
(In billions of dollars)

	Money in circulation	Currency outside banks
End of 1939	7.6	6.4
End of 1943	20.4	18.8
June, 1944	22.3	20.9
End of 1944	25.3	23.5

SOURCE: *F.R.B.*

Currency expanded roughly at the same rate as wages and salaries through 1942; but in 1943 and 1944 it far outdistanced the rise of income and deposits. By the end of 1943 currency had risen about four times as much as consumer expenditures. (See Chart 58 for a study of relevant variables, 1939–1943.) By December, 1944, money in circulation was up about 25 per cent over the amount outstanding at the end of 1943. The rise of employee compensation in 1944 over 1943 was but 10 per cent; of consumption expenditures but 7 per cent.[3]

[1] *Cf. F.R.B.*, December, 1943, p. 1145. In the first two years of our participation in the war, currency growth was $8 billion and required reserves rose by $2 billion. These needs for member banks of $10 billion of additional reserves were met principally by an increase of $8 billion in Reserve bank holdings of securities and a decline of $2 billion in excess reserves.

[2] See especially G. L. Bach, "Currency in Circulation," *F.R.B.*, April, 1944, pp. 318–328.

[3] *S.C.B.*, February, 1945, p. 5.

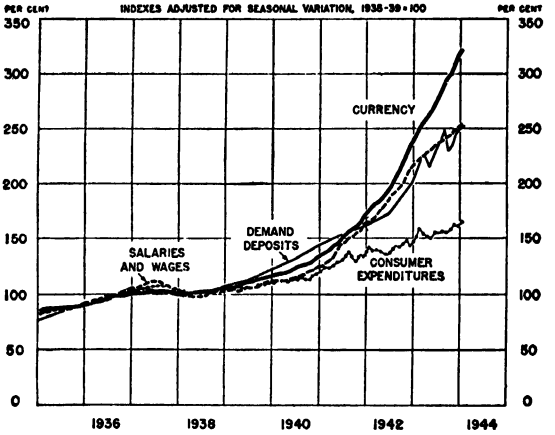

CHART 58.—Currency, deposits, salaries and wages, and consumer expenditures. (*Source: Federal Reserve Board.*)

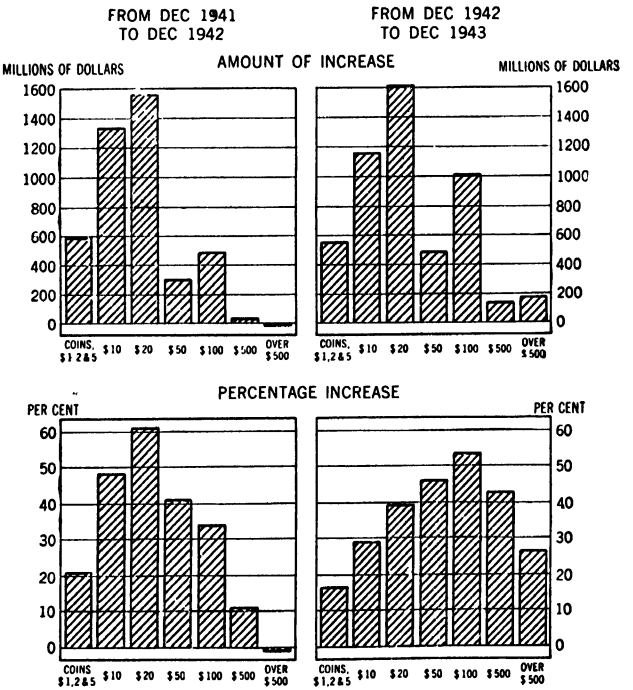

CHART 59.—Increase in currency, by denomination. (*Source: Federal Reserve Board.*)

The following characteristics of the expansion should be noted:

1. The rise of money in circulation was small compared with the expansion in individual savings of about $115 billion in 1941–1944 (about 13 per cent).

2. That hoarding was a significant factor is explained by average holdings of $450 per four-person family at the end of 1943.

3. The marked rise in large denominations, especially in 1943, also suggests hoarding and some expansion of use for black-market transactions (see Chart 59).

4. Large variations in expansion occurred from region to region. In the Minneapolis region, for example, the expansion of Federal Reserve notes in circulation was but 27.4 per cent in 1943; in Atlanta, 74.6 per cent.

5. In part, the moderate rise in prices may be explained by the increased propensity to hoard money: currency, outside of banks, accounted for *one-third* of the total rise in demand deposits, adjusted, plus currency in circulation.

5. CONCLUSION

Despite their increasing awareness of the inflationary dangers of monetary expansion, the government and the monetary authorities were unable to avoid a serious degree of *monetary inflation*. That this expansion of money did not result in greater wartime *price inflation* is explained by the following considerations: an increased propensity to hoard money, a very marked expansion of output, greater use of ensuing increases of income in the purchase of government securities, and sterilization of money in certain economic areas through official measures. In the light of the extent of monetary expansion, the rise of prices was moderate and the increase of money income not so great as might have been expected. This expansion of money, moreover, enabled the government to finance its needs without a rise in the rate of interest. Whereas in World War I the rate of interest rose greatly and the government had to borrow at rates substantially in excess of 4 per cent, in World War II the government was able to carry on at an average rate below 2 per cent, and this despite far greater demands on the capital market. In part, this success may be ascribed to the relatively moderate expansion of prices in the first 5 years of World War II. Prices rose much less than the circulating medium; the reverse hap-

pened in the other war.[1] A price rise of the proportions of that of the previous war would have made it much more difficult to keep the rate of interest down, for the civilian population would have become more conscious of rising prices, would have been more disposed, therefore, to spend for consumption, thus raising prices more, and would have been less disposed to buy securities, the civilian population anticipating their repayment in dollars shrinking rapidly in value.

Note the following:

1. Despite a large volume of net savings of $35 billion and gross private savings of $53 billion in 1943, the government had to borrow $20 billion from the banks. Since the total rise in the interest-bearing debt was but $57 billion, it is clear that the government did not succeed in absorbing a large part of available funds. (A rise of currency outside banks of $5 billion is relevant here.) Although savings were even larger in 1944, the banks had to buy substantial amounts of securities.

2. Demand deposits, adjusted, rose twice as rapidly in the second 2-year period of our war effort as in the first; and the rise paralleled purchases of government securities.

3. That our price inflation was less than our monetary inflation is explained in part by the expansion of currency hoards and in part by some tendency of the rate of turnover to decline. (The picture is confused; but there probably was a decline in 1943.) Sterilization induced by controls probably helped reduce activity of money.

4. Open-market operations provided banks with the cash required to pay for the large outflow of currency. Additional reserves were provided by a reduction of reserve requirements, the using up of excess reserves, and an early inflow of gold.

[1] *Cf.* Whittlesey, *op. cit.*, p. 35.

Chapter XIV

The Significance of Index Numbers[1]

Most products are as dear as sable,
But what care we, the index is stable.

1. INTRODUCTION

This chapter may seem unnecessarily long. The busy reader, interested only in the broad outlines of the inflationary picture, may skip it or read only its introduction and conclusion. Our task here is to discuss the subject of actual vs. recorded rises of prices. The Bureau of Labor Statistics (BLS) index number yields a rise of the cost of living of around 25 per cent since the beginning of the war. If the cost of living rose substantially more than 25 per cent during this period, we might conclude that our stabilization program had not been overly successful. *Some readers may be content with the conclusion that the rise of prices for low-income groups was not much more than* 25 *per cent.* This conclusion is not supported by the Meany-Thomas report, nor does it coincide with the views of the average housewife. Total *expenditures*

[1] The following are of some importance for this discussion: W. C. Mitchell, "The Making and Use of Index Numbers," *BLS Bull.* 656, March, 1938; F. M. Williams and S. Stewart, "Changes in the Cost of Living in Large Cities in the United States, 1913–1941," *BLS Bull.* 699, 1941; *Monthly Labor Review*, August, 1942, Serial *R* 1476, *What Is the Cost-of-living Index?;* OPA, *Price Control Report* 15; F. T. Ostrander, "The Mitchell Committee's Report on the Cost of Living Index: Comment," *A.E.R.*, December, 1944, pp. 849, 852.

Note especially: (I) American Statistical Association, *An Appraisal of the U.S. Bureau of Labor Statistics Cost of Living Index*, October, 1943; (II) G. Meany and R. J. Thomas, *Cost of Living: Recommended Report for the Presidential Committee on the Cost of Living*, January, 1944; (III) U.S. Department of Labor, *The Cost of Living Index of the Bureau of Labor Statistics*, February, 1944; (IV) *Report of the Technical Committee Appointed by the Chairman of the President's Committee on the Cost of Living*, June, 1944.

These four reports are discussed throughout the chapter. I is the report of the committee of experts appointed by the American Statistical Association, of which Prof. F. C. Mills was chairman. II is the report of labor members of the presidential committee. III is the reply of the BLS to II. IV is the report of the technical committee headed by Prof. W. C. Mitchell.

on consumption rose, however, by more than 50 per cent. *Much of the controversy results from the failure to distinguish rise of prices from rise of expenditures and improvements in the standard of living.* It is important that, on the one hand, the economist realize the limitations of index numbers as a measure of the cost of living and that, on the other hand, the public's excessive skepticism be dispelled. Above all, we emphasize that the main difficulties are theoretical ones which no government agency could easily resolve; and the divergencies of the rise in the true cost of living from that indicated by the index numbers are especially to be associated with war conditions over which an agency responsible for index numbers will have little control. The cost of living rises, for example, for the millions who have moved into defense areas where costs of housing and food are much higher than if they had remained in their homes and had their meals at home. The ensuing rise in the *cost of living* is not measured by index numbers.

An index number presumably measures the variations in the prices of a collection of commodities. It is a substitute for the very complicated procedure of quoting individual prices of a large number of commodities. In short, it is a summary procedure. The index will measure what a dollar will buy as compared to what it bought in a previous period. The BLS Cost of Living Index, for example, measures the purchasing power of a dollar of low-income groups (*e.g.*, $1,500, annually) in a given year compared to the purchasing power of the dollar for the average of the years 1935–1939. There are, of course, index numbers that measure the value of a dollar not only to a low-income group or to any particular income group in consumption markets, but in markets other than those for final consumer goods.

It is generally known that index numbers play a very large part in the determination of the level of wages. Especially since the inception of the Little Steel formula, the use of the cost-of-living index for the determination of wages has been important. For this reason it is imperative that the cost-of-living index measure the change in the value of the dollar as accurately as possible. The government was not slow to realize this, and as a result there is an increasing tendency to take into account not only what a particular policy will do to the price level but what a particular policy will do to the index number. In other words, when a particular policy (say a subsidy program) is being considered, the government studies carefully what effect this program will have upon the index number which more or less determines movements of wages.

In Canada, for example, the government took measures to subsidize those commodities which were prominent in the index number in order to avoid any increase in prices as evidenced by a change in the index number.[1] It is no secret that in its wartime policies the United States government also, at least in some instances, took into account the question of whether a commodity was a cost-of-living item or not.

On this score, critics have "noted the definite evidence that price control by OPA has been partial to foods in the Index's food item in contrast to food whose prices are merely imputed in the Index. . . . Subsidy programs . . . have been concentrated mainly upon those foods priced in the BLS Index. Price breakthroughs . . . have been mainly restricted to those foods that are not priced in the Index."[2]

To these criticisms the OPA replied that all meats, dairy products, all sugar-using products, all edible vegetable fats and oil products, all wheat-flour products, all canned vegetables and fruits, whether included in the index number or not, are subsidized; that "roughly 80 per cent of total food consumption is subsidized without distinction between index and non-index foods demonstrates clearly that subsidies have been employed with a high degree of impartiality"; that subsidies are invoked for important foodstuffs and not on hundreds of minor items. The Price Administrator also pointed out that numerous break-throughs, *i.e.*, upward revisions of ceilings, have been allowed for items in the index numbers and many price reductions enforced for those not included.[3] In general, the General Maximum Price Regulation and later adjustment techniques have applied to all commodities, irrespective of their inclusion in the index number. In short, the charge of attempted stabilization of index numbers and not of the cost of living has been put much too strongly. Yet, there have been cases where overzealous officials, in determining subsidy policies or break-throughs, have paid a little too much attention as to whether the commodity was or was not included in the index number.

Not all commodities can be priced in the construction of an index number; but those included are supposed to be *representative of all commodities consumed.* When, therefore, the government manipulates prices through subsidies or any other technical procedure, and in doing so takes into account not the general price picture but what changes in prices will be shown by an index number as the result of a particular policy, then those commodities which are used in index numbers may not be so representative of all commodities as they were prior to attempts to stabilize the *index number* rather than *prices.* To take an

[1] OPA, *The Payment of Subsidies under the Canadian Price Ceiling*, p. 30, November, 1943.
[2] Meany and Thomas, *op. cit.*, p. 85.
[3] U.S. Department of Labor, *The Cost of Living Index of the BLS*, Appendix, pp. 21–44.

extreme case: the government might conceivably subsidize *only* commodities that are used in the cost-of-living index number. The net effect might, therefore, be that the prices of these commodities would be 20 per cent lower than they would otherwise have been. If, however, these commodities account for only 20 per cent of total consumption, then, although this index would indicate a *relative* reduction of prices of 20 per cent (as compared with non-subsidized prices), the actual relative reduction of prices would be only 4 per cent. To that extent the index number would be misleading. We repeat, however, that critics have greatly exaggerated the use of this type of manipulation and its significance.

To conclude our introductory remarks, this chapter deals primarily with the following problems:

1. What commodities are, and should be, priced by an index number?
2. What are the main characteristics of the BLS cost-of-living index number, which has played such an important part in our discussions of inflation?
3. Does the BLS index measure reasonably well the changes in the cost of living? Some criticisms of that index are made and the differences between changes in unit prices and cost of living are considered. Also emphasized is the fact that a distinction should be made between dollars spent and the relatively large proportion of dollars not spendable today.
4. The question of the accuracy and relevance of our index numbers is also treated.

2. A THEORETICAL PROBLEM: SHOULD THE INDEX NUMBER MEASURE THE COST OF A BASKET OF GOODS USED IN THE PREWAR PERIOD OR A BASKET CONSUMED CURRENTLY?

Our index numbers do not measure the prices of a list of identical commodities which were used both in the base period and currently. Obviously this would be impossible since many commodities that were formerly available in the base period are unavailable currently, and this holds especially in time of war. Furthermore, with changed economic conditions the importance of various commodities also changes, and it would be a mistake, therefore, to measure the changing prices of commodities that were consumed in the base period.

In World War I there was considerable debate on the issue of the weight to be given to commodities no longer consumed. Labor interests, for instance, argued that the index numbers in use did not measure adequately the rise of the cost of living. They pointed to the fact that the price of steak, which was no longer available, had gone up a great deal, and if the semiluxuries and luxury products that had been available before the war were now included in the index number and weighted as heavily as they had been before the war, the net result would have been a rise of price far greater than the 100 per cent increase in the cost of living that was shown in 1918. *Government spokesmen, however, pointed out that the budget or the pattern of consumption in* 1914 *was only of theoretical interest since many of the commodities were unavailable.* It was explained that, although the available price index showed a rise of prices in excess of 100 per cent, expenditures for consumption had risen little more than 50 per cent and the nutritional value of current consumption had not fallen greatly. They minimized the significance of the point raised by labor interests that the commodities currently consumed were only second choices and that, since the laborers had to select commodities that were second and third choices, the index number based on current consumption was not an adequate or accurate guide to the actual rise of prices. This is a theoretical issue that cannot be solved to anybody's satisfaction. Undoubtedly a budget based on prewar consumption might give a much higher cost of living than the budget for the pattern of consumption used currently.[1]

In World War II, the BLS was confronted with three alternatives in the treatment of commodities no longer available (*e.g.*, automobiles):

1. Since cars were no longer available, the cost of living might be reduced in proportion.

2. The money formerly spent on commodities no longer available might be assumed to be saved.

3. The money might spill over into other commodity markets.

The third assumption was the choice of the BLS.[2] In choosing the third alternative the BLS, in fact, favored labor: A greater rise is shown than under assumptions 1 and 2 and hence stronger arguments might be made for wage increases.

[1] Seymour E. Harris, *Monetary Problems of the British Empire*, pp. 117–119; and *Report of Cost of Living Committee of the Working Classes*, 1918, Cmd. 8980, pp. 8–9, 20.

[2] U.S. Department of Labor, *The Cost of Living Index of the BLS*, p. 9.

3. ALTERNATIVE APPROACHES TO THE PROBLEM OF MEASURING THE COST OF LIVING

We have seen that the use of identical budgets would serve only a theoretical purpose; on the other hand, the general practice of using current patterns of consumption does not give an indication of what the consumption budgets available before the war would have cost. *It has, therefore, been suggested that the cost of a budget of the minimum nutritional requirements should be measured both in the base period and currently.* Prof. Bowley, for example, estimated the cost of a prewar diet recommended by the British Medical Association. He found that this budget at Oxford would have cost 30 per cent more in March, 1941, than in September, 1939, while the cost-of-living index used by the British government indicated a rise in the cost of living in that period of only 22 per cent.[1]

There have been various other proposals. In Germany in World War I there was a practice of using a soldier's ration as an indication of the change in the cost of living. In this manner a compromise was achieved between the use of an identical budget of the prewar period and current consumption. More recently, Lord Keynes suggested that British wages might be adjusted to an iron ration, the idea being that in this manner the cost of living would be kept down to a minimum and, therefore, wages would rise a minimum.[2] At the same time, of course, this is a compromise between an index based on a changing "basket" and a prewar basket. In the United States various attempts have been made to measure a minimum standard budget necessary to maintain a family of five in decency and health. Such a budget, which would have cost roughly $2,300 in 1922, would have cost $1,994 in June, 1941. By the latter year, however, the pattern of consumption had changed considerably. In March, 1935, a study was made by the Works Project Administration which gave the comparative living cost of 59 cities for identical budgets with some modifications to allow for such variations in consumption as were made necessary by geographical differences.[3]

There are other approaches to the problem. In Switzerland the government used as an index of wage increases the cost of the necessary

[1] A. L. Bowley, *Working Class Budgets and the Cost of Living Index*, Institute of Statistics, Oxford, Supplement 1, Aug. 30, 1941, pp. 1–2.

[2] J. M. Keynes, *How to Pay for the War*, pp. 27–34, 1940.

[3] "Changes in Cost of Living in Large Cities in the United States," 1913–1941. *U.S. Department of Labor Bull.* 699, pp. 9–12.

expenses for the maintenance of a household. (This of course is somewhat closer to the study of identical commodities than the usual index number.) Whereas the cost of living as compared to a prewar period rose by 45 per cent by the latter part of 1942, wage rates were allowed to rise only 24 per cent; those with incomes less than 3,000 francs per year were entitled to an increase of 29 per cent, whereas those with incomes of 7,300 francs obtained only an 18 per cent increase.[1] Finally, a British government official publication summarizes the problem very well when it points out that consumption had fallen by 18 per cent by the year 1942 but that, if the consumption were based upon identical patterns of consumption in the prewar period, the reduction of consumption would have been considerably more than 18 per cent. If, however, the comparison were made on the basis of a budget yielding equal nutritional value in 1938 and 1942, the increase would have been considerably less than 18 per cent.

Various alternatives are, therefore, available. *First, we may use identical commodities, but of course, if we do, only a theoretical purpose will be served:* it is very difficult to obtain price quotations for many commodities that were available in the prewar period. *Second, we may compromise by using a limited number of indispensable commodities.* We then obtain quotations for identical commodities over a limited area only, but we do not measure the changing costs of the prewar basket. Since these indispensable commodities are likely to be subject to control of price and distribution, they will not rise greatly, nor will a cost-of-living index and wage rates, based on such a pattern of consumption, rise greatly. *A third alternative is to find out the cost, in the prewar period and in the current period, of a budget which satisfies certain minimum nutritional requirements.* In this case, we do not require identical commodities but rather an objective of equal nutritional value.

The largest increase in the index number will be given by using the first alternative; probably the lowest will be yielded by using the second alternative. Current index numbers yield higher increases than the second and third alternatives and probably smaller increases than the first. Still another method is the technique used by the BLS: readjustment of weights according to the changing pattern of consumption. This index number measures what it costs to buy a basket of varying contents, not the prewar basket.

[1] "Annual Report of the Swiss National Bank," *F.R.B.*, September, 1943, pp. 842–843.

That the construction of index numbers on the basis of prewar consumption may not yield a price level substantially at variance with one based on current consumption is revealed by the following:

"A new study has been made of the average change in the retail market price of goods and services covering approximately 90 per cent of the total of civil expenditure on consumption, *i.e.*, of the total of expenditures shown in line 1 above, less the income issued in kind to H.M. Forces and Auxiliary Services. To illustrate the method adopted, the figure for 1942 was calculated by taking the average of the change between 1938 and 1942 in the cost at market prices of buying the collection of goods and services bought in 1938 and 1942, respectively. Since the diversion to war purposes of resources used in peacetime for the satisfaction of consumers' needs has necessitated a considerable change in the structure of consumer purchases, it might have been expected that the two components of the final average would differ somewhat widely. This, however, is not in fact the case. The proportionate increase between 1938 and 1942 in the cost of purchasing each collection was almost the same. The two percentage changes are sufficiently close to one another for their average to afford a reasonable measure of market price changes applicable to personal expenditure on consumption." [1]

A committee of the American Statistical Association comments as follows on the issue of the use of prewar or current weights in the experience of the United States.

"We believe that the adjustments made by the Bureau represent a reasonable compromise between the desire to reflect current consumption and the desire to maintain an index that measures with accuracy average changes in the unit prices of consumer goods and services." [2]

Finally, it should be emphasized that the movements of prices and wage rates and a comparison of their relative movements, and especially a comparison of total money wage payments in relation to the rise in the cost of living, may point to a substantial rise of consumption and an increase of inflationary pressure. Actually, consumption may not rise so much as might be anticipated by a comparison of prices and wage rates or prices and total money wage bills.

[1] H.M. Stationery Office, *An Analysis of the Sources of War Finance . . .*, Cmd. 6438, pp. 5–6. A similar conclusion was reached in this country in a study, *The Cost of Living Index of the BLS.* Old and new weights were applied to the period 1941–1943. Results did not vary significantly. *Report of the Technical Committee*, p. II-24.

[2] American Statistical Association, *An Appraisal of the U.S. Bureau of Labor Statistics Cost of Living Index*, 1943, p. 12.

4. THE COST-OF-LIVING INDEX OF THE BUREAU OF LABOR STATISTICS [1]

Now we turn to an analysis of the BLS index number. This index was first used in 1919 and was based on a study of budgets in the years 1917–1919. More recent studies were used to discover the consumption patterns in the years 1934–1936, and they are the basis of the present index number. Weights have been adjusted to take account of the change in consumption in the last generation, and from time to time, of course, further changes are made. The original index included 155 commodities and services, whereas the new index includes 198. The old index carried the prices of 42 food products, whereas the new index considers 54, though at first it included 84 food commodities. The reduction is explained by the fact that equally good results were obtained by using the smaller number of commodities which were found to be representative of all foodstuffs. The increase in the consumption of fruits and vegetables required some change in weights, and the consumption of clothing is less important now than it was in earlier years. Food, for example, accounts for 31.6 per cent of the total budget in the earlier index and for almost 34 per cent in the new index; clothing for 14.1 per cent in the old and for 10.5 per cent in the new. More recent changes are noted below.

It is interesting to compare these weights with the results of a recent study by the Department of Commerce (see Table 61).

TABLE 61.—PERCENTAGE DISTRIBUTION OF CONSUMPTION EXPENDITURES, 1929–1943

	Average, 1929–1941 (1)	January, 1941 * (2)	1942 (3)	1943 (4)	December, 1943 * (5)
Food and tobacco.	30.2	34.3	35.5	37.4	41.2
Clothing.....	12.8	11.0	14.1	15.1	12.6

SOURCE: W. H. Shaw, "Consumption Expenditures, 1929–1943," *S.C.B.*, June, 1944, p. 6, and *Report of the Technical Committee*, II-16.

* Percentage in BLS index.

The increased importance of food and clothing in 1942 and 1943 reflects both large rises in the prices of these categories of goods and also the unavailability of other classes of goods. Columns (2) and (5) give the weights

[1] The reader not especially interested in index numbers may wish to skip this and the following section.

allocated by the BLS in January, 1941, and December, 1943. In general, the BLS weights food products in total consumption expenditures more heavily than their importance deserves. This is easily understood, however, because the BLS covers low-income groups only, where expenditures on food are large relative to incomes.

We should never lose sight of the fact that the BLS index number relates to budgets of relatively low income groups. The results attained are not a very accurate indication of the rise in the cost of living for those with incomes much less or much more than that of the average clerk or laborer. In this connection it is of some interest that, from 1941 to the first quarter of 1944, the prices of 13 articles of clothing rose by 96 per cent for those with incomes of less than $1,000, by 70 per cent for those with incomes of $1,000 to $1,999, and by 53 per cent for those with incomes of $2,000 to $3,000. The large rises for the lowest income groups are explained largely by the disappearance of low-priced clothing.

The BLS uses the base period of 1935–1939. It is generally agreed that a recent base period is desirable because variations in consumption, particularly in periods of rapid developments, are very marked and because it would be difficult to obtain an index number which would have real meaning constructed on a base period of many years ago. It is, however, difficult to adjust the base period, since any change may have very significant effects on the cost-of-living index in any particular year with resulting repercussions on wage levels, and so on.

Studies of the cost of living are made in 34 large cities in the United States and the results are then weighted to obtain a composite index which is more or less based on the total population of the United States. Each metropolitan area is weighted according to its population. The cost of living varies in different cities. For example, in the present war it is generally known that the cost of living has gone up much more in large war centers than in most other parts of the country. In June, 1941, the cost of living as compared to the base period had gone up over 7 per cent on the Pacific coast whereas in the West North Central part of the country the increase was less than 2 per cent. From January, 1941, to December, 1943, an increase of 30 per cent was registered in Savannah and only 20.3 per cent in Minneapolis; for food the maximum was 62.1 per cent in Knoxville, and the minimum 32.6 per cent in Rochester.[1]

Consumption is naturally weighted differently in different parts of the country. For example, in Jacksonville, in the fuel, etc., category, ice is weighted at 23 per cent, whereas in Boston the weight is only 10.6. Heating fuels, on the other hand, account for 10.2 per cent in Jacksonville and for 55.8 per cent in Boston.

The man in the street is likely to forget that the cost-of-living index number is one that applies to the country as a whole and is based on the consumption of families in large cities with an average income of about $1,560 per year. Thus, the average man may find that the rise of the cost of living as given by the index number has little relevance for his budget. Thus, he

[1] U.S. Department of Labor, *The Cost of Living Index of the BLS*, Appendix, p. 3.

may live in a city where the cost of living has gone up much more than for the country as a whole, or he may have a pattern of consumption that is considerably different from that of the average man. He may, for example, spend a disproportionate part of his income on food and, therefore, the cost of living may seem very high to him because the increased price of food is felt much more by him than by the average American. If, on the other hand, he spends a disproportionate part of his income on travel and other public utilities, he may seem better off because the prices of utilities have gone up considerably less than the index number as a whole. If he is a man with a high income, he may not feel the increased cost of living so much as the average laborer since food expenditures account for a relatively small part of total expenditures of high-income groups. A citizen in the high-income brackets may spend only one-half of his income and the increase in the cost of living affects him only to the extent of one-half of his total income. The unspent part of his income may seem to retain the old purchasing power since he does not spend it at the present time. What the purchasing power of this unspent income will be in the future is another matter. If the cost of living remains high, it will be less, of course.

The British constructed a new index number which covers the expenditures of all classes of the community and includes luxuries as well as necessaries. This index yielded an increase in *retail* prices of 38 per cent from 1938 to 1942, in contrast to the rise in the old British Ministry of Labour's Index of 28 per cent for this period.[1]

In general, the public believes that the cost-of-living index underestimates the increase in the cost of living. This results partly from the fact that the average person notices changes, and since changes are upward he is more aware of the rise of prices--and particularly large rises—than he is of the many instances where prices do not rise or where they rise very little. That is perhaps the most important explanation of the fact that the housewife complains bitterly that the index number showing a moderate rise in the cost of living is, in her opinion, a misleading guide of what has actually happened. I shall return later to a more fundamental discussion of the deficiencies of the cost-of-living index number as a guide of the changes in the purchasing power of the average man's dollar. Here it suffices to say that the index number considers a large number of commodities, and as long as the quotations are correct and as long as the commodities are representative and a reasonable weighting system is used, results ought to be roughly accurate and indicative of the actual rise in the cost of living. There are certain reservations to this generalization. I shall turn to them after a discussion of weighting.

5. WEIGHTING

Many have criticized the index numbers used in this country as well as in England on the ground that weights are not in accordance with current consumption. Professors Bowley and Fisher were responsible in part for the spread of the general view that weighting is not of great importance. Prof.

Mitchell, in his study of index numbers, emphasized the fact that haphazard weighting may cause errors. He pointed out, for example, that an index number covering the period 1890–1919 will give the same general results if 25 or 50 or 242 commodities are used. But if, on the other hand, studies are made of the year-to-year variations, one will discover that the results will vary according to whether 25 commodities are used or 242. Prof. Mitchell also commented on some rather extreme uses of haphazard weights. In the *Senate Finance Committee Report* of 1893, for example, one index number included relative prices for 25 different kinds of pocketknives which had a weight eight times as large as that given to wheat, corn, etc. In the period 1862–1873, the use of haphazard weights for United States prices gave results that were as much as 10 per cent at variance with results given by the use of systematic weights. Even the Canadian index number which accounted for 272 commodities gave results which varied as much as 7 per cent in 1912 as a result of shifts in weight. One could also envisage the effects of haphazard weighting on the American index number of recent years. We have pointed out that food is more important than it was a generation ago and also that the price of food has gone up much more than the prices of other products. If, therefore, the weighting of food had not changed with the changes in current consumption, the net result would have been a serious underestimate of the subsequent rise of prices.

We can conclude, therefore, that the use of any rational system of weighting will give reasonably good results. In both British and American experience of recent years, it was shown that material changes in weights make little difference. Frequently, however, the government finds it necessary to change weights even if this does not affect the results substantially. In order to ensure confidence in a given index number it is necessary to take into account the changing patterns of consumption. This explains why the BLS early in 1943 made material changes in its weighting. Seven food products were added which had previously not been considered. These included beef liver, Hamburger, etc., commodities that were being consumed in greater quantity as a result of the rationing program. Effects of rationing also accounted for the reduction of weights accorded to 27 food products, among them coffee, fresh vegetables, all cuts of beef, and fruits, products which had been reduced in importance. Twenty-five foods, on the other hand, were given increased weights. Among these were cereals, pork chops, chickens, cheese, onions, potatoes, all commodities that were consumed much more than before the war because of rationing and unavailability of other supplies. In addition, important changes were made in transportation and clothing. These changes can be justified largely on political grounds. By that I mean that the changes in weights make little difference in the final results. Once consumption habits change, however, there is much clamor for modification of weights, which the government finds it expedient to heed.[1]

[1] *BLS Bull.* 699, especially pp. 27–61; J. L. Nicholson, "The Cost of Living Index," *Institute of Statistics*, Oxford, Feb. 22, 1941, pp. 45–46; OPA, *Price Control Report* 15, p. 13; *Report of the Technical Committee . . .*, II-16.

6. SOME BROAD ISSUES

We have explained that the cost-of-living index at best measures the change in price levels of current consumption. In other words, it compares the price of what was consumed in a base period by the low-income group to what is being consumed currently by the same group. We also explained that the cost of living may show a greater rise than actually occurred if we relied on measuring the prices of commodities that *were consumed in an earlier period* instead of those currently being consumed. A more important matter, and probably one that has not received adequate attention, is the significance of what are known as low-end products in the economy.[1] *In wartime, when supplies are scarce and particularly when control is introduced, the manufacturer and the seller are inclined to push the production and distribution of high-priced products.* Consumers have large incomes and are not so resistant to price rises as they are in normal times, and the sellers find that they can make larger profits by selling high-priced items. Several large whisky companies were accused by government officials not only of selling higher priced products and of using a disproprotionate part of their supplies for costly brands, but also of packing the same grade of whisky in bottles with higher price labels. Again, if a consumer has to purchase a pair of shoes for $10 because the previously priced $5 shoes are no longer available, he is confronted with a rise in prices; and as far as he is concerned the dollar is worth less to him than before. If the BLS in such a case does not include an allowance for higher prices, the index number understates the increase in prices. This follows even if the increase of price from $5 to $10 is reflected in a corresponding improvement in quality. Frequently, of course, there is no upping of quality. But we must distinguish voluntary trading up (*i.e.*, buying higher priced items) from compulsory trading up. Only the latter should be interpreted as a rise of prices.

On this score one is reminded of the debate in 1943 on *Maximum Price Regulation* 330 which proposed that the manufacturers of dresses should not increase the proportion of high-priced garments in their sales. But the fact is that formerly priced $1.98 dresses are unobtainable. Manufacturers and distributors concentrate much more on high-priced units. A woman now has to pay $3, $4, or $5 for a house dress, whereas previously she was satisfied with, and would have preferred, a $1.98 dress. We have two problems that should be distinguished:

[1] *Cf.* Chs. III, XV, and XXV of my *Price and Related Controls.*

(1) There is a deterioration in quality, that is to say, the $5 dress of today is not so good as the $5 dress of a previous period. (2) The consumer is confronted with the impossibility of obtaining the $1.98 dress.

To some extent, of course, the BLS takes account of such changes, but not fully. I quote from an official document BLS issued late in 1942: [1]

"*If a store no longer carries the brand on which a price series has been reported for some time, what does the Bureau include in its cost-of-living index?*

"The store buyer is asked for a price of the brand being carried currently which meets the Bureau's specification. Prices for the preceding pricing period and for the current pricing period are obtained on the new brand. These prices are then used in computing the changes in the index and the substitution does not affect the level of the index. Example: Prices were collected on the X brand of men's cotton broadcloth shorts in a store in Birmingham, Ala., in September, 1941. The price was 3 pairs for $1. In December, the store reported that the X brand was no longer carried and that the Y brand was stocked instead. This brand had also been stocked in September. The Y brand was substituted for the X brand and prices for both September and December were obtained. The September price on Y was 3 pairs for $1, the December price, 55 cents per pair. The reason given for the price increase was increased wholesale cost and increased consumer buying."

Other difficulties in estimating the increase in prices arise. The average consumer is aware of the fact that the commodity he buys today does not include the same services as commodities purchased previously. For example, he does not get deliveries, discounts, or credits. In addition, he has to purchase under very unsatisfactory conditions: delays in service, rude salesclerks, and so on. Since, again, a smaller percentage of purchases now fail of payment as compared to prewar days, prices on the average have risen more than is apparent on the surface. Irrespective of the desire of the OPA to maintain services that were usually provided with purchases or to have prices reduced when services are withdrawn, the fact remains that services are withdrawn and frequently prices are not adjusted accordingly. The fact also remains that in constructing the cost-of-living index, the BLS cannot always take account of these changes. Furthermore, we have the problem of black markets. The position of the Department of Labor is that adjustments cannot be made for certain black markets because contracts are based on prices quoted and these, therefore, should be

[1] BLS Serial *R* 1476, p. 3, question 10.

the legal prices. Nevertheless, insofar as the black market exists, prices are higher than indicated by the BLS and, to that extent, the dollar purchases less than is indicated by the index number. The OPA comments as follows:[1]

"A further factor contributing to the rising cost of living has been the violation of ceiling prices. . . . A surprising number of violations are reported and consequently are reflected in the official Bureau of Labor Statistics index. But many flagrant violations are not reported and are not reflected in the index. The black-market operations, of course, are not shown in the index."

On the basis of a sample survey, the OPA in 1943 estimated that food prices were 5 per cent in excess of ceilings.

7. THE INDEX AND THE REDUCED STANDARD OF LIVING

In a great war the index number has much less significance and validity than in peacetime. *A large proportion of the dollars that are paid out have little purchasing power because goods are not available or because the public, under great pressure from the government and under patriotic impulses, uses the dollars to purchase bonds, i.e., to obtain command of goods in the future.* At an annual income of $155 billion, for example, if there were no controls and no war, the public might well spend $120 billion to $125 billion annually for consumption goods. Actually, they spent over $90 billion in 1943 and $95 billion in 1944, and, if the government had fully succeeded in its program of limiting consumption, they would have spent only about $70 billion in each of these years. The dollar received, therefore, actually had less purchasing power than might be suggested by the price level. A much smaller proportion of dollars received will be spent than before the war. *In part,* the reduction of the proportion of spent dollars is a matter of compulsion, direct or disguised. Pressures which result in the spending of an abnormally low ratio of incomes in fact reduce the purchasing power of the average dollar below that of the spent dollar. The purchasing power of the average dollar is, then, reduced and is less than that of the spent dollar. *In other words, whereas we normally would spend about* 85 *per cent of the dollars received, today we spend only* 60 *per cent of the dollars received prior to taxation, and about* 70 *per cent after taxes; and to that extent the average dollar has a reduced purchasing power in terms of goods today, whatever its purchasing power in terms of goods will be in the future.* Moreover, as has already been indicated, we must not

[1] OPA, *Price Control Report* 15, p. 1.

lose sight of the fact that to a much greater extent than usual the consumer has to depend on second choices. He purchases margarine, not butter; fish, not meat. He travels on crowded streetcars, not in automobiles. *The net result is, moreover, that he does not get so much satisfaction out of every dollar spent as he did in the prewar period, and this holds true even if we allow for the increase in prices.*

8. THE DEBATE OVER INDEX NUMBERS, 1943–1945

We should not end this chapter without adding a word concerning the debate between the labor representatives of the Presidential Committee on the Cost of Living and the BLS. Whereas the former put the rise in the cost of living from early 1941 to the end of 1943 at 43 per cent, the latter's estimate was 23 per cent. My conclusion is that, on the whole, the charges made against the BLS were not well founded. Although prices rose more than 23 per cent and although the reduction in the satisfaction obtained from a dollar was not adequately measured by the official increase of prices of 23 per cent, nevertheless the BLS seems to have had the better of the debate.

1. Labor representatives confuse a *rise* in the cost of living and a *change* in the standard of living. They seem to forget that voluntary up-trading, *i.e.*, purchasing higher priced items as incomes rise, should not be reflected in a rise in the index number. As the public voluntarily buy at higher prices, prefer to eat out more, move to higher priced war centers in order to earn more, they spend more. Possibly increased costs for (say) housing of a given kind in a war center might be interpreted as a genuine rise in the cost of living—allowance for this is easily made by changing the weights of different cities; but voluntary trading up represents an increase in the cost of living in an entirely different sense. The tendency to buy more expensive goods when incomes go up and the voluntary choice to eat out are simply ways of spending increased money. Many eat out because they thereby retain more energy to work intensively at their regular occupations. Earning more, they therefore use part of the additional income to pay others to do kitchen work for them. The rise of prices in restaurants in part reflects this increased demand for a particular kind of service. This, again, is a voluntary trading up, a change in the manner of living.

2. Labor was too inclined to compare what the pay envelope of $50 would buy instead of what the $35 or $40 left after taxes and savings were deducted would purchase. They seemed to forget that a dollar

does not yield so much satisfaction because the way of life has been changed, because people save a larger proportion of their dollars, and because they are taxed more heavily. It is not the task of index numbers to measure the reduction in purchases associated with the rise of taxes and savings.

3. It was demonstrated by the BLS and the Technical Committee that the estimates of the labor representatives contained certain statistical defects. For example, they pointed out that it is not proper to measure the rise in the cost of living by adjusting an estimate of dollar food expenditures by a series for the physical volume of food made available. The two series are subject to many errors and are not comparable. Estimates of expenditures on food are subject to an appreciable margin of error; and estimates of physical flows of food are subject to serious errors. That the net result thus obtained by the labor group is a rise of food prices of 70 per cent between 1940 and 1943, as compared with 43 per cent obtained by the BLS, is, therefore, not very significant. In fact, the BLS index is meant to measure consumption of low-income groups, not the prices of all consumption goods. For that reason, even if the figures of the labor representatives were correct, they would be of only limited significance.

Similar mistakes were made by the labor representatives in obtaining implied rises in the price of clothing. In the case of rent the rise seems to be much closer to the 3 per cent estimated by the BLS than the 15 per cent estimated by the labor representatives.

4. It is not true, as is held by the labor representatives, that the index number is not so representative as it was before the war. At least, it is not true to the extent that they hold. In this connection, the reader is reminded that we discussed the subsidy issue above and indicated that the concentration on items in the index number was not nearly so great as the Meany-Thomas report held.

5. What remains, then, of this report of the labor group? Undoubtedly, deterioration is an important problem. Unfortunately, index numbers cannot measure the degree of deterioration. We may, therefore, conclude that the index number does not measure the full extent of the rise of prices since full allowance is not made for deterioration of quality. The full effect of extensive up-grading is also not adequately covered in the index number. Perhaps some allowance should also be made for the unrepresentativeness of the index number. To some extent, for example, spending in public eating places may have gone up greatly,

and part of the explanation may well be the higher rise of prices in public eating places than at home. Unfortunately, the BLS does not measure the rise of prices in public restaurants. They do hold, however, that the rise has not been so great as indicated by the labor representatives. There is, then, some substance in many of the charges made by the labor members of the Presidential Committee on the Cost of Living. They have, however, grossly exaggerated the BLS's underestimation of the rise.

Since the above was written, the Report of the Technical Committee was published.[1] In general, its conclusions are similar to those of the Mills (American Statistical Association) Committee. Its estimates of the *actual* rise in the cost of living as compared with the BLS rise are shown in Table 62.

TABLE 62.—COST OF LIVING, PERCENTAGE INCREASE, JANUARY, 1941–DECEMBER, 1943

	BLS	Technical Committee
All items	23.4	26.8 28.5
Food	40.2	43.0–46.5
Clothing	33.7	40.4 41.8
House furnishings	27.8	39.5 43.5
Rent	3.0	4.5
Fuel, electricity, ice	8.6	8.6
Miscellaneous	15.9	15.9

SOURCE: *Report of the Technical Committee*, pp. II-37, II-38.

The Technical Committee estimates that prices may have gone up 3 to 5 points more than is indicated by the BLS. This compares with the estimate of 20 points by the Meany-Thomas report.

The Technical Committee concludes that forced up-trading is generally caught by the BLS for families that purchase middling qualities. But it fails to catch up-trading at the lower and higher qualities.[2] On the issue of deterioration, the Committee suggests that it is not possible to measure it fully; that expenditures are not necessarily pushed up by a reduction of quality; that quality declines in the market are not matched by equal cuts in items measured by the index. The Committee, on the basis of these considerations, concludes that

[1] I shall comment briefly on the conclusions of the committee of the American Statistical Association in the conclusion, pp. 210–211.

[2] *Report of the Technical Committee*, p. 16.

quality deterioration may be held to account for an unrevealed rise of but 2 to 3 points.[1]

On the whole, the Technical Committee finds little support for the charges that the index number does not measure the full cost of living or that it fails to measure price changes reasonably accurately. The excess of 3 to 5 points over the BLS rise is accounted for by shortcomings of actual weights and samples, underreporting of actual prices, effect on average prices of reductions in markdowns and special discounts, and quality deterioration.

9. CONCLUSION

In this chapter we noted two types of difficulties: the theoretical problems that cannot be resolved by any index number to the satisfaction of everyone, and those that may be associated directly with the techniques and administration of the BLS cost-of-living index number.

1. Especially important are the underlying theoretical difficulties. It is emphasized, for example, that the reduction of the value of the dollar in a war economy in one sense is not measured by an index number. There are some dollars that cannot be spent and, in addition, freedom of choice is more restricted than in normal times. The average dollar has less purchasing power because through compulsion and mild pressure by the government, and also because of the unavailability of supplies in some markets, a relatively small proportion of the dollars is spent.

2. We come to the issue of what kind of a basket of commodities we should try to price. Many would measure the prices of commodities consumed in the prewar period, but this is obviously impossible because certain commodities are unavailable. Then we may try to measure the cost of available commodities that will yield a given amount of nutrition; or we may measure the value of the dollars in accordance with the changing standards of consumption in wartime. Finally, we may measure the price of an iron ration. Each of these will yield a different change in the cost of living and, therefore, will also have varying effects upon wage rates insofar as they are tied to the cost of living.

3. There is the issue of the increase in the cost of living in the sense that the total consumption expenditures of an individual, or of a family, or of a nation rise. This rise in wartime is likely to be greater than the increase which is shown by an index number measuring the changes

[1] *Ibid.*, pp. 16–17, II-16–21.

in prices of units of goods. This follows because many improve their standards of living, and also because high-priced commodities—their rate of price acceleration is rapid—are increasingly in demand and yet escape full measurement by the index number. Although the index number authority is not primarily concerned with these problems, the average consumer is very much concerned with them.

4. We now come to the particular problems of the BLS cost-of-living index number. For example, it is held by the American Statistical Association Committee on the BLS index number that if the job of the BLS is to determine whether it will price the "basket" of the prewar, theoretical difficulties mentioned above will, of course, be relevant in the determination of changes in the cost of living. For instance, the BLS has to determine whether it will price the "basket" of the prewar period or that of the current period.

The Statistical Association Committee supports the BLS as follows:

"The principal conclusions to which we have come are: First, that within the limitations established for it the Cost of Living Index provides a trustworthy measure of changes in prices paid by consumers for goods and services. Second, that many of the difficulties involved which have arisen have their origins in attempts to use it uncritically for purposes to which it is not adapted." [1]

In detail, the Committee does agree that the prices paid for food may be as much as 1.8 per cent higher than is indicated by the price quotations given to the BLS. The Committee also agrees that in black markets where coupons are actually paid out the prices for food may be understated to the extent of 2 per cent. They also agree that there has been a deterioration of quality which is not adequately measured by the index number. They point out in particular that people who move, for example, from houses to lodgings actually incur a large rise in the cost of living which cannot be measured by index numbers.

In general, the BLS index number probably measures the changes in the cost of living as well as can reasonably be expected in periods like ours of hectic change. Thus, the conclusions of the Statistical Association and the Technical Committee seem to be well justified. Perhaps they understate the extent to which there was a deterioration of services and even of quality, and perhaps to that extent the index number understates the increase in the cost of living. The Committee of the

[1] *An Appraisal . . .*, p. 2.

Statistical Association has not dealt adequately, either, with the problem of up-trading, *i.e.*, the increased need of purchasing high-priced products because low-end and moderate-priced products are not available. This, in fact, constitutes a disguised rise of prices to the consumer because his dollar is not worth so much to him if he has to pay higher prices (even with unchanged quality) since cheaper commodities are not being offered in normal quantities. An important issue may be formulated as follows: When does a reduction in the number of units of a commodity, or of a commodity at a given price level, constitute a rise of price? Surely the dollar has lost purchasing power when only one unit of each commodity included in the index number, or even 1 per cent of the prewar number of units, is available, even if prices are held at the 1939 level.

We must emphasize above all that the BLS index number is reasonably accurate. The appraisal of two committees of experts suggests that the cost-of-living index, which merely measures the movement of prices, does not understate the rise of prices by more than 5 per cent. The more serious problems are, of course, those which do not come under the surveillance of the BLS.

To sum up: Americans spend more, voluntarily, because their incomes have risen by more than 100 per cent. They purchase higher priced goods, more of them, and in general enjoy new consumption experiences. Their "cost of living" in this sense has gone up; but few would hold that the index number should reflect this rise or that wages should respond to it. What is more disturbing is compulsory trading up, the loss of services, the deterioration of quality, the unavailability of lines of products. The dollar is worth less to the consumer for all these reasons. How much less no one can say.[1] In any case, there is not a prima-facie case for raising wages to make up for deterioration unless larger purchases are required. Surely no one would go so far as to argue that index numbers (and wages) should be adjusted upward to compensate for unavailability of supplies at current, high-income levels or for the reduced enjoyment of goods. Such adjustments would constitute the rankest kind of inflation.

[1] In January, 1945, Mr. Bowles announced that the unavailability of low-priced items accounted for five-sixths of the rise in clothing prices over the preceding 18 months.

Chapter XV

Taxation

1. INTRODUCTION

The four preceding chapters dealt with general aspects of inflation: total demand relative to supplies of consumption goods; an analysis of recent price history; the relation of monetary expansion to inflation; and, finally, the relation of recorded price increases to actual rises.

Our task in the next two chapters is to consider the extent to which income has been siphoned off through the payment of taxes and through savings. The larger the part of income that is thus siphoned off, the less the inflationary pressures. Income payments minus personal taxes equal disposable income; and the latter minus savings equals the amount spent on consumption. Successive chapters deal, therefore, with taxes, savings, and consumption.

The opening section of this chapter presents a general survey of the relative contributions of taxes and savings. We also consider price aspects of tax programs, tax capacity, and the extent of the burden imposed.

2. NATIONAL INCOME, TAXES, AND SAVINGS

Let us begin with a general analysis. From Table 63 (and Chart 60) it will be noted that public expenditures have been rising at a rapid rate. They reached their peak in 1944–1945, however. Receipts have also gone up rapidly but not rapidly enough. The public debt rose at the rate of $60 billion annually in the fiscal years 1943 and 1944. In the fiscal year 1944–1945, the rise was somewhat less. Table 63 reveals that, on the assumption that the European war would not end soon enough to result in curtailed expenditures in 1944–1945, public debt, nevertheless, would rise less in 1944–1945 than it did in 1943–1944. The explanation is a small rise of revenue and the anticipated reduction of cash balances of $5 billion. (In 1943–1944, there was a

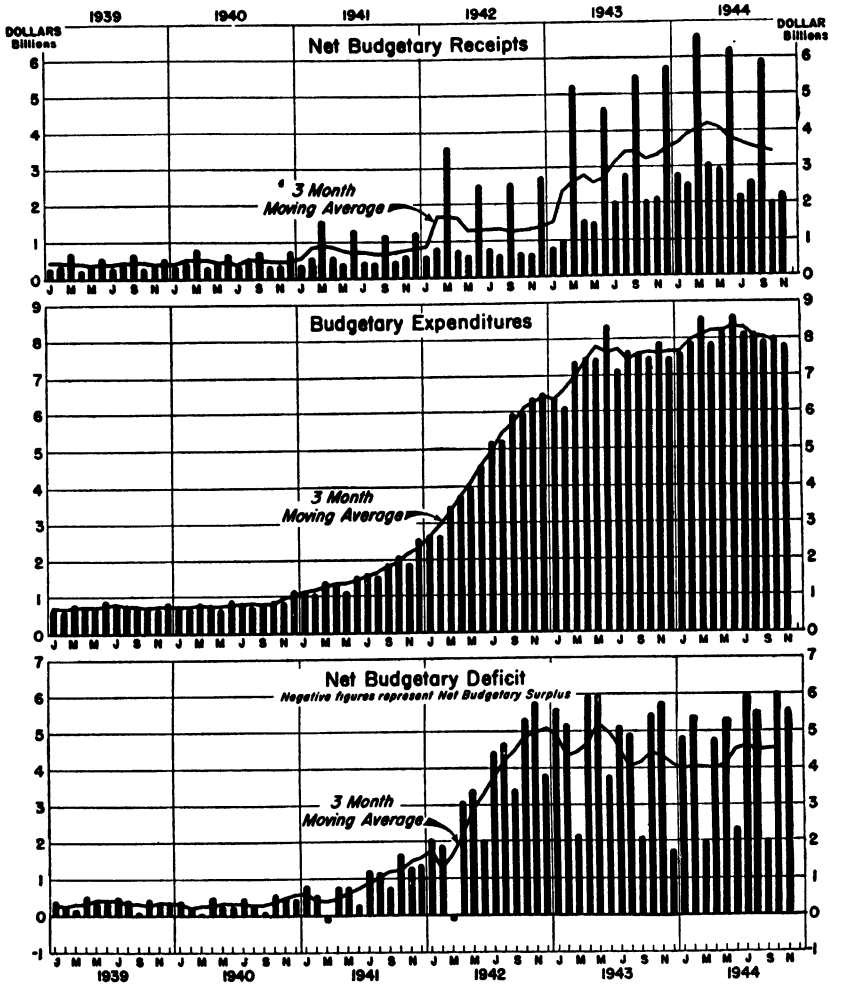

CHART 60.—Budgetary receipts and expenditures. (*Source: United States Budget, January,* 1945.)

rise of cash balances of $10 billion.) For 1945–1946, the President looked forward to a very large reduction of expenditures, which was offset only in part by an anticipated reduction of receipts.[1]

[1] *The Budget of the U.S. Government,* 1946, p. A-3. Another factor is the item *Checking Accounts of Government Corporations and Credit Agencies with the Treasurer of the United States* (net); it amounted to $4.4 billion in 1944 and is estimated at $2.6 billion for 1945. These estimates were made by President Roosevelt in January, 1945. The end of the European war came too late to save much money in the fiscal year 1944–1945. An unexpectedly early termination of the Japanese war will make possible substantial savings in expenditures for fiscal 1945–1946 over those given in Table 63.

TABLE 63.—TREASURY RECEIPTS AND EXPENDITURES
(In billions of dollars)

	Fiscal year ending June 30						
	1940	1941	1942	1943	1944	1945 *	1946 *
1. War expenditures	1.7	6.7	28.3	75.1	89.7	89.0	70.0
2. Total expenditures	8.9	13.7	34.1	79.6	95.2	99.7	83.1
3. Receipts †	5.4	7.6	12.8	22.3	44.1	45.7	41.2
4. Excess of expenditures	3.5	6.1	21.3	57.3	51.1	54.0	41.9
5. Increase in direct interest-bearing and guaranteed debt	2.5	6.9	21.8	63.0	64.3 ‡	50.8 ‡	40.5 ‡

SOURCE: *F.R.B.*, August, 1944, p. 750; *Budget*, 1946, p. xxx.

* Estimated.

† This includes miscellaneous receipts (on renegotiated contracts, etc.) of $906 million in fiscal year 1943 and $3,280 million in 1944. *Cf. Tr. Bull.*, September, 1944, p. A-5.

‡ Rise in *total* debt. The rise in 1944–1945 actually was $58 billion.

Perhaps one-third of the borrowing (row 5 of Table 63) is inflationary.[1] We should note the following, however. "*Gross savings available to the government*" *were large enough in* 1943 *and* 1944 *to absorb* 80–90 *per cent of all issues of the government. That they were not so absorbed must largely be explained by the increased tendency to hoard cash.* In other words, the resulting inflation is largely monetary instead of price inflation. Part of the item referred to by the Department of Commerce as "gross savings available to the government" are thus, in fact, unavailable.

To proceed to the rise of taxation and savings:

1. *A rise of individual savings in* 1939–1944 *offset a larger part of the increase of income payments than did the increase in personal taxes.* Table 64 shows a much larger rise in savings than in taxes.

TABLE 64.—RISE OF INCOME, TAXES, AND SAVINGS, 1939–1944

	Billion Dollars
Income payments	87
Net individual savings	34
Personal taxes	17

SOURCE: *S.C.B.*, April, 1944, and February, 1945. *Cf. Budget*, 1946, p. xxv.

The rise percentagewise was from 9 per cent of income payments in 1939 to 25 per cent in 1944 for private savings and from 5 to 12 per cent of income payments for personal taxes.[2] At the very high in-

[1] *Cf.* Chs. XIII and XVI.

[2] *Cf. First Report by the Director of War Mobilization and Reconversion*, p. 19, Jan. 1, 1945.

come payments of $160 billion, the public paid but 12 cents of each dollar in personal taxes.

2. *When we break this material up into two periods, we find that the rise in taxation was particularly disappointing through* 1942*; that the large growth of savings in* 1941 *and* 1942 *made an important contribution to the anti-inflation fight in these early years; and that in* 1943 *and* 1944 *a substantial rise of personal taxes helped greatly.* (See Table 65.) In fact, disposable income rose by less than two-thirds as much from 1942 to 1944 as from 1939 to 1942. This is partly explained by the large increase in personal taxation and in part by a slackening in the rate of income growth.

TABLE 65.—RISE OF INCOME PAYMENTS, PERSONAL TAXES, DISPOSABLE INCOME, AND NET INDIVIDUAL SAVINGS, 1939-1944 *

(In billions of dollars)

	1939–1942	1942-1944
Income payments	47	40
Personal taxes	4	13
Disposable income	43	27
Net individual savings	23	11

SOURCE: *S.C B.*, April, 1944, and February, 1945.

* *Cf. The Budget for* 1946, p. xxv, and *First Report by the Director of War Mobilization and Reconversion*, p. 19.

3. At the present writing (summer 1945), it appears that Federal taxes yielded about $44 billion in the calendar year 1944. The rise of *all Federal* taxes, of *gross savings available* to the government and of *total* income from 1939 to 1944 is also of some interest. *The rise of total taxes was close to one-half the increase of net national income.* (See Table 66.)

TABLE 66.—RISE IN NET NATIONAL INCOME, FEDERAL TAXES, AND GROSS SAVINGS AVAILABLE TO THE GOVERNMENT, 1939–1944

	Billion Dollars
Net national income	90
Federal taxes	39
Gross savings *available to the government*	63 *

SOURCE: *S.C.B., Tr. Bull.*, and *F.R.B.* Gross savings for 1944 are estimated on the basis of net savings.

* Estimated.

A rise of Federal taxes and gross savings available to government of $102 billion should be compared with an increase of gross national product of $112 billion. The difference ($10 billion) is not an accurate indicator of the increase of inflationary pressures. First (tending to

reduce inflation), there has been a rise of consumer goods available. Second (tending to expand money), all "gross savings available to the government" are in fact not wholly available.

For both gross and net figures, the rise of savings seems to have contributed somewhat more than that of taxes to the control of inflation.

4. The important part played by savings is summarily indicated by the ratio of expenditures on consumption to disposable income (income payments after taxes). (See Table 67.)

TABLE 67.—PERCENTAGE OF CONSUMPTION EXPENDITURES TO DISPOSABLE INCOMES

1939	91
1941	84
1942	74
1943	73
1944	71

SOURCE: *S.C.B.*

3. TAXES AND OTHER SOURCES OF TREASURY FINANCE [1]

A government engaged in total war necessarily requires large financial resources. It will obtain as much as is practical from taxation, and what it cannot obtain from taxation it will obtain through the capital market. What it can obtain neither through taxation nor through loans out of savings it will borrow from the banks. There are limits as to how much can be raised by taxation. (The issue of tax capacity is discussed briefly in the next section.) Moreover, there are limits as to how much can be taken from the capital market without depriving the market of needed funds.

The issue as to how much can be obtained from the capital market is discussed elsewhere (Chapter XVI). My task in this chapter is to concentrate on the tax problem, but a word may be said concerning the relative advantages of taxes and loans. Much has been written on this issue. Here it suffices to point out that beyond a certain point it is better to rely on borrowing than on taxes. In periods of rising income, business and individuals have funds available that they are prepared to turn over to the government in exchange for government bonds; but their solvency would be jeopardized if they were required to turn over as taxes most of their current savings, and their funds for deferred maintenance. In part, the use of funds saved is required in order to maintain a high level of output currently, and in part they are required later to take care of accumulated capital needs.[2]

[1] For a discussion of more general aspects of taxation in a war economy, see my *Economics of America at War*, Chs. 10 and 11, Norton, 1943. Also see Ch. XVIII of this book.

[2] *Cf.* Part IV of this volume.

Loans are not, however, a complete blessing. On the one hand, they will cause serious financial problems for the government in the postwar period; on the other, by these loans the *rentier* class obtains income at the expense of other groups. If, to counterbalance the latter, the holders of bonds are taxed roughly in proportion to their holdings, then they might just as well have been taxed in the first instance, *i.e.*, during the war. The only rejoinder here is that the taxpayer prefers taxes in the future to present ones and that fiscal needs cannot be met through taxation alone. In other words, preference for loans as against taxation arises both because people consciously or subconsciously assume that the payment of interest and repayment of capital will not be at their expense and because a larger future tax burden is preferred to the present smaller burden. Finally, it should be observed that the receipt of a given sum by the government through borrowing will reduce consumption less than the receipt of an equal sum through taxation.

We should not leave this problem without a discussion—very brief—of compulsory loans.[1] The case for compulsory loans arises largely for the groups with incomes from $1,500 to $15,000 per year. In this area it is difficult to raise enough through taxation to cut consumption adequately; furthermore, excessive taxation in this area has unfortunate effects on output. It has been proposed, therefore, to take as much as is practicable in the form of taxation and then to prevent excessive consumption by promising future consumption in exchange for the potential excess of present consumption. The compulsory loan program, therefore, will tend to reduce consumption of these income groups beyond what can be achieved through taxation. Any siphoning off of extra income from these groups will, to a substantial degree, be at the expense of consumption. Compulsory loans are less effective as incomes rise. The more that is raised through compulsory loans for the higher income groups, the more they will cut their voluntary purchases of government securities. Observe, further, that the compulsory loan is a form of taxation. The buyer is required to purchase government bonds or some other equity at a rate of interest which is lower than would be required to elicit these funds under a voluntary program. The government may pay no rate of interest, merely repaying the loan, or may borrow at a rate of interest as high as the current rate on its new issues, or, finally, may pay at a rate between zero and the current rate. Whatever the rate is, however, it is lower than the rate that would have prevailed in a free market for these loans, and to that extent taxation is involved.

That compulsory loans have not been invoked more frequently since their early espousal by Lord Keynes is explained by the increased success of voluntary loans, by the large expansion of tax programs, by the reliance on other techniques for reducing consumption and keeping prices down, and, finally, by opposition on the part of labor which prefers voluntary loans from the upper income groups to compulsory loans which will have es-

[1] *Cf.* J. M. Keynes, *How to Pay for the War, passim;* A. G. Hart, "What It Takes to Block Inflation," *R.E.S.*, August, 1942, pp. 109–111; Crum and others, *op. cit.*, pp. 162–166.

pecially the effect of reducing their consumption; and they prefer to deal with excessive consumption through rationing rather than through forced loans.

4. TAX CAPACITY

That the limits of taxation that prevailed before the war, or even during the previous war, have been exceeded by so much is explained by the fact that tax capacity is a relative matter. Much depends upon the use of the funds by the government, the attitude of the public toward the object of the expenditure, the level and distribution of income, the nature of the tax system, and the political setup at the time the taxes are levied. It is easier to raise taxes of a given amount if the public is behind the war program, if the tax system does not press too severely on those whose efforts will be reduced greatly by heavy taxation, if significant proportions of the expenditures are transfer payments and a burden on the economy only in a limited sense.[1]

It is no surprise, then, that the ratio of taxes to income has risen greatly. In 1943 the British were taxed at about 40 per cent of their national income. In 1944, with our national income at about $160 billion, our Federal, state, and local taxes amounted to about $55 billion—*i.e.*, about one-third of our national income. In a study of tax capacity, Dr. Kuznets found that taxes in the United States were 4 per cent of *national income* in 1860 and 23 per cent in 1938. On certain assumptions, concerning growth of national income, minimum consumption standards, and capital formation, he concluded that in the postwar period one-fifth or one-quarter of the *real* product might be diverted to government. *This compares with* 10 *per cent* in the thirties (transfer payments are eliminated). Total government outlays in the postwar decade may then well rise to 30 or 33 per cent of *national income.* An interesting conclusion is that "within the immediate future a ratio of taxes to income payments in excess of 70 and perhaps even 50 per cent appears beyond the capacity limit." [2]

5. TAXES AND PRICES

Taxes are raised in order to obtain necessary funds for the government. This may not, however, be the most important objective, because a government can always obtain a sufficient supply of dollars by borrowing, or by manufacturing money for its own use—inflationary finance. That it does not use this easiest way out leads to a fair presumption that the government, like most of the population, is anxious to prevent a great inflation and therefore takes the opportunity to use taxation as a leverage for reducing consumption and demand.

[1] For a fuller discussion see Seymour E. Harris, *Economics of Social Security*, pp. 254–259, 1941, and references cited there.

[2] S. Kuznets, "National Income and Taxable Capacity," *Papers and Proceedings, A.E.R., Supplement*, March, 1942, pp. 37–75.

The government's concern with inflationary aspects of fiscal policy stems not entirely from a desire to provide just fiscal policies, but also from the fact that fiscal policies have repercussions on output.

It does not follow that taxes have only anti-inflationary effects. A very severe tax program will affect output adversely and will, thereby, reduce the supply of goods available; to that extent it will bring about higher prices. (An offset here is any reduction of income and hence demand.) Severe taxation will, moreover, result in inefficient and wasteful methods of doing business. Firms required to give 90 cents of the marginal dollar to the government are inclined to waste resources at the expense of the war effort through excessive payment of wages, wasteful selling expenses, etc. In other words, they build up good will for the future at the expense of present output, the war effort suffering as a result.

It is also important to consider the effects of the tax system. Taxes on consumption (*e.g.*, pay roll, sales, and excise taxes) will all tend to have the effect of raising prices. It would be better if the equivalent taxes could be raised without contributing toward a rise of prices. Unfortunately, it is impossible to carry on a great war without levying heavy taxes on commodities and services. If these taxes were eliminated, the severity of taxes on income would be so great as to produce serious effects on output and in addition raise questions of justice. In any case, the transfer of Federal tax burdens of $5 to $6 billion from taxes on commodities and services to income taxes would put a great strain on our direct tax structure. That taxes contribute toward higher prices when they are levied on commodities is prima-facie evidence that taxation may increase the pressure to raise prices. This rise of prices, however, should be considered in a somewhat different light from that resulting from the use of inflationary financing, such as borrowing from banks. A rise of prices associated with commodity taxes reflects increased payments for goods, but the government obtains its share of the total price through its new tax program. To this extent less inflationary finance will be required and a rise of income does not accompany this increase of prices. Unfortunately, sales taxes and the like tend to have secondary effects on prices. Parity prices automatically rise as commodities purchased by farmers become more expensive. An increase of wages will follow significant rises in the cost of living. Considerations of this nature have played an important part in the administration's opposition to sales taxes.

Let us further consider this problem of the relation of prices and taxes. A rise of prices may be associated with (1) an expansion of public securities sold to banks or to nonbanking lenders who draw on idle balances; (2) an excess of demand (the inflationary gap) by those who obtain income; (3) the imposition of taxes on commodities; (4) the imposition of taxes on surplus income (*e.g.*, income taxes).

Alternative (1) provides the Treasury with cash but, unless other assets held by banks are reduced, accounts for a measure of inflation. A rise of prices associated with an excess of demand (2) is not even accompanied by an inflow of revenue other than any automatic responses of tax receipts to higher incomes. Our third alternative also brings higher prices, but it yields revenue without a growth of debt and reduces the amount of inflationary finance. *Alternative* (4) *is clearly the most acceptable: prices do not rise; debt does not grow; and the government obtains revenue. From the price aspect, the government will rely on* (4) *at least to the point where output suffers seriously and will substitute* (3) *for* (1) *until considerations of justice and adverse effects on output require the use of other measures.* These adverse effects are associated with a reduction of output by low-income groups who at high rates of commodity taxation now are confronted with a deterioration of their standard of living.[1]

It should not be too readily assumed that every payment of tax represents a siphoning off of income, *i.e.*, a diversion of spending power from the private citizen or the business unit to the government. What it frequently represents is a transfer to the government of idle purchasing power that otherwise would not have been spent and, therefore, the net effect may well be an increase of demand rather than a diversion of demand.

Let us summarize the discussion, thus far, of the relationship of taxes and prices. *In general, the higher the taxes, the less will a government have to rely on monetary expansion. Against this favorable factor are to be considered any adverse effects on output, any price-raising tendencies of particular types of taxes, e.g., excise and pay-roll taxes, and, finally, the use of idle balances to pay taxation.* With all these reservations, one may nevertheless safely conclude that, within limits, greater use of taxation tends to have an anti-inflationary effect. Very significant in this connection was Great Britain's success in stabilizing the cost of living from 1941 to 1944

[1] For a fuller discussion of the relative merits of different taxes on the basis of the criteria of effects on prices, output, consumption, and justice, see Seymour E. Harris, *Economics of America at War*, Ch. 10.

despite a very severe tax program, which prevented industrial profits, after payment of taxes, from rising during the war.[1] We now return briefly to our tax burden and its relation to inflation.

6. THE TAX BURDEN

In a previous section it was noted that the rise of Federal taxes has been substantial. *A rise from* $5 *billion to close to* $45 *billion per year from* 1939 *to* 1944–1945 *is not to be minimized.* (*All taxes rose from* $15 *billion to* $55 *billion.*) *Indeed, the improvement in Federal taxation was most inadequate and slow in* 1940–1942; *but the rise over the whole period exceeded expectations. Nevertheless, it has not been large enough to prevent our public debt from rising at the rate of* $60 *billion per year at the peak of the war effort; and it has not been large enough to prevent considerable inflationary pressures.*

In the war period Congress was less disposed to raise taxes than was the President.[2] As an example, one might point to the President's recommendation of $16.5 billion of additional taxes in January, 1943, and the Treasury's proposals later in the year for $10 billion additional; of this, Congress voted less than $1 billion net.

TABLE 68.—TOTAL CENTRAL AND NONCENTRAL GOVERNMENT TAXES PER CAPITA, 1943–1944

United States	$357
United Kingdom	$291
Canada	$261

SOURCE: U.S. Treasury Department, *Comparison of Taxes in the United States, United Kingdom and Canada*, Oct. 15, 1943, p. 3.

It is possible that a 5 per cent sales tax and a rise in pay-roll taxes might have yielded $5 billion additional annually. Had these been voted, it might have been possible to increase other taxes by $5 billion. (Opposition to heavier direct taxes stemmed in part from those who resented the small increases levied against those who paid little or no income taxes.) Much political courage would have been required, however, to introduce a further general rise of the tax burden.[3]

On the whole, we have not done so well as the British or the Canadians in our tax policies, as is evident from Tables 68–71.

[1] *Cf.*, however, H.M. Stationery Office, *An Analysis of Sources of War Finance . . .*, Cmd. 6520, pp. 18, 26; and W. M. Dacey, "The 1944 White Paper on National Income and Expenditure," *E.J.*, June–September, 1944, pp. 181–182.

[2] See Appendix, pp. 226–227.

[3] *Revenue Revision of* 1943, pp. 35, 53; Seymour E. Harris, "Social Security, Taxes and Inflation" in *Curbing Inflation through Taxation*, Tax Institute, 1944.

This comparison is significant, however, only if incomes and distribution of incomes are considered, as well as the distribution of taxes. Clearly a tax burden of $291 is a heavier burden for the British taxpayer than one of $357 for the taxpayer of this country.[1]

TABLE 69.—TOTAL REVENUE AS PERCENTAGE OF TOTAL EXPENDITURE REQUIRING DOMESTIC FINANCE, 1943–1944

United States	44.4
United Kingdom	61.2

SOURCE: U.S. Treasury Department, *Comparison of Taxes . . .*, p. 5.

In 1944 taxes were 46 per cent of expenditures in the United States.[2] Taxes not directly allocable by income levels (excluded are such taxes as corporation, property, and excise taxes which cannot clearly be related to the income of those who bear them) are not considered in Table 70.

TABLE 70.—CENTRAL AND NONCENTRAL GOVERNMENT TAXES AS PERCENTAGE OF NATIONAL INCOME, 1942 1943 *

United States	23.8
United Kingdom	42.1
Canada	35.6

SOURCE: U S. Treasury Department, *Comparison of Taxes . . .*, p. 7.
U.S. taxes as percentage of national income in 1944 = 33 per cent.
* Comparisons of taxes with national income should be used with caution. (See especially U.S. Treasury Department, *Comparison of Taxes . . .*, pp 6-7.) Possibly the comparison understates the relative burden on the United Kingdom. Since a large part of our taxes is not included in net national income, the ratio of taxes to national income seems higher than it would if comparison were made with national income *inclusive of business taxes.*

TABLE 71.—INDIVIDUAL INCOMES AND EMPLOYEE CONTRIBUTIONS TO SOCIAL SECURITY—PERCENTAGE TO INDIVIDUAL INCOMES, 1943–1944

United States	39.8
United Kingdom	37.9
Canada	31.7

SOURCE: U.S. Treasury Department, *Comparison of Taxes . . .*, p. 9.

This brief survey of the tax burden suggests that the British are taxed more severely than Americans. The difference is not, however, so great as is commonly supposed. And tax collections here increased much more rapidly than in the United Kingdom. Thus, from 1939 to 1944, *total* tax collections in this country were up from less than 20 per cent to about

[1] I have relied especially on U.S. Treasury Division of Tax Research, *Comparison of Taxes in the United States, United Kingdom and Canada*, October, 1943; *An Analysis of the Sources of War Finance . . .*, Cmd. 6520; *Tr. Bull.*, September, 1944; *S.C.B.*, April and September, 1944.
[2] *F.R.B.*, January, 1945, p. 1.

33 per cent of national income; for the United Kingdom the proportion of private income devoted to taxation was up from 23 to 36 per cent from 1938 to 1943.[1] Total taxes were up about 300 per cent in the United States, and less than 200 per cent in the United Kingdom.

7. TAXES AND PRICES—SOME FINAL CONSIDERATIONS

Plainly, a government cannot select its taxes merely on the basis of their effects on prices. In general, however, the government should as far as possible rely on progressive taxation and particularly on taxes that fall on surpluses and windfalls and are, therefore, not considered as part of the cost of production. The government in the years 1940–1944 especially increased its taxes on corporate and personal incomes and, on the whole, the contribution of consumption taxes declined. Whereas direct taxes (exclusive of property taxes) were approximately one-fourth of all taxes in 1940, they were almost three-fourths in 1944. Consumption taxes, inclusive of employers' pay-roll taxes, declined from 45 per cent in 1940 to 20 per cent in 1944. From 1902 to 1930, consumption taxes had, however, declined from 47 to 25 per cent of all tax receipts for all governments; from 1930 to 1938, they rose to 30 per cent.[2]

We may conclude that the tax pattern changed from 1939 to 1944–1945 in a manner which would tend to have a very small direct additional pressure on prices. Of $39 billion of additional Federal taxes from fiscal 1939 to fiscal 1945 (estimated), $34 billion are accounted for by rises in income and profits taxes. Approximately $4 billion additional is provided by excise taxes and $1 billion out of employment taxes.

From 1939 to 1944, the decline of the relative importance of consumption taxes was marked indeed. Since Federal taxes account for the entire increase of taxes since 1939 (except for little more than $1 billion) and since Federal taxes now account for about four-fifths of all taxes, we may now concentrate on these.[3] The reader should consult Table 72 and Chart 61.

The rise from fiscal 1939 to fiscal 1944 and calendar 1944 was as shown in Table 72.

[1] This is not the ratio used by the U.S. Treasury publication mentioned above in assessing British tax burdens. Earlier in this chapter (p. 215) the comparison was with *federal* taxation.

[2] See S. Kuznets, "National Income and Taxable Capacity," *A.E.R.*, Proceedings, March, 1942, p. 73; 1940–1944 figures computed from R. A. Musgrave and H. L. Seligman, "The Wartime Tax Effort in the United States, the United Kingdom, and Canada," *F.R.B.*, January, 1944, pp. 20, 26.

[3] *F.R.B.*, January, 1945, p. 66, and *Budget*, 1946, p. A-2.

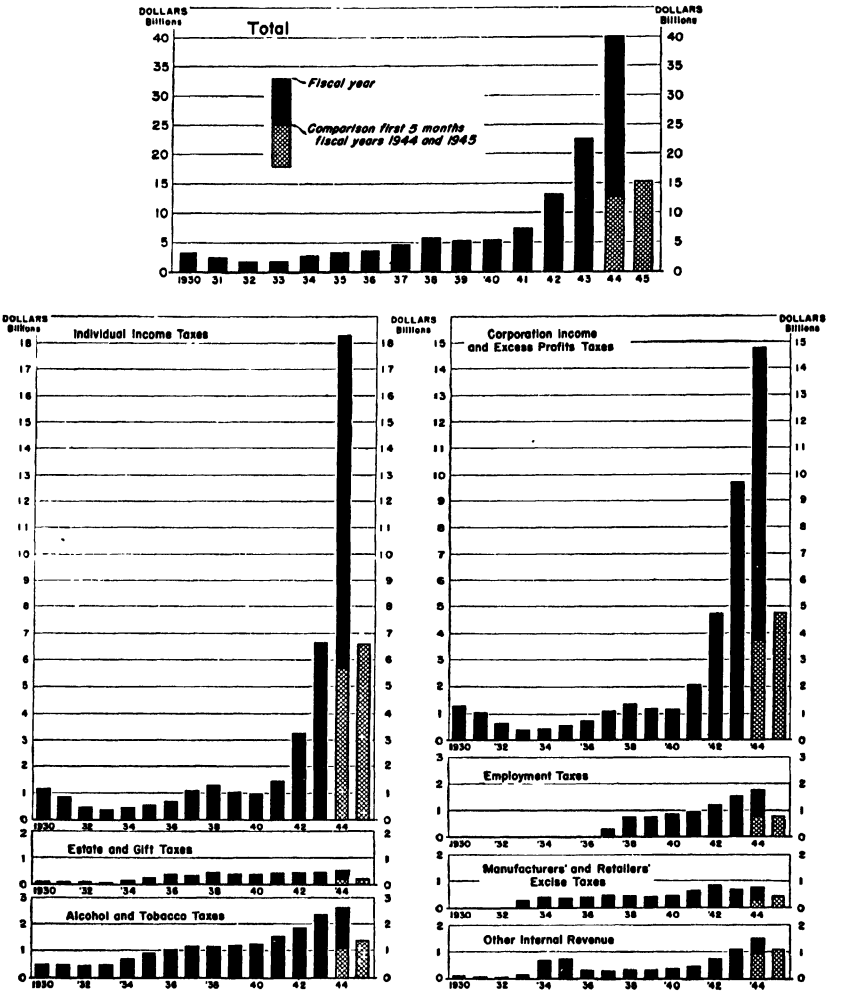

CHART 61.—Collections of internal revenue. (*Source: Treasury Bulletin, January*, 1945.)

TABLE 72.—FEDERAL INTERNAL REVENUE RECEIPTS—MULTIPLES: FISCAL 1944 AND CALENDAR 1944 TO FISCAL 1939

	Fiscal 1944	Calendar 1944
Total	7.8	8.2
Income and profits	15	16
Individual income taxes	18	17
Corporation income and excess profits	13	15
Employment	2.3	2.4
Miscellaneous excise	2.4	2.8

SOURCE: Calculated from material in *Tr. Bull.*, March, 1945. *Cf.* R. Musgrave in *F.R.B.*, January, 1944.

In wartime the effects of heavy direct taxation on output are not likely to be so serious as in peacetime. The patriotic factor plays a large part and, furthermore, in such periods the minimum required rewards for business entrepreneurship are not so great as in normal times. Risks for most firms are small, and favorable demand and prices are assured. (This is not to deny that firms heavily dependent on the government for cash may well be confronted with difficulties as a result of sudden termination of contracts, slow payments, and the like.)[1] Heavy taxation of labor and particularly of those who work longer hours or who are working for the first time should, on the other hand, be extended with caution. In this area there is danger of a loss of interest in work and of absenteeism. If possible, the maximum effort should be obtained even if the alternative is heavier taxes on the higher income groups and greater reliance on inflationary finance. It is the job of the government to weigh carefully the effects on current output of heavy taxes on low incomes, against the effect on both current and future output of additional inflationary finance. Wherever possible, heavier taxation should be introduced but the most important guide of tax policy should be the total effect on output and particularly on current output.

8. CONCLUSION

1. Federal taxes have grown in a manner which should put a minimum direct burden on costs and prices. Approximately nine-tenths of the rise in taxes was in direct taxes. (This is not to deny, as we shall see, that part of these may be passed on in higher prices.)[2]

2. On the whole, the rise of savings was a larger factor in the fight against inflation than the increase in taxes.

3. From 1940 to 1942 the unexpectedly large growth of savings was a very helpful windfall for our stabilization program; and the yield of taxes, although increased, was disappointing indeed. In 1943–1944, however, the rate of growth of savings declined; and the largest additional drainage on growing income was made by taxes.

4. Modern wars are on a scale which precludes exclusive reliance on taxes. If taxes are carried too far, output begins to slacken and prices to rise. Recourse must then be had to borrowing.

5. Purchases of securities by the public totaled far less than the amount of savings available. In large part the explanation is increased

[1] *Cf.* C. C. Abbott, *The Financial Situation of Industry after Two Years of War*, pp. 16, 22–23, 1944.

[2] See Chs. XVIII and XXIX

hoarding of cash. Sales to banks are then offset at least in part by additional hoards by the public.

6. In general, direct taxation is preferred to indirect; and indirect taxation is preferable to borrowing from the banks. Yet, considerations of motivation preclude exclusive reliance on the first; and considerations of justice and inflation limit the recourse to the second.

APPENDIX

THE STAGES OF THE TAX PROGRAM

In the early period of a war program, the rise of taxation is necessarily slow. Before the serious expansion of our tax program was proposed, much attention was paid to unemployment and to the need of achieving a high level of employment. In his message of April, 1941, the President suggested a new tax program of $3 to $4 billion, but he was inclined to emphasize as the objective a reduction of demand for nonessentials. In his budget speech of January, 1942, the President took a much stronger position: he proposed taxes on consumption and emphasized the need of progressive taxation.

"Our present war program was preceded by a defense effort which began as we emerged from the long depression. During the past 18 months we laid the foundation for a huge armament program. At the same time industry provided ample consumers' goods for a rapidly growing number of workers. Hundreds of thousands of new homes were constructed; the production of consumers' durable goods broke all records. The industrial plant and equipment of the country were overhauled and expanded.

"Adjustment to a war program can now be made with greater speed and less hardship. The country is better stocked with durable goods. Our factories are better equipped to carry the new production load. The larger national income facilitates financing the war effort.

"There are still unused resources for agricultural and industrial production. These must be drawn into the national effort. Shortages, however, have developed in skilled labor, raw materials, machines, and shipping. Under the expanding war program, more and more productive capacity must be shifted from peacetime to wartime work.

"Last year fiscal policy was used to shift the economy into high gear. Today it is an instrument for transforming our peace economy into a war economy. This transformation must be completed with minimum friction and maximum speed. The fiscal measures which I outline in this message are essential elements in the Nation's war program.

. . . . . .

"Total receipts from existing tax legislation will triple under the defense and war programs. They are expected to increase from 6 billion dollars in

the fiscal year 1940 to 18 billion dollars in the fiscal year 1943. This increase is due partly to the expansion of economic activities and partly to tax legislation enacted during the last two years. As we approach full use of our resources, further increases in revenue next year must come predominantly from new tax measures rather than from a greater tempo of economic activity. Taxes on incomes, estates, and corporate profits are showing the greatest increase.

. . . . . .

"In view of the tremendous deficits, I reemphasize my request of last year that war expenditures be financed as far as possible by taxation. When so many Americans are contributing all their energies and even their lives to the Nation's great task, I am confident that all Americans will be proud to contribute their utmost in taxes. Until this job is done, until this war is won, we will not talk of burdens.

. . . . . .

"There are those who suggest that the policy of progressive taxation should be abandoned for the duration of the war because these taxes do not curtail consumers' demand. The emergency does require measures of a restrictive nature which impose sacrifices on all of us. But such sacrifices are themselves the most compelling argument for making progressive taxes more effective. The anti-inflationary aspect of taxation should supplement, not supplant, its revenue and equity aspects.

. . . . . .

"With expenditures and deficits multiplied, the threat of inflation will apparently be much greater. There is, however, a significant difference between conditions as they were in the fiscal year 1941 and those prevailing under a full war program. Last year, defense expenditures so stimulated private capital outlays that intensified use of private funds and private credit added to the inflationary pressure created by public spending.

"Under a full war program, however, most of the increase in expenditures will replace private capital outlays rather than add to them. . . ." [1]

In the budget message of January, 1943,[2] too, the President stressed the need of a just tax program, one that would not interfere with production, would bring the necessary revenues, and would contribute toward stabilization. He suggested the need of a strong tax program which might well raise tax revenues equal to one-half of our total expenditures. We have already discussed the failure of Congress to support the President's program for 1943–1944.

In his budget message for 1945, the President again emphasized the need of additional revenue:

"The debt has risen at a rapid rate, and the prospect is for continued rise with little or no diminution in rate during months to come. Let us face

[1] *Budget*, 1943, pp. v–vi, xi–xiii, xvi.

[2] *Budget . . . June* 30, 1944, pp. xx–xxiii.

the fact—the failure thus far to enact an adequate fiscal program has aggravated the difficulties of maintaining economic stabilization. Increases in income should be limited to reasonable rewards for additional effort. . . . The time to impose high taxes is now when incomes are high and goods are scarce. In this situation, if we do not pay in taxes all that we can, we shall be treating unfairly those who must face the accumulated bill after the war." [1]

In his budget message of January, 1945, the President said little concerning taxes. He issued a warning, however, against premature tax reduction. Tax increases for 1945 apparently were excluded from consideration.

"Wartime taxes must be maintained as long as large-scale war expenditures are necessary. There is no justification for tax reductions as long as we are engaged in a major war. When a favorable development of the war allows a major decline in war expenditures, minor tax adjustments will become possible and desirable." [2]

The years from 1940 to 1945 saw a gradual change in our tax policies. At first there was the fear that the diversion of purchasing power through taxation might reduce the favorable effects on employment associated with an expanding war program. It soon developed, however, that the deficit was growing rapidly and that direct controls were not bringing about an adequate reduction of demand on commodity markets. By the early part of 1942, the seriousness of the military situation and the rapid expansion of our war program impressed upon the authorities both the need of greater revenues through taxation and the use of anti-inflationary objectives of taxation in a period when national income was rising rapidly and less and less goods might become available for the civilian economy. In 1942 the stabilization repercussions of the tax program were not yet in the forefront. This is evident from the President's statements quoted above. By 1943 the need for more taxes to prevent inflation was receiving more attention than any other aspect of the tax program. In turning down the Administration's tax program, however, the Ways and Means Committee took special pains to discount the contributions that might be made to the fight against inflation by increased taxation. It emphasized the greater effectiveness of alternative contributions.[3]

[1] *Budget*, 1945, p. xxii.
[2] *Budget*, 1946, p. xviii.
[3] House Report 871 on the *Revenue Bill of* 1943, p. 2.

Chapter XVI

Government Borrowing and Inflation

1. INTRODUCTION [1]

This chapter is concerned primarily with the following problems:

1. The manner in which the government kept the rate of interest down and the significance of this policy for price history.

2. The effects of future price movements on yields and prices of government bonds.

3. An examination of the relative importance of noninflationary and inflationary sources of funds for the bond markets.

While the war lasted, the Federal government had to continue to borrow large sums of money. For the fiscal year 1944 the increase in debt was around $60 billion; in 1944–1945 the rise was almost $60 billion additional; and total debt on July 1, 1944, was approximately $200 billion. Early in 1945 the President estimated the debt by June 30, 1946, at $290 billion.[2] But with the war's end earlier than anticipated, the debt should not rise above $270 billion by the end of the fiscal year 1946.

Our problem in this chapter is to analyze the sources from which the large sums of money were obtained; and to consider the repercussions of borrowing $40–60 billion annually for 3 years (or a rise of public debt of $225 billion during this war) on the rate of interest and on prices. Once amounts obtained through taxation cannot be increased any further, the government must rely on borrowing—both on noninflationary and inflationary borrowing. Savings are limited and, therefore, beyond a certain point borrowing will have inflationary effects.

[1] Unless otherwise indicated, material is taken or calculated from *Tr. Bull.*, September, 1944.

[2] *Budget*, 1946, p. xxx.

It will be recalled from earlier chapters that inflationary purchases were substantial and that the noninflationary purchases were not nearly so large as total savings available.

From June, 1940, to June, 1945, the interest-bearing debt of the United States Government rose from $42 *to* $256 *billion, while the computed rate of interest declined from* 2.5 *to* 1.9 *per cent.*[1] This is indeed a remarkable performance. Its significance will be assessed presently. *We should and shall distinguish, however, any improvement in rates associated with* (1) *greater*

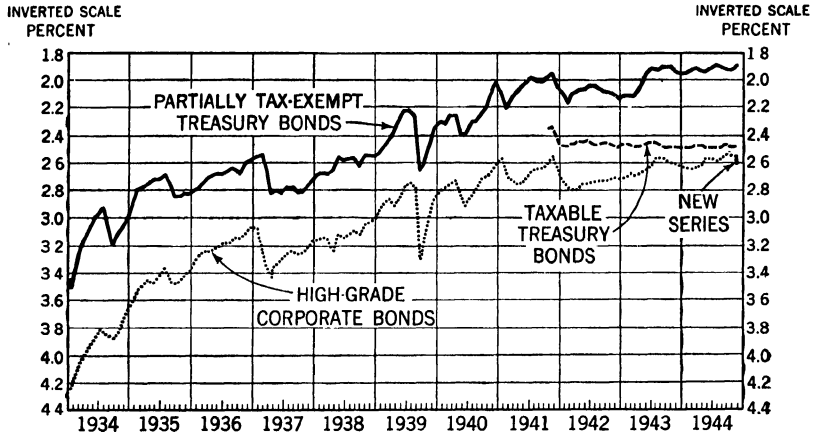

CHART 62.—Average yields of long-term Treasury and corporate bonds. (*Source: Treasury Bulletin, January,* 1945.)

recourse to nonmarketable or short-term issues, from that associated with (2) *an over-all increase of demand in private* (*inclusive of banking*) *markets—that is, relative to supplies of government issues of identical or almost identical composition over the years.*[2] Chart 62 reflects an improvement in rates on Treasury issues. It is rather interesting, however, that, since 1942, the prices of high-grade corporate issues improved more than those of Treasury issues.

2. THE RATE OF INTEREST AND PRICES

The lower the interest rate on government issues, the better, other things remaining equal. Higher rates increase the cost of the war, and the increase in itself is accompanied by a depreciation of the outstanding issues, with adverse effects on the financial structure. In war-

[1] Figures from *F.R.B.*, March, 1944, p. 264, and *Tr. Bull.*, August, 1945, p. 27.

[2] In the calendar year 1944, the public debt rose by $59 billion and the rate of interest tended slightly downward. *F.R.B.*, January, 1945, pp. 8, 57; *Tr. Bull.*, January, 1945, p. 27.

time, moreover, a rise of rates on Treasury issues is not required in order to attract funds from other markets; direct attacks are available which will cut down nonessential investment. There is still a relation between interest rates and savings, but the relationship is not so important as in normal times.

How was it possible for the government to increase its public debt from 1940 *to* 1945 *by five times and yet to sell government securities at higher prices or, what is the same thing, to reduce the rate of interest? A relevant consideration is the much greater reliance on short-term issues in the present war than in the previous one.* Prof. Whittlesey in a study for the National Bureau of Economic Research (NBER) observed that in the first 10 months of 1942, the United States government had issued only 15 per cent of its securities with a maturity of more than 10 years, whereas in the first 10 months of 1918, 69 per cent had a maturity of more than 10 years.[1] In the two years 1942 and 1943 holdings of securities with a maturity of over 10 years were relatively stable; with a maturity of 5 years or less, the rise was in excess of 100 per cent; and for bonds callable in 5 to 10 years, the increase was roughly from $6 to $16 billion.[2]

In this connection Table 73 is of interest.

TABLE 73.—COMPOSITION OF THE INTEREST-BEARING DEBT

	Percentage of interest-bearing public debt, end of fiscal years	
	1940	1944
1. Marketable bonds	63.1	39.8
2. Nonmarketable bonds	7.5	17.7
3. Marketable notes	15.1	8.7
4. Nonmarketable notes	0	4.8
5. Certificates of indebtedness	0	14.4
6. Bills	3.1	7.4
7. Special issues	11.3	7.2

SOURCE: *Tr. Bull.*, September, 1944, p. 22.

It is clear from the increased significance of certificates of indebtedness and bills that short-term securities are much more important than they were in 1940: the rise is from 3.1 to 21.8 per cent of all

[1] C. R. Whittlesey, *The Banking System and War Finance*, p. 33, NBER, February, 1943.
[2] *F.R.B.*, December, 1943, p. 1143.

issues. Short-term issues yield a low rate of interest (see Chart 63 for some indication of varying rates paid by the Treasury). In part, therefore, the computed rate reflects the expansion of money and the resulting increased demand for short-term securities.

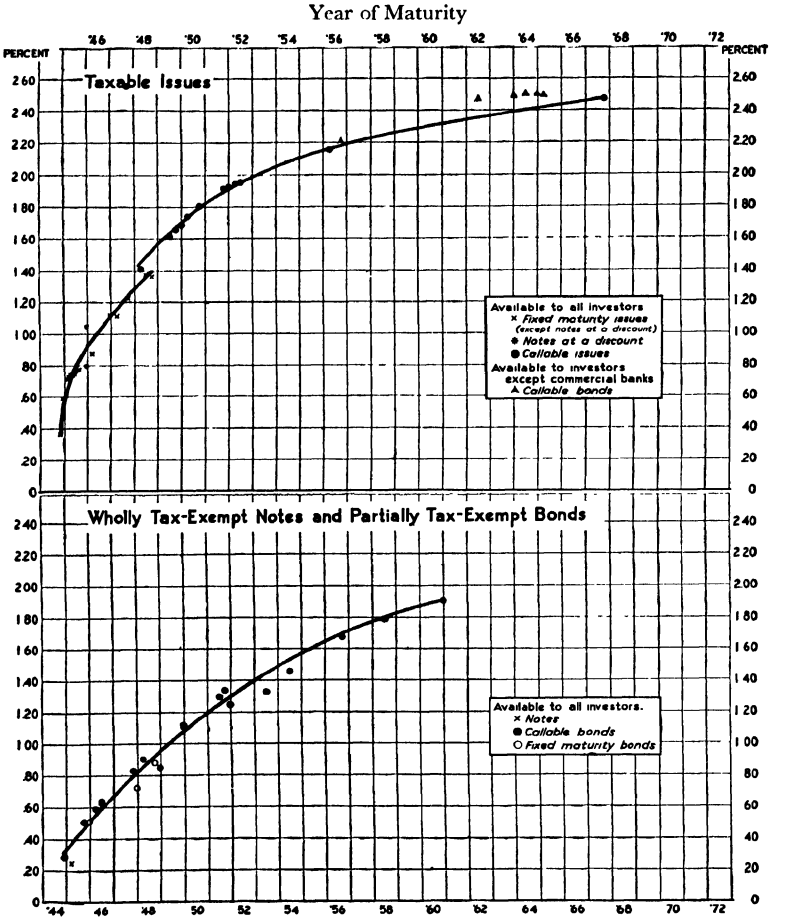

CHART 63.—Yields of Treasury securities, July 31, 1944. (*Source: Treasury Bulletin, September,* 1944.)

Another conclusion brought out by Table 73 is that the favorable rate of interest may also be explained by the increased amounts outstanding of nonmarketable and special issues. In the five years ending June 30, 1945, the debt rose by $214 billion: the rise for nonmarketable issues was $53 billion, and for special issues $18 billion. The latter are

sold to government agencies and to trust funds. It is not clear, however, that interest rates are depressed as the relative proportion of nonmarketable bonds rises. In fact, savings bonds in 1944 accounted for about three-fourths of these issues and the nonmarketability feature of these was compensated for by a somewhat higher rate. The availability of increased public demands for securities did, however, tend to keep rates down.

(Chart 64 reveals the growing market for special issues and nonmarketable issues and also the increased significance of short-term issues—bills, certificates of indebtedness, and notes.)

The greater reliance on short-term securities reflects a considerable change in the organization and needs of the money market. Both in this country and in Great Britain it was observed that the money market had been able, during the war, to absorb much larger supplies of short-term securities than previously. The increased popularity of this type of security arises in part from increased cash resources, in part from a greater independence of industry from the banks, and, finally, from the uncertainty of future economic conditions which induce financial institutions to purchase large issues of short-term securities in order to protect their depositors. The shorter the period of maturity, the less likely that there will be a significant depreciation, and the more quickly can losses resulting from depreciation be recouped.

Low rates, then, are associated with the large demands for early maturities which in turn are related to monetary expansion. Despite the government's catering to this demand, the span between short-term and long-term rates remains large. It is associated, furthermore, with the relative stability of prices; for if prices had risen greatly, it would have been more difficult, if not impossible, to stabilize rates. A rise of prices would have had this effect both because rising prices encourage sales of government securities (a factor to be discussed later) and the rise of prices would require the absorption of additional money to carry a larger volume of dollar transactions. Less would be available to buy securities and hence their prices would tend to fall.[1]

Our technique in the present war was to assure an increase of monetary supplies on security markets at least adequate to absorb increased supplies of securities. It was observed (1) that the Federal Reserve banks provided the money market with adequate reserves to assure the

[1] *Cf.* the excellent discussion of similar problems in the British economy by E. V. Morgan, "The Future of Interest Rates," *E.J.*, Vol. LIV, 1944, pp. 340–351.

necessary expansion of deposits; (2) that reserve requirements were adjusted to provide increased supplies of cash; and (3) that the supply of inactive money was unusually large, even with the public drawing

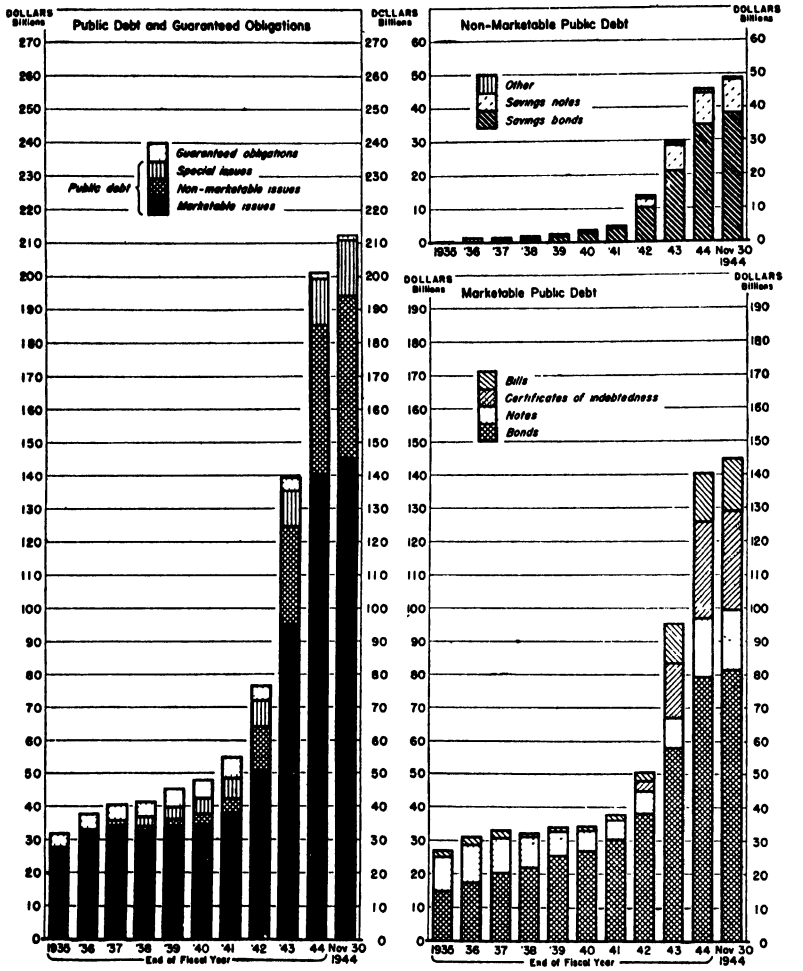

CHART 64.—Interest-bearing public debt and guaranteed obligations of the United States. (*Source: Treasury Bulletin, January,* 1945.)

on these idle balances to purchase government securities. *Not only was demand stimulated, but alternative uses of banking funds were discouraged.* Our priority system and our restrictions in general on nonessential activities precluded the free use of funds by nonessential industries.

The use of cash to purchase other assets was also discouraged by

the failure of the stock market and real-estate values to rise as much as might have been anticipated. In 1942, for example, when total corporate earnings after taxes were 74 per cent higher than in 1937, stock prices were 41 per cent lower.[1] In 1943, corporate earnings after taxes were more than 100 per cent in excess of 1939; but stock prices were lower.[2] Finally, the government provided a large part of the necessary financing of essential industries through the issue of its own

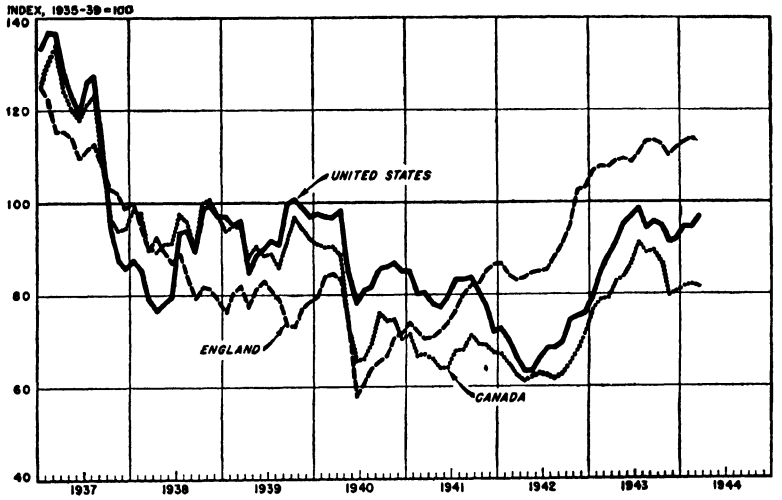

CHART 65.—Common stock prices in the United States, England, and Canada. (*Source: Survey of Current Business, May,* 1944.)

securities and to that extent reduced the competition of private enterprise for government money. Prof. Abbott estimated, for example, that of $56 billion of working capital used to finance industrial production in the middle of 1943, the government was providing $26 billion.[3]

In a word, then, we have stimulated demand for government securities *pari passu* with new issues. *The banks purchased government securities to a much greater extent than in World War I.*[4] This banking demand held

[1] *S.C.B.*, January, 1943, p. 23.

[2] *Cf.* Chart 65. It will be noted that for all three countries security prices were lower in early 1944 than in 1939. By the end of 1944, however, security prices in this country were 9 to 10 per cent above the prices at the end of 1943.

[3] C. C. Abbott, *The Financial Situation of Industry after Two Years of War,* 1943, p. 16.

[4] Dr. Whittlesey observes that from the middle of 1916 to the middle of 1919 the holdings of public securities by commercial banks increased by only $4.4 billion. *The Banking System . . .*, p. 5.

up the prices of government securities. Furthermore, insofar as there were inducements offered subscribers to hold securities until maturity and insofar as the securities were short-run, the danger of depreciation was reduced. That prices of commodities were under control and supplies were rationed also contributed greatly to the demand for government securities. Alternative uses for cash were either unprofitable or unavailable insofar as prices were kept down and supplies restricted.

A word might be inserted here concerning the banking demand for securities. *It will be observed from Table* 74 *that the banks absorbed about* 40 *per cent of the increase in security issues; and that at the end of* 1943 *they held over* 40 *per cent of the outstanding issues.*[1] (In 1944 the banks also absorbed 40 per cent of new issues and in December, 1944, they held 42 per cent of outstanding issues.[2])

TABLE 74.—OWNERSHIP OF INTEREST-BEARING SECURITIES

(In billions of dollars)

	Total	Banks		Nonbank investors
		Commercial	Federal Reserve	
Outstanding, June 30, 1940.....	47.9	16.3	2.5	29.1
Outstanding, Dec. 31, 1943.....	168.7	60.0	11.5	97.2
Rise.....	120.8	43.7	9.0	68.1

SOURCE: *Tr. Bull.*, September, 1944, p. 46.

Banks were also disposed to hold short-term securities. *They thus protected their depositors against future rises in the rate of interest.* (For if the rate of interest rises, government securities, and hence assets held against deposits, depreciate.) Banks held (June 30, 1944) $4.9 billion of Treasury bills (all outstanding), other than issues to public agencies and the like. Their investments in Treasury certificates accounted for $15 billion, or about one-half the total outstanding, and 60 per cent of issues privately held. (Treasury notes are issued for somewhat longer periods than Treasury bills and certificates of indebtedness; but they

[1] The F.R. Board noted, however, that banks absorbed a declining proportion of new issues: 49 per cent in 1942, 42 per cent in 1943, and 40 per cent in 1944. Nevertheless, they held slightly more than two-fifths of outstanding issues of $230 billion at the end of 1944. *F.R.B.*, January, 1945, pp. 8–9.

[2] *F.R.B.*, March, 1945, p. 258.

are short-term.) The commercial banks held $11.7 billion, or about two-thirds of the issues outstanding. Their investments in Treasury bonds were $30.7 billion, or less than 40 per cent outstanding. Moreover, whereas one-half of the outstanding issues of Treasury bonds were dated 1952–1954 to 1969–1972, the commercial banks held but one-fifth of their bonds in these relatively long-term issues. In short, the banks preferred short-term issues.

In summary, then, rates have declined, despite an unprecedented rate of issue, through recourse to stimulation of demand (*e.g.*, provision of new markets), through adjustment of amounts and types of security to the demands of each market (*e.g.*, banks, private investors), and through discouragement of alternative uses of surplus funds.

3. THE BOND MARKET AND THE RISE OF PRICES

If commodity prices should rise greatly the demand for bonds may suffer substantially. Although there is not so close a relationship between price movements and the rate of interest as Irving Fisher at one time contended, the degree of relationship is not to be underestimated. Once prices begin to rise rapidly, many will realize that in purchasing a government security they will incur a loss in the goods value of the dollars that they invest. Many investors will then prefer land, real estate, or commodities to public securities.

The problem may be put as follows: (Figures are primarily used for illustrative purposes, although they may actually represent a fair approximation to the truth.) Let us assume that in 1944 at the peak of its wartime borrowing the government borrowed at the rate of $40 billion per year from nonbanking lenders. We may assume, in addition, that $20 billion were borrowed from the banks and $40 billion or more were obtained through taxes. (These are all assumed rates of receipts for late in 1944.) We may further assume that prices in 1945–1946 will rise approximately 5 per cent per year. In five years of war, the average annual rise of wholesale prices was about 7 per cent, and of the cost of living approximately 5 per cent. But what would have resulted, we may ask, if prices had risen 25 per cent per year? With a budget in 1944–1945 of $100 billion, the Treasury would then have needed (say) $20 billion additional to cover its necessary expenditures. Although $10 billion of these $20 billion might have been obtainable from additional noninflationary loans and from taxes associated with the accompanying increase of prices and income, the government would have had to

borrow annually $30 billion from the banks instead of the previous $20 billion. This would certainly further increase the pressure on prices, with the result of further withdrawal of investors from the bond market.

For the validity of our conclusion one important reservation is required here. Assume that the public sells bonds in order to spend. In that case, the one who at second or third remove obtains the cash disbursed by the initial seller of securities may well buy non-Federal securities or another asset which will enable the holder of that asset in turn to buy Federal securities. It is another matter, however, if the seller of Federal securities disposes of them with the net effect that the demand for *goods and services* rises. In that case, the effect pricewise would be upward and serious indeed.[1]

How long can the government continue to bring about an expansion of monetary supplies (thereby supporting the bond market) without at the same time inducing a serious rise of commodity prices? The money that is manufactured is used in the first instance to buy government bonds. Later it is transferred to other markets or is added to private hoards. *As long as this artificial expansion of demand for government securities has a greater effect in increasing prices of government securities than the continued rise of commodity prices has in reducing demand,*[2] *the government will succeed, ceteris paribus, in preventing a rise in the rate of interest.* It should be observed, however, that as the government's cost of waging war increases with higher prices, more and more money must be manufactured in order to obtain a given supply of war goods and services. The resulting pressure on commodity prices, therefore, increases and will be reduced only insofar as monetary hoards grow. That in the face of reduced flows of goods (both producers' and consumers') and low rates of interest, the volume of money and deposits *held* rose greatly (*i.e.*, velocity tended downward) accounts for the modest rise of prices.

The question then arises as to whether the government will gain more through a reduction in the rate of interest than it will lose through the resulting increase of prices. The gain through a reduction in financing costs is to be put in terms of the total volume of debt and the length of the period during which the debt has to be paid at rates determined currently. We assume that at the end of the war we shall have a public debt of around $300 billion on which the computed rate of interest

[1] *Cf.* Morgan, *op. cit.*, pp. 347–348.

[2] Through a flight from fixed-interest securities to common stocks, real estate, and commodities.

is 2 per cent.[1] (The computed rate for the calendar year 1944 was 1.92 per cent.[2]

What would the rate of interest on the public debt have been if no recourse were had to inflationary sales of bonds? First, let us consider the amount of additional noninflationary sales of bonds required. With no inflationary sales of bonds (*e.g.*, sales to banks), commodity prices would have been lower. Let us assume that prices would be 10 per cent lower, the government, therefore, reducing its war expenditures by about $10 billion annually. Since inflationary borrowings may be roughly put at $20 billion annually, the net amount of additional noninflationary sales required would be $10 billion: from inflationary borrowings of $20 billion, deduct $10 billion of economies resulting from reduced prices. Second, at what rate of interest could the government have ferreted out $10 billion of additional savings? Possibly a rise in the rate of interest of 2 per cent to nonbanking lenders might have increased savings by $10 billion. (An increase of purchases out of hoards would still be inflationary.) The issue is then whether a rise in the rate to nonbanking lenders of 2 per cent or an increase from about 50 to 100 per cent in the rate (depending on type of issue, etc.) would account for additional savings of less than 30 per cent of total savings at the war's peak.[3] If these additional savings were forthcoming, the government might have reduced inflation to the extent indicated. *Apparently the Treasury was not very optimistic concerning the elasticity of supplies of savings and thus preferred the gains through lower interest rates and the losses resulting from higher prices.*

We might assume that at an average borrowing rate of 4 per cent, the government would not have had to have recourse to the banks. The public would have put $50 billion annually at the disposal of the government instead of $40 billion;[4] and with an average *relative* reduction of prices of 10 per cent, the required amount of borrowing would have been $10 billion less. (It is necessary, however, to allow

[1] Actually, at the war's end, in the summer of 1945, the debt was not much more than $260 billion.

[2] *Tr. Bull.*, January, 1945, p. 27.

[3] The sum involved in 1944 is 27 per cent of individual savings and an estimated 20 per cent of gross savings. It should be noted that in 1944 the government siphoned off only $15 billion out of $39 billion of individual savings. A higher rate of interest might attract cash from the growing volume of cash. This, however, is not what is required; for the inflationary pressures come from active money. The public must cut its consumption from $95 to $85 billion (say). How much of a rise in the rate of interest is required?

[4] The additional $10 billion to be at the expense of consumption, not idle balances.

for the adverse effects of relative stability of prices on money income and, therefore, on taxes.) Then the government might have saved $30 billion on its $300 billion of war expenditures and the interest on this sum. Against this, however, the Treasury would be encumbered with an additional annual debt charge of close to $6 billion. *Even on the relatively favorable assumptions made here as to the effectiveness of a high interest policy in eliciting more savings and keeping prices down, the Treasury's actual rate policy is preferable on fiscal grounds to the alternative one of higher rates considered here.*

Unless the gains of a reduction in the rate of interest are substantial, the time may come when it would be better to allow the rate of interest to rise. Much depends, of course, upon the elasticity of supply of loanable funds to the government. Where the public lends cash funds that otherwise would not have been used, it does not contribute toward checking inflation. Where, however, through a rise in the rate of interest the government can induce the public to increase its savings by large amounts, it may be appropriate to increase the rate of interest. *It is only because a very large rise in the rate of interest will be required in order to increase savings by* $10 *billion annually and because a depreciation of outstanding bonds may reduce demand for bonds in the future and thus bring new increases in rates, that the government's current policy may be justified.* Against lower prices and savings in war, the government will have to weigh increased financing costs and inflationary pressures after the war.

The rise in the rate of interest should be applied only in areas where it will be effective and, in this manner, the increased costs can be kept down. *The war taught the government to isolate markets.* It pays relatively high prices for advances where the increased rate is required (*e.g.*, to small investors) and low prices to others (*e.g.*, banks). In this manner the Treasury takes into account also the cost to the banking system of providing additional cash.

The gist of this argument is that the government should compare the savings in interest costs resulting from its low-interest-rate policy as against the cost to the economy and the Treasury of the ensuing rise of costs and prices.

Current policy must, above all, be protected by price control if the low-interest-rate policy is to be successful. A significant and rapid rise in prices would result either in a desertion of government bond markets (and, therefore, more monetary pressure on commodity markets) and in the government's offer of a higher rate of interest or, finally, in the purchase of government bonds through compulsion or on the basis of other non-

economic considerations. Finally, even if, despite the manufacture of more money, controls and fiscal policy keep prices down, the monetary expansion is a threat to stability in the postwar period.[1]

4. NOTES ON SOME STATISTICAL ASPECTS OF THE PROBLEM: SAVINGS AND INFLATIONARY SOURCES

I present here some admittedly dull but useful statistical aspects of the problem. It is important to know where the resources that the government requires come from and to what extent they are inflationary or noninflationary. It should be observed that the following discussion is based on certain assumptions which to some extent may possibly be unjustified. (In particular, purchases of government securities by nonbanking lenders: although these purchases may fail to induce an expansion of currency and deposits, they are not necessarily noninflationary. For this discussion it is assumed, however, that these purchases are always noninflationary.) This assumption should not by any means invalidate our conclusions.

A. SOURCES OF GOVERNMENT FINANCE.[2] Tables 75 and 76 list the sources of war finance, in absolute amounts and percentages.

TABLE 75.- SOURCES OF WAR FINANCE, CALENDAR YEARS
(In billions of dollars)

	1941	1942	1943	1944 *
Federal government requirements	20.5	58.2	93.5	97
Receipts from taxes, etc.	10.8	19.3	35.8	44
Public security sales to individuals, business units, and state and local governments and noninflationary sales to banks, etc.	6.8	25.1	33.6	33
Inflationary sales of government securities	2.9	13.8	24.1	22

SOURCE: Department of Commerce; 1943 and 1944 = my calculations—materials from *S.C.B.*, *F.R.B.*, and *Tr. Bull.*

* 1944 is estimated. *Cf. F.R.B.*, January, 1945, pp. 8–9.

[1] *Cf.* H. S. Ellis in *Economic Reconstruction* (edited by Seymour E. Harris), and Chs. XXIV and XXIX of the present volume.

[2] The material for this section comes from the *F.R.B.*, May, 1943, pp. 369–377; August, 1943, p. 714; U.S. Treasury Department, *Annual Report of the Secretary of the Treasury on State of Finances, for* 1942, p. 39; Warburton, *op. cit.*, *S.C.B.*, April, 1943, pp. 17–22; M. Gilbert and G. Jaszi, "National Income and National Product," *S.C.B.*, March, 1943, p. 19; E. T. Weiler, "Wartime Savings and Postwar Inflation," *S.C.B.*, July, 1943, pp. 13–18; S. M. Livingston and E. T. Weiler, "Can Business Finance the Transition?" *S.C.B.*, February, 1944, pp. 9–11; *S.C.B.*, April, 1944, pp. 10–17; *Tr. Bull.*, September, 1944; January, 1945, pp. 45–46.

TABLE 76.—PERCENTAGE OF SOURCES OF WAR FINANCE, CALENDAR YEARS

	1941	1942	1943	1944
Taxes, etc.	53	33	38	45
Noninflationary sales, public securities	33	43	36	34
Inflationary sales, public securities	14	24	26	23

SOURCE: *S.C.B.*, *F.R.B.*, and *Tr. Bull.*

Despite the large gains in taxation, the proportion of resources contributed from inflationary sources continued to rise through 1943. *In* 1944 *there was a decline.*

B. THE RELATION OF SAVINGS TO SALES OF TREASURY SECURITIES. The government necessarily relies largely on savings to absorb its sales of Treasury securities. Net and gross savings of individuals are shown in Table 77. These

TABLE 77.— PRIVATE NET AND GROSS SAVINGS, 1940–1944

(In billions of dollars)

Year	Net savings	Gross savings
1940	7.3	17.5
1941	14.2	27.2
1942	28.0	43.9
1943	33.0	52.7 †
1944 *	39.0	55.0

SOURCE: *S C.B.*, and *First Report by Director of War Mobilization and Reconversion*, Jan. 1, 1945.

* Estimated.

† The gross savings estimate for 1943 is based on previous ratios of net and gross savings. It does not agree with the Government estimate in Table 78. The latter includes government savings.

private savings are not all available to the government because in part they are used to satisfy the requirements of private enterprise. In 1942, however, the gross private savings, inclusive of funds made available through social security and state and local government surpluses, equaled the $39 billion required by the government from the security markets.[1]

TABLE 78.—SOURCES OF GROSS SAVINGS, AVAILABLE TO FEDERAL GOVERNMENT

	Billion Dollars
Net savings of individuals	33.0
Remainder, private (largely business savings, depreciation and depletion charges, tax accounts)	19.7
Other government and social-insurance savings	5.0
Total	57.7
Deduct private gross capital formation	2.0
Balance	55.7

SOURCE: *S.C.B.*, April, 1944, p. 11.

In 1943, $55.7 billion of gross savings were available to the Federal government. They came from the sources shown in Table 78.

[1] *S.C.B.*, March, 1943, p. 19.

This equality of gross savings available to the Federal government and total gross savings absorbed by the Federal government in 1942 and 1943 is, of course, not the whole picture, but is to be considered in the light of other figures. According to another study by the Department of Commerce, the net purchases of Federal government securities in 1942 by individuals and business were but $19.8 billion; besides this, state and local governments and bank purchases, not accounting for a rise of deposits, yielded an additional $5.2 billion. These $25 billion represented purchases out of savings. The remainder (approximately $14 billion) represented inflationary purchases and was included as coming out of gross savings only because the expansion of money yields simultaneously additional income and savings. But this induced type of saving is to be distinguished from voluntary savings not associated with concomitant monetary expansion.

In 1943, it will be recalled, noninflationary sales were but $33.6 billion, as compared with gross savings available to the government of $55.7 billion. *Here, again, we must conclude that gross savings included amounts available out of increased monetary resources.* Thus, in that year the banks purchased $24 billion of these securities. Monetary supplies expanded; and the additional money became the "savings" of the holders of the additional cash. *In short, the equality of gross savings available to the Treasury, and the sales of Treasury issues, do not necessarily mean that inflation has been averted.*

In general, the public's tendency to hoard cash makes the wartime problem of the Treasury more difficult. It means that more sales must be made to the banks, with corresponding expansion of deposits. This tendency of the public to hoard reduces the immediate inflationary pressures; but monetary inflation with its threat for the future grows.[1] In no small part the rise of deposits and cash can be explained by the rise in business activity, but not wholly. Even if deposits and cash rise as rapidly as income, the propensity to hoard increases, for a rise of output by x per cent is not likely to require an equal percentage rise of cash. This tendency to hoard cash was discussed earlier in relation to money in circulation, when it was made clear that hoards of deposits were quite large.

From 1941 to 1943 there were large increases in deposits and cash and in gross savings available to business. Table 79 gives some indication of the rise of deposits, currency, savings, and purchases of Treasury issues by various groups. A more recent survey reveals that all liquid assets of business and individuals rose from $66 billion to $194 billion

[1] It will be recalled that out of $39 billion of individual savings in 1944, only $16 billion were made available to the Treasury for the purchase of securities.

in the 5 years ending December 31, 1944. Business accounted for $48 billion of the total rise of $128 billion in liquid assets and invested two-thirds in Treasury issues. Individuals accounted for $79 billion of the increase but invested less than one-half in Treasury issues.[1]

TABLE 79.—RISE IN CASH, DEPOSITS, BUSINESS SAVINGS, AND CORPORATE INVESTMENT IN FEDERAL GOVERNMENT SECURITIES, END 1940 TO END 1943

	Billion Dollars
Deposits adjusted plus currency, outside of banks	52.1
Demand deposits adjusted plus currency, outside of banks	37.4
Currency, outside of banks	11.5
Business gross savings (includes unincorporated as well as incorporated business)	48.6
Purchases of Treasury issues by insurance companies	8.2
Purchases of Treasury issues by other nonbanking corporations (exclusive of banks and insurance companies)	17.7

SOURCE: Based on materials in *S.C.B.*, *F.R.B.*, and *Tr. Bull.* Note especially *F.R.B.*, August, 1943, pp. 713–716; Livingston and Weiler, *op. cit.*, p. 9. See also *S.C.B.*, July, 1943, p. 15.

Table 80 gives a concise picture of wartime savings. It will be noted that in the years 1942 to 1944, noninflationary purchases roughly equaled net savings of individuals and two-thirds of gross private savings.[2]

5. CONCLUSION

1. Despite a wartime increase in the public debt of five times by 1945, the computed rate of interest declined.

2. This is explained in part by the changing composition of issues outstanding and in particular by the increased importance of short-term securities and the growing market for special issues and nonmarketable issues.

3. Another relevant factor is the large rise of demand associated with monetary expansion and increased incomes and the unavailability of alternative investments.

[1] *FRB*, June, 1945, p. 533.

[2] Noninflationary purchases of government securities are closely similar to estimates found in Table 76 for 1941 and 1942. (Table 76 gives percentages, however.) The method used by the Department of Commerce for estimating the noninflationary purchases for 1941 and 1942 is more elaborate than that used here for 1943 and 1944. I have used nonbanking purchases of government securities as roughly indicating noninflationary purchases. *Cf.* figures in *Treasury Bulletin*, January, 1945, p. 46. Purchases by the public out of money that would otherwise have been idle are, in fact, inflationary; and purchases by banks at the expense of other assets are, in fact, noninflationary. These figures differ slightly from those published in the *Bulletin* in 1943 (see Table 75). They differ from those given for 1941 and 1942 because I used a relatively crude method. The Department of Commerce may more recently, however, have given noninflationary sales more accurately than my estimate does; but their estimates in question give an indication of being more precise than they actually are.

4. Despite large rises of taxes, the inflationary sales of Treasury issues accounted for an increasing share of total receipts through 1943. A decline was noted for 1944.

5. Treasury policy of low rates and, therefore, increased monetary supplies and inflationary pressures was considered. The policy can be justified on the ground that savings do not respond greatly to a rise

TABLE 80.—ESTIMATES FOR WARTIME SAVINGS

(In billions of dollars)

Year	Noninflationary purchases of government securities	Net savings of individuals	Gross private savings
1941	9.2	14.2	27.2
1942	24.2	28.0	43.9
1943 *	33.0	33.0	52.7
1944 *	33.0	39.0	55.0

SOURCE: Department of Commerce. * My estimates for 1943 and 1944.

in the interest rate; therefore, the gains from lower commodity prices to the Treasury would be less than the increased costs of financing the debt. A rise of the rate of interest that would yield $10 billion more of savings annually and economies of $10 billion annually on government disbursements would also be too costly in additional financing charges. We should put against these costs the gains resulting to the nation (other than the Treasury) of a moderation of the rise in prices. The government seems to favor low rates of interest and control of use of excess monetary supplies (*e.g.*, through price control).

6. The equivalence of total government sales of issues and gross savings available to the Treasury suggests that the gross savings include savings associated with purchases of securities by banks out of created money.

Chapter XVII

Consumption and Prices

1. INTRODUCTION

It has been observed in earlier chapters that wartime expenditures on consumption, with certain reservations, increased.[1] The higher the expenditures on consumption goods tend to be and the less that are made available, the higher are prices. *The more consumption goods that are made available, on the other hand, the lower will prices of consumption goods be; but the rise may be at the expense of war goods.* Thus a wartime rise of expenditures on consumption goods reflects (1) an excess of demand over supply at prewar prices and (2) a failure to keep down the output of consumption goods as much as the stern dictates of a war economy require. To the extent that taxes and savings do not mop up the excess of incomes over supplies of consumption goods made available, the dollar value of consumption will rise.

2. THE CONCEPT OF CONSUMPTION

We have discussed the problems so far in terms of expenditures on consumption. Of a total income of $160 billion, our consumption expenditures in 1944 were put at $96 billion. This is not equivalent to saying that we consumed $96 billion of goods and services during the year 1944. In this connection, it was pointed out by the Department of Commerce, for example, that, whereas our 1942 consumption *expenditures* declined slightly, our *current consumption* in 1942 actually rose by $2.5 billion (both in 1939 dollars). The explanation is, of course, that in 1941 we were spending large sums of money for durable consumers' goods to be used up in later years. In 1942 the flow of consumers' durable goods was reduced and consumption of these goods exceeded current purchases.

We should also observe that disbursements for consumption ought

[1] *Cf.* Chs. VII and XIV.

to be distinguished from either of the two other concepts used here. The country may, for instance, have spent $82 billion on consumers' goods and services in 1942, but in addition, the country may have spent $3 billion to $4 billion in repayment of past loans for the purchase of consumer goods. Disbursements may then be in excess of expenditures on consumption and also in excess of current consumption.[1]

Another aspect of the relation of consumption and prices relates to the supply of goods made available by the war economy. Obviously, consumption is limited by the flow of goods made available plus any drains on inventories. In the early years of the war when spending greatly exceeded the current output of consumption goods at stable prices, the degree of inflation was kept down by our access to existing inventories. *Inflation was not so great as it otherwise might have been in the years* 1942 *and* 1943 *because the increase in demand was offset to some extent by a release of goods from inventories.*[2]

3. CONSUMPTION—A RISE?

Once again we must emphasize that the rise of consumption expenditures does not point clearly to a rise of consumption.[3] As pointed out repeatedly, it is not easy to correct for the rise in prices. Let us mention, for example, the increased wartime expenditures on restaurant food. This involves a rise of consumption expenditures without a corresponding increase of consumption. Prices are higher; and the expense of preparation and serving are then included as expenditures on consumption, whereas the housewife's labor was not included. For this and similar reasons, consumption may not have risen so much as is generally assumed. The F.R. Board's production figures suggest similar conclusions. Several classes of consumers' goods made available to the armed forces and lend-lease, according to the Federal Reserve, account for 20 per cent of total production of these goods. The Board's estimate is that total output of consumption goods was up by one-fifth and that the productive activity engaged in the output of consumers' goods available to civilians was smaller than 1939 by about 10 per cent. Production figures are not, however, by any means comparable with expenditure figures. Allowance should be made, for example, for the

[1] See *F.R.B.*, August, 1943, p. 784, and *S.C.B.*, March, 1943, p. 14.

[2] *Cf.* Ch. VIII.

[3] See especially W. H. Shaw, "Consumption Expenditures, 1929–1943," *S.C.B.*, June, 1944, pp. 6–13; also *S.C.B.*, April, 1944, pp. 7–8; September, 1944, pp. 5–6; *F.R.B.*, September, 1944, pp. 842–844.

rise of services; but their dollar rise in 1943 was only about one-third above the 1929–1941 level, as compared with a rise for commodities of goods *and* services of more than one-half.

In a careful investigation made available late in 1944, Dr. Kuznets concluded that in 1939 prices, the flow of goods to consumers rose by $7.9 billion from 1939 to 1941 and declined by $2.4 billion from 1941 to 1943; that the nonwar component of the national product (again in 1939 prices) rose by $14.3 billion from the second quarter of 1939 to the fourth quarter of 1941 and declined by $19.9 billion from the fourth quarter of 1941 to the fourth quarter of 1943. These results lend weight to the thesis that, if consumption rose, the rise was not so large as might be inferred from the Department of Commerce series.[1]

It may well be, when allowance is made for the diversion to the military and lend-lease, that total supplies available to civilians can be considered to have declined. Total figures should, however, not be confused with per capita results. If less was available to civilians, we should allow for the large reduction in civilian population and also for the use of inventories at the disposal of both dealers and consumers. When all of these are accounted for, it is doubtful that civilian consumption per capita can be considered actually to have declined.

Total consumption figures vary, moreover, according to the statistical series used. Two series by the Department of Commerce (Table 81) yield differences.

TABLE 81.—CONSUMPTION

(In billions of dollars)

	Department of Commerce (1)	Shaw (2)	1939 dollars of (1) (3)
1939	61.7	66.5	61.7
1943	91.0	97.7	70.8
1944	96.5	....	75.0 (estimated)

SOURCE: Compiled and computed from materials in *S.C.B.*

Series (1) is that used in conjunction with GNP studies; series (2) is the Shaw series presented in the *S.C.B.* The latter includes, for example, imputed rental value of occupied dwellings and food consumed but not purchased in market, but excludes most payments to govern-

[1] S. Kuznets, *National Product in Wartime*, prelim. ed., pp. II-38, III-15, 1944.

ment. The relative rise of (1) and (2) is roughly similar; and the increase of real consumption (3) is about 20 per cent.

My conclusion is that civilian per capita consumption is up, though not nearly so much as is indicated by the official statement of a rise of over-all consumption of 20 per cent. Production figures seem to understate actual consumption; and expenditure figures deflated by official index numbers seem to overstate it.

4. MANNER OF CUTTING CONSUMPTION

I shall not discuss in great detail here the problem of how to cut consumption. The most obvious way to cut consumption is, of course, to reduce the output of consumption goods by denying to producers the necessary raw materials, transportation, power, and labor. Action along these lines, however, will not prevent a serious inflation. In order to prevent a serious inflation (and the danger is greater the more successful the limitations are), it is necessary to undertake vigorous programs (all interrelated) of taxation, borrowing for war purposes, control of demand through rationing, and, in many cases, a direct control of money returns to the factors of production: In short, keep money incomes down, siphon off as much as possible of the excess of income likely to be spent over the value of goods available at normal prices, and, finally, control the distribution of scarce supplies. It is known that at the peak of the war effort the government went far in restricting output, although probably not far enough. Golf-club manufacturers were denied new steel; manufacturers of kitchenware, supplies of aluminum; race-track enthusiasts, the use of gas for the purpose of attending horse races. (Race tracks were finally shut down.)

On the basis of normal output, the output for 14 selected consumers' goods had been cut drastically by 1942. Cooking utensils were produced in 1942 at the rate of 26 per cent of normal output. In 1943 electric appliances were reduced to 2 per cent of the 1942 output, fountain pens 26 per cent, heating stoves 35 per cent, cooking utensils 10 per cent, and razor blades 86 per cent. In general, the cuts were largest where the primary materials were most needed for the war effort, where conversion to war output was easy, where consumers' goods were not needed badly, and, finally, where there were large inventories. Furniture output was kept at a high level because in the early war years the scarcity of wood was not a serious problem. Razor blades were produced in great quantity because of current need.

Automobiles were not produced because there were large inventories, because they are made of important strategic materials, because much economy is possible in their use, and because the relevant factors when released for war could make significant contributions to war effort.

In 1943 the war program called for no production of the following: safety razors, sewing machines, oil burners, bicycles, watches, washing machines, and refrigerators. That the prices of these commodities left in the market did not rise to fantastic heights is explained partly by the fact that consumers were well stocked in these items and partly by price control and rationing.

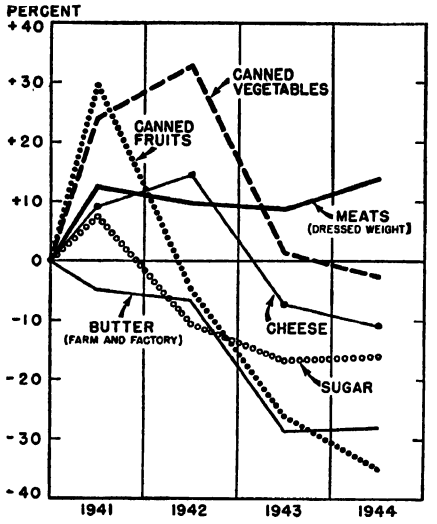

CHART 66*a*.—Percentage change in per capita consumption of selected rationed foods from 1935–1939 average; percentages based upon data for calendar year, except canned fruits and vegetables, which are on a pack year basis. (*Sources: Department of Commerce; based upon data published by U. S. Department of Agriculture.*)

Production of selected civilian durable goods was lower in 1943 than in 1940–1941 and had generally declined further in 1944. Of 20 important items—automobiles, auto parts, washing machines, etc.—the output of only a few products—cutlery, buttons, and bicycles—remained at levels reasonably close to 1940–1941 levels.[1] Production of selected rationed consumers' goods in 1944 was generally below 1941 levels but much above 1935–1939 levels. Civilian consumption of selected rationed foods (Chart 66*a*) was generally above 1935–1939 levels in 1941, but by 1943 civilian per capita consumption of canned fruits, canned vegetables, butter, cheese, and sugar was below the 1935–1939 level. Chart 66*b* reveals that production of meats, however, in 1944 was much above the 1935–1939 level, and that per capita consumption of all foods and 9 out of 12 important classes of food was above the level of 1935–1939.

Table 82 gives the retail sales from 1939–1944.[2] This table indicates that the rise of retail sales from 1942 to 1944 in stable dollars was but

[1] *S.C.B.*, September, 1944, p. 6.

[2] L. Paradiso, "Retail Sales and Consumer Incomes," *S.C.B.*, October, 1944, pp. 5–14.

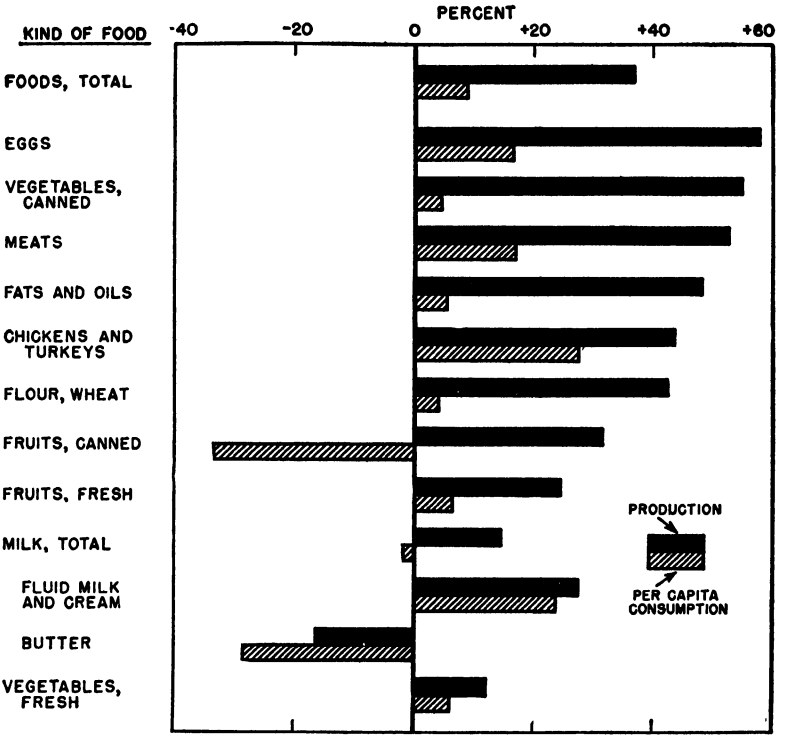

CHART 66.—Percentage change in production and per capita civilian consumption of major foods, 1944 from 1935–1939 average. (*Source: U. S. Department of Agriculture.*)

5 per cent and in current dollars, 16 per cent. The rise (in current dollars) for all retail sales from 1941 to 1944 was 20 per cent; for durable-

TABLE 82.—SALES OF RETAIL STORES

(In billions of dollars)

	Current dollars	1941 dollars *
1939	42.0	46.1
1942	57.8	50.9
1944	67.0	53.5

SOURCE: *S.C.B.*, October, 1944, p. 7.

* Dollar sales adjusted for changes in retail price index of Department of Commerce.

goods stores a decline of 38 per cent and for nondurable-goods stores a rise of 43 per cent. In the durable-goods area, the largest decline was the automotive group (68 per cent) and the largest rise in jewelry

(70 per cent). In nondurables, the largest rises were in liquor (102 per cent), eating and drinking places (89), women's apparel and accessories (86). Sales at filling stations were down 26 per cent. The history for groups of products is well described in Charts 67–69.

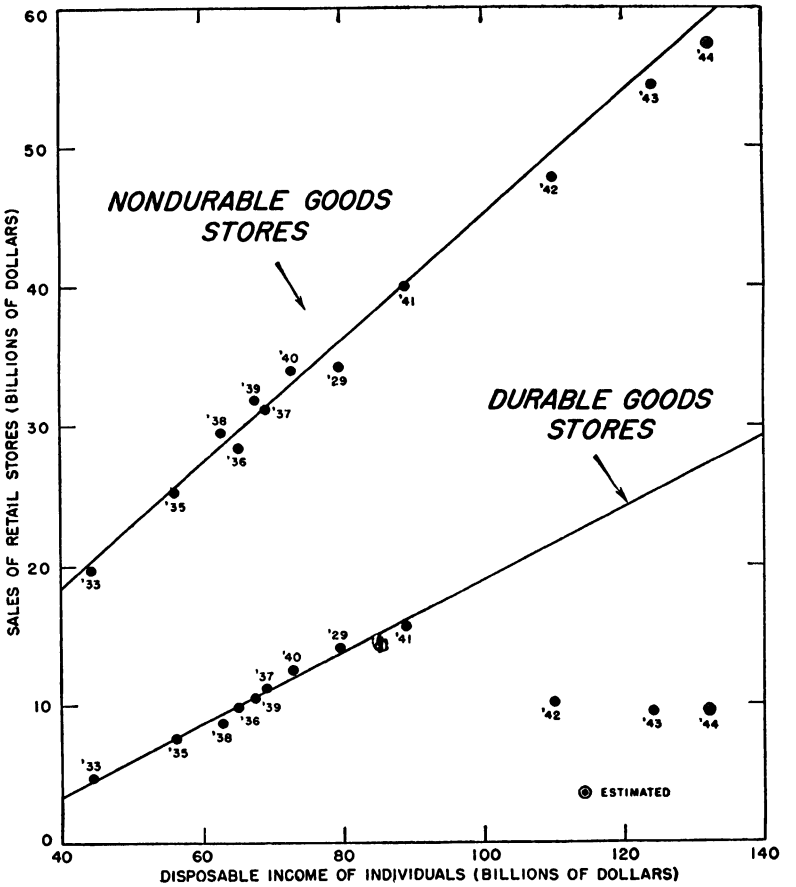

CHART 67.—Relationship between sales of durable and nondurable goods retail stores and disposable income of individuals. (*Source: U. S. Department of Commerce.*)

Note, for example, the high level for jewelry in relation to disposable income (not so for shoes), the marked rise for eating and drinking places. Yet, for most groups experiencing large rises in demands, the expansion was smaller than might be expected in view of the rise of disposable income. Where there had been upward trends in relation to disposable income in the years 1929–1940, the rises were generally not continued

at a corresponding rate during the war. The explanation of this paradox is the unexpected gains in savings and unavailability of goods.

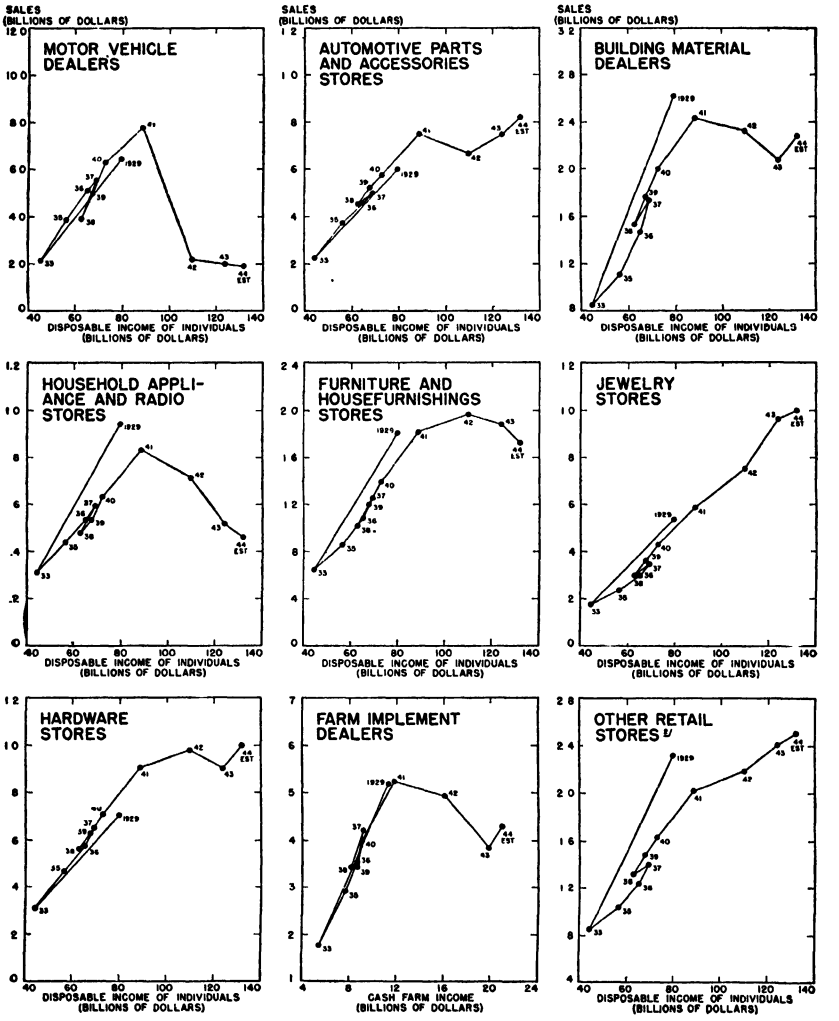

CHART 68.—Incomes and sales by classes of stores. (*Source: See Chart* 67.)

One reason for the continued high level of consumption is suggested by Table 83. It will be observed there that approximately 80 per cent of all consumption is accounted for by spending units with incomes of less than $5,000. Yet in 1942 the taxes of these groups accounted for only 15½ per cent of total tax receipts and only 11 per cent of all direct taxes. The average spending unit obtained $2,558 of income per year, paid taxes of $104,

and consumed $1,808 per year. The task is to cut the consumption of those that account for most of the consumption; but this is difficult because the low-income groups, whose consumption standards are admittedly relatively low, have to be squeezed in order to obtain this objective. Lower income

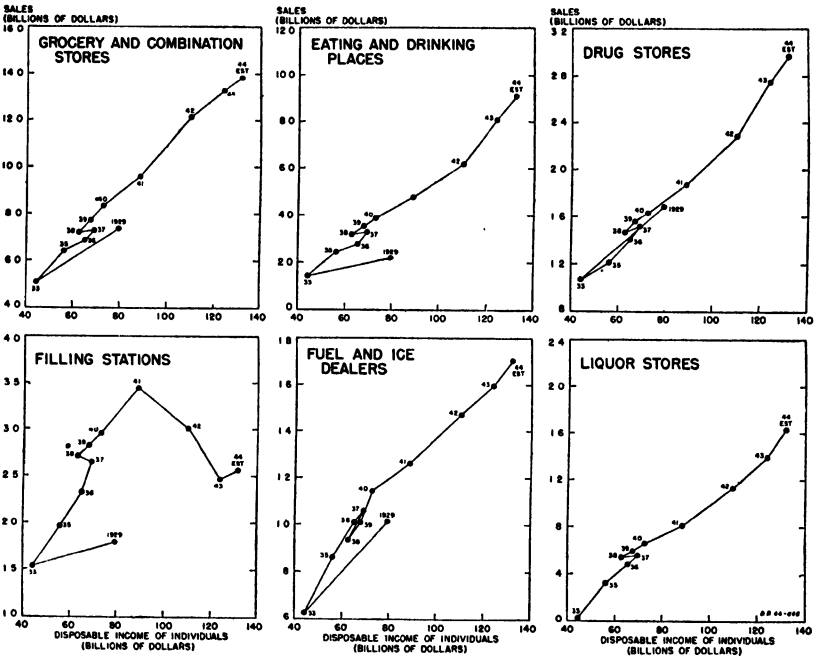

CHART 69.—Income and sales by classes of stores. (*Source: See Chart* 67.)

groups consume heavily relative to their incomes and save little. Any serious increase in their taxes will, therefore, be largely at the expense of their consumption and not their savings.

TABLE 83.—1942 PERCENTAGE DISTRIBUTION OF SPENDING UNITS, MONEY INCOME, TAXES, CONSUMPTION, AND SAVINGS, BY INCOME LEVELS

Income level	Spending units	Money income	Taxes	Consumption	Savings
Under $1,500	40.6	13.7	1.5	19.0	0.1
$1,500–3,000	33.8	28.2	4.5	32.9	18.4
$3,000–5,000	17.6	26.2	9.6	26.9	26.9
$5,000–10,000	6.1	16.1	12.3	13.8	23.5
$10,000 and over	1.9	15.8	72.1	7.4	31.1

SOURCE: OPA, *Civilian Spending and Saving*, 1941 *and* 1942 (March, 1943).

According to Treasury estimates for 1944, classes earning $3,000 and less accounted for 61 per cent of $157 billion of total income payments before payment of personal taxes and 64 per cent after taxes. The corresponding figures for incomes of $5,000 and less were 81 and 84 per cent, respectively. There was no great change in distribution of income from 1942 to 1944.[1]

5. POSSIBLE ECONOMIES OF CONSUMPTION

In my *Economics of America at War* [2] I made various estimates of possible reductions of consumption. These estimates were obtained by comparing our consumption in earlier years with consumption in 1941–1942 and suggested (1) the possibility of eliminating a large part of the excess of consumption over 1935–1936 for each class of consumption and (2) the extent to which the consumption could be reduced from the level of 1935–1936. On these assumptions it was possible to reduce consumption by $12 billion on one series of assumptions and by $26 billion on another. The latter would bring us close to the bedrock estimate of civilian supply of $56 billion at 1941 prices.

As of early 1942, Dr. Kuznets estimated consumption on the assumption that the government might require 50 per cent of national income for war. He found that at 1929 prices each consumption unit would obtain $617 or 19 per cent less than it obtained from 1929 to 1938 and 22 per cent less than in 1938. (The latter figure is adjusted to yield a net result of 19 per cent.) This estimate was based on a maximum national income of $105 billion in 1943–1944 at 1941 prices, but the national income of 1944, even in 1941 prices, proved to be almost $130 billion.[3]

Early in 1942 the Department of Commerce estimated that consumption in the fiscal year 1943 would be $64 billion at 1941 prices. Actually consumers' expenditures amounted to $91 billion in 1943, or roughly about $17 billion more than the $74 billion which correspond to $64 billion at 1941 prices. *In short, consumers' expenditures and income payments were much higher than estimated in the year* 1942, *and underestimates of expenditures on consumption were quite general.*

Further light is thrown on these problems through an examination of disbursements for groups of commodities. Inflationary effects were accentuated by the large rise of money expenditures in certain areas.

[1] House Hearings on *Revenue Revision of* 1943, p. 21.

[2] Pp. 130–134.

[3] S. Kuznets, *Use of National Income in Peace and War*, pp. 22–26, NBER, March, 1942. *Cf.* also *S.C.B.*, September, 1944, p. 4.

Expenditures on all durable goods declined by 9 per cent from 1939 to 1943. Food expenditures rose from $18 billion to $32 billion or 79 per cent, and clothing from $6.8 billion to $12 billion, or 77 per cent. These increases are to be compared with a reduction of 28 per cent for gasoline and oil, and rises of but 27 per cent for services and 44.3 per cent for all consumers' expenditures. The closing of alternative markets, the drains on available food supplies for military and foreign use, and the relative inelasticity of supply account, then, for a rise in the price of food of approximately 50 per cent. In real terms, the largest increases in consumption were in food, clothing, and services.[1] In the rise of prices, food and clothing led the list.

In general, a larger proportion of total consumption expenditures occurred in areas of food, tobacco, and clothing; substantial declines were registered in housing, household operation, and transportation. These changes were the result of price changes (*e.g.*, rises in prices of food and clothing) and unavailability of some classes of goods (*e.g.*, new houses and autos). See Table 84.

TABLE 84.*—PERCENTAGE CHANGE IN PERCENTAGE DISTRIBUTION OF EACH CLASS TO TOTAL CONSUMPTION EXPENDITURES FROM 1929–1941 TO 1943

Food and tobacco	+7.2
Clothing, etc.	+2.3
Housing	−0.8
Household operation	−1.4
Transportation	−0.5

SOURCE: *S.C.B.*, June, 1944, p. 6.

* *Cf. S.C.B.*, February, 1945, p. 18. Total sales in retail stores were up 9 per cent. Food and apparel sales roughly equaled the rise for all sales; the increase for eating and drinking places was 16 per cent.

The ratio of consumption of nondurable consumers' goods to disposable income of individuals was relatively normal. The wartime ratio of consumption of durable goods to the latter was much below normal. We may conclude from this that part of the large amounts saved on durable goods spilled over into nondurable-goods markets and that the rest was not spent at all. If this had not occurred, the ratio of expenditures on nondurables to disposable income would have declined greatly. The pressure to save under the stimulus of Treasury campaigns and rising prices was offset by the diversion of cash from durable-goods markets. (See chart 67 on page 252.)

[1] *S.C.B.*, March, 1943, p. 14; Senate Hearings *To Continue the C.C.C.*, p. 201.

6. THE RELATION OF CONSUMPTION TO INCOME

That prices of consumption goods did not rise more than they did is to be associated in part with the increasing proportion of income that was being saved and the declining proportion of income that was

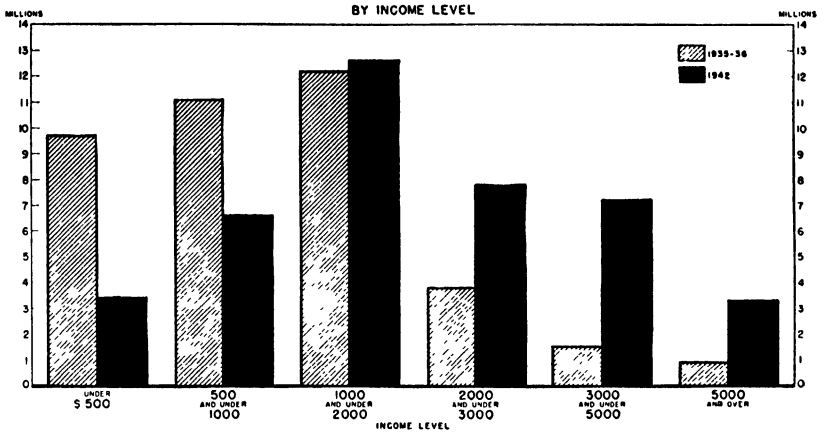

CHART 70.—Shifts in Distribution of Families and Single Consumers by Incomes. (*Source: Bureau of Labor Statistics.*)

being consumed. At higher incomes, more is generally saved. Those earning $1,000 in the prewar earn $1,500 to $2,000 in wartime and those earning $5,000 may now rise to the $6,000 to $8,000 brackets. Numbers in the higher income groups have increased and those in the lower income groups declined (*cf.* Chart 70). As average incomes rise, the proportion spent on consumption declines. This would follow even if taxation burdens had not increased. On top of this reduction in the

TABLE 85.—RELATION OF CONSUMPTION TO INCOME, 1939–1944

	Ratio of consumer expenditures to national income	Ratio of consumer expenditures to income payments	Per cent of disposable income saved by individuals
1939	87	87	9
1940	84	86	10
1941	78	82	16
1942	68	71	25
1943	62	64	27
1944	61	63	29

SOURCE: *S.C.B.*, January, 1944, p. 17; April, 1944, p. 14; September, 1944, p. 4; February, 1945, p. 5. House Hearings on *Revenue Revision of* 1943 (revised), pp. 36, 40; *Budget*, 1946, p. xxv.

ratio of consumption expenditures to incomes, the war witnessed a revolution in consumption. At *identical income levels*, a smaller proportion of income, and even disposable income after taxation, was spent

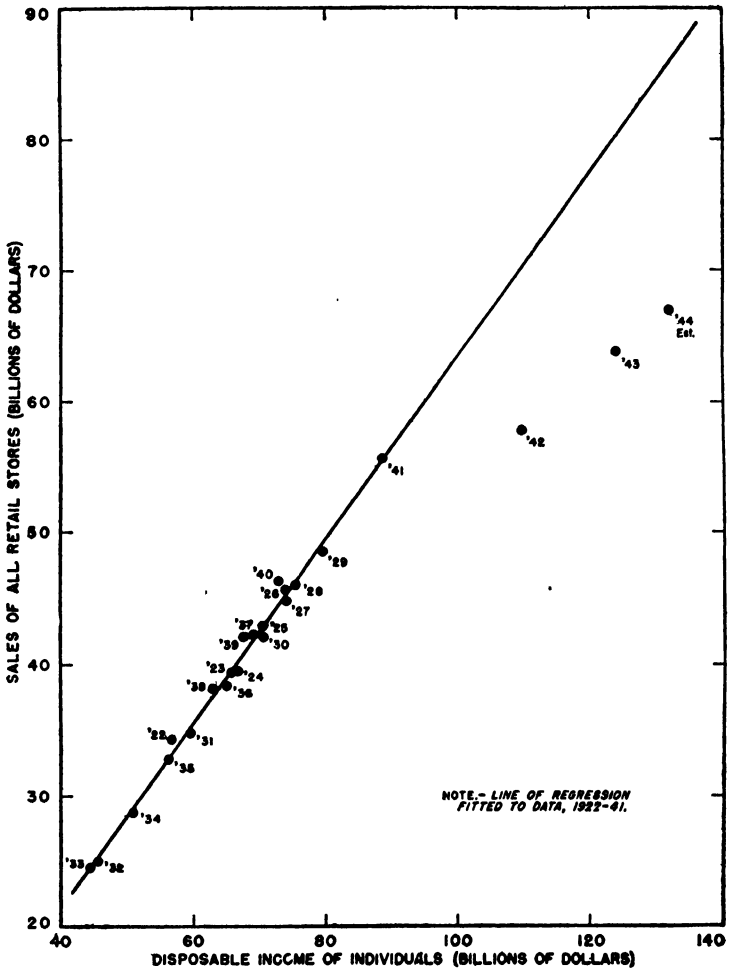

CHART 71.--Relationship between sales of all retail stores and disposable income of individuals. (*Source: U. S. Department of Commerce.*)

and that despite rising prices. Table 85 presents the facts relevant to the discussion of this paragraph.

Particularly since 1941, the ratio of consumption expenditures to income departs from the accustomed pattern. The more important reasons for this are the unavailability of consumers' goods and the

patriotic urge to buy government bonds. Chart 71 illustrates the relationship between disposable income and retail-store sales. These sales in 1942–1944 were abnormally low in ratio to disposable national income.

We may express the changing relation of consumption to income in terms of the ratio of year-to-year changes of both variables. From 1939 to 1940 the relative increase in consumers' expenditures was 85 per cent of the relative increase in income payments. The marked reduction in this ratio is one important explanation of the success in preventing a large inflation (see Table 86).

TABLE 86.—RATIO OF RISE OF CONSUMERS' EXPENDITURES TO RISE OF INCOME PAYMENTS, 1939–1944

1940	85
1941	63
1942	37
1943	50
1944	77

SOURCE: *S.C.B.*, January, 1944; September, 1944; and February, 1945.

7. CONCLUSION

Despite a large rise in the ratio of savings to income and a substantial reduction in the ratio of resources made available for consumers to total gross national production, the expenditures for consumption were excessive as were the supplies made available. Whereas the British reduced their consumption from 1939 to 1943 by 21 per cent, we increased our consumption close to 20 per cent in real terms according to official figures—but probably substantially less if *full* allowance is made for the rise of prices, and adequate consideration is given to production figures and diversions to military and lend-lease. Over-all figures should, moreover, be corrected for the movement of 11 million into the military forces. Our large gains in consumption relative to the British are explained in part by the fact that we were able to provide war resources out of increased output to a greater extent than the British. It is also apparent from this that the tax program was not stepped up sufficiently or quickly enough. Had it not been for an unexpected rise of savings, excess demand would have been much greater. (Chart 72 is a reminder of the expansion of consumption and the much larger rise in taxes and savings—and note the rise of consumption in *monetary* and *real* terms.) On the face of it, the record does not look too good; but the reader should not forget that

when the number of hours of work per worker rises 10 to 20 per cent, when special incentives are required to induce labor to work overtime, when 17 million men and women are added to the ranks of the employed in civilian or military life, it is very difficult to prevent a rise of consumption. Official figures suggest an increase of output of perhaps 80 per cent, as compared with a rise of consumption of 20 per cent. In fact, both rises were probably less. It would have been better if consumption, instead of rising, had been reduced by 10 per cent, because more

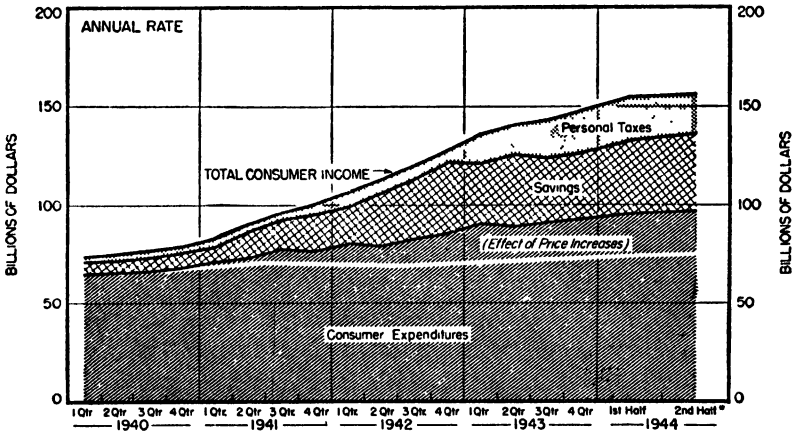

CHART 72.—How people spent (saved) their money. (*Source: Director of War Mobilization and Reconversion.*)

resources would have been available for the war economy. We have then not done so well as far as consumption is concerned, but, in the light of the rise of incomes, we have not done too badly.

In this chapter we also emphasized (1) the difficulties of imposing restraints of consumption on the group where the expenditures for consumption are the largest—the group earning annually less than $5,000; (2) the tendency of money not disbursable on closed markets to spill over into markets for nondurable goods; (3) the difference between the following terms: over-all consumption expenditures, civilian consumption expenditures, per capita civilian consumption expenditures, consumption, and disbursements on consumption. Finally, consumption expenditures have exceeded the amounts planned by the government, output somehow has continued at a high level, and incomes disbursed continued to increase. *Consumption expenditures suggest large rises in consumption; but production figures are more reassuring.*

Chapter XVIII

Inflation and Capitalist Returns

1. INTRODUCTION

So far Part III has concerned itself with two general problems: (1) the extent of the rise of prices and the general excess of demand and (2) the contributions of taxation and savings to the siphoning off of excess income, and the relation of the remainder to consumption. Our third and last problem in Part III is the contributions to demand, as reflected in income growth of these particular groups: capitalists, labor, and farmers. In this chapter we now turn our attention to capitalist incomes and consider the relative gains of each group.

In notes at the end of this chapter we consider the rise of profits in the light of various policies and techniques which, many assume, might have prevented wartime profits from rising as rapidly as they did. The policies of the Office of Price Administration (OPA), although successful in holding prices down, apparently did not hinder a large rise of profits even after payment of business taxes. We discuss price policies as well as the application of further fiscal measures to cope with rising profits. Although tax receipts continued to rise in 1943 and 1944, wartime changes in the tax structure virtually ended in 1942. Conversion needs and wastage following further rises of corporate taxation especially militate against large rises of business taxation. Finally, in notes at the end of this chapter, we consider the renegotiation approach. It is a useful technique, but it, also, has not succeeded in keeping profits at a low level. Its coverage is limited, and military authorities are much more concerned with supply than with price. Nevertheless, renegotiation saved substantial amounts of money, although the gains after payment of personal taxation are considerably

less than before payment of taxes.[1] Renegotiation, however, does induce a desired distribution of profits on the basis of contributions to the war effort.

2. SOME STATISTICAL ASPECTS

All capitalist income might well include farm income, but we shall consider farm income separately. I also omit from the discussion of this chapter payments to business managers and executives. These payments undoubtedly rose substantially and contributed somewhat toward higher prices.

For the inflationary problem the volume or the increase of profits and other capitalist income is not quite so significant as the increase of other classes of income. This follows because on the whole those who earn profits, rents, and interest do not consume so large a part of their income as the recipients of noncapitalist income.[2]

TABLE 87.—BUSINESS EXPENDITURES, 1940–1943
(In billions of dollars)

	1940-1941	1942-1943
Spent by business enterprises	33.5	10.0
Available from own sources	17.0	26.7
Net obtained from other sources	16.5	
Net unused business savings (includes reserves)	....	16.7

SOURCE: Department of Commerce, *Markets after the War*, 1943.

One other aspect of this problem suggests a similar conclusion: It will be found that as profits rise, businessmen, impressed by the large problems of reconversion in the postwar period, are inclined to pay out a declining proportion of profits as dividends (*cf.* Table 90). That business is disposed to put aside large reserves both because of restrictions on the flow of supplies for nonessential use and because of

[1] In the first year of renegotiation, the Navy had $29.7 billion of contracts under renegotiation. Total savings effected by May 31, 1943, were $1.0 billion. The Army saved $2.1 on $20 billion of contracts on which renegotiations had been effected. *Investigation of the Progress of the War Effort: Report of House Committee on Naval Affairs on Renegotiation of War Contracts*, 1943, p. 6. Miscellaneous receipts, let us note, are in no small part funds turned back to the Treasury on these renegotiated contracts. They total $3.3, $3.3, $2.9 billion, respectively, in fiscal years 1944, 1945, 1946. (The last two are estimated.) *Budget*, 1946, p. A-2.

[2] *Cf.* OPA, *Civilian Spending and Saving*, 1941 and 1942, p. 5, and discussion in preceding chapter, where the relatively large amounts of income and consumption by low-income groups are revealed; also House Hearings, *Revenue Revision of* 1943 (revised), p. 21.

concern over the postwar period is evident from Table 87 and Chart 74 (the latter presented later in this chapter). Whereas in 1940–1941 business relied on outside sources for one-half of its expenditures, in 1942–1943 it spent only $10 billion out of $26.7 billion available for capital.

A study by the F.R. Board covering the period 1941–1943 for 259 large manufacturing and mining companies yields the following results: [1]

From the end of 1940 to the end of 1943 these companies increased their assets by $15 billion to $16 billion. Of this total a rise of cash and marketable securities accounted for $5.3 billion. The amount thus held was close to 1½ times more than was available at the end of 1940. Rises in net property, receivables, and inventories accounted for the remainder.

The 259 companies obtained no less than $7.6 billion, *i.e.*, more than half of the total amount, out of current operations. Of this total of $7.6 billion, approximately two-thirds represented depreciation and other reserves and one-third profits retained. The remainder consisted largely of income tax liabilities ($3.09 billion), other current liabilities ($3.19 billion), and advances from banks and government ($1.35 billion).

3. CAPITALIST INCOME

An indication of the rise of capitalist income is given in Table 88

TABLE 88.—RISE OF CAPITALIST INCOME, 1939–1944

(In billions of dollars)

	1939	1940	1941	1942	1943	1944
Net income of proprietors	11.2	12.0	15.8	20.6	23.5	24.1
Agricultural	4.3	4.4	6.3	9.7	11.9	11.8
Nonagricultural	6.9	7.6	9.6	10.9	11.6	12.3
Interest and net rents	7.4	7.5	8.0	8.8	9.7	10.6
Net corporate profits (after taxation)	4.2	5.8	8.5	8.4	9.8	9.9
Total (exclusive of agriculture)	18.5	20.9	26.1	28.1	31.1	32.8

SOURCE: *S.C.B.*, April, 1944, p. 12; September, 1944, p. 4; February, 1945, p. 5.

It will be observed in Table 88 that the increase in capitalist income was largest for net corporate profits, and substantial for nonagricultural proprietors (noncorporate business). The increase in net rents and interest was modest. The percentage rises are given in Table 89.

[1] *F.R.B.*, July, 1944, p. 636.

TABLE 89.—PERCENTAGE RISES OF CAPITALIST INCOME, 1939–1944

	1939–1942	1939–1944
Total (exclusive of agriculture)	52	77
Net corporate profits	100	136
Nonagricultural proprietors	58	78
Interest and net rents	19	43

SOURCE: Based on *S.C.B.*, April, 1944, and February, 1945.

A summary issued by the Treasury presents the position of corporations in greater detail (Table 90).

TABLE 90.—NET INCOME, INCOME TAXES, AND DIVIDENDS OF CORPORATIONS, 1939–1944 *
(In billions of dollars)

	1939	1940	1941	1942 †	1943 †	1944 †
1. Net income (includes dividends)	7.2	9.2	16.3	21.4	23.5	25.6
2. Net income excluding dividends received	5.3	7.2	14.1	19.9	22.0	24.0
3. Income and excess-profits taxes	1.2	2.5	7.2	11.8	13.5	14.6
4. Net income after taxes *	4.0	4.7	6.9 (8.5)	8.1 (8.7)	8.6 (9.8)	9.4 (9.9)
5. Net dividends paid	3.8	4.1	4.5 (4.5)	4.1 (4.3)	4.0 (4.3)	4.1 (4.5)
6. Net income retained	.2	.6	2.5 (4.0)	4.0 (4.4)	4.6 (5.5)	5.3 (5.4)
7. Ratio of taxes to net income	23.4	35.4	50.8	59.2	61.1	60.8
8. Ratio of net dividends paid to net income after taxes	95.1	87.4	64.3 (53)	50.6 (49)	46.8 (44)	43.6 (45)

SOURCE: Adapted from House Hearings on *Revenue Revision of* 1943, pp. 126*ff*.
* Later estimates in rows 4, 5, 6, 8 are from *S.C.B.*, Feb., 1945, p. 5. Cf. Table 99 for 1939 figures.
† 1942–1944 estimated.

Tables 89 and 90 reveal the following:

1. Net income of corporations (exclusive of intercompany dividends) rose three and one-half times from 1939 to 1944.

2. Income and excess-profits taxes rose eleven times and the ratio of these taxes to net income of corporations increased from 23 to 61 per cent.

3. Net incomes *after taxes* nevertheless rose to more than twice the

1939 figure. (The rise is even larger if comparison is made with the years 1936–1939.)

4. Net dividends paid were reasonably stable, but their ratio to net income declined from 95 to 44 per cent. (The latter figure was 45 per cent on the basis of later estimates of income.)

5. Corporate savings rose from less than $200 million to $5.3 [1] billion by 1944. Here, again, some adjustments are required in order to take account of later downward revisions of net income.

6. All capitalist groups did not do equally well. The rise in interest and rents was less than one-half that in corporate profits; and corporate enterprise seemed to have fared much better than noncorporate enterprise.

7. Corporate savings rose rapidly although their magnitude may seem modest when compared with the $16.7 billion of untused resources for 1942 *and* 1943 (Table 87). The latter is, however, a more inclusive series and covers not only net savings but resources put aside for deferred maintenance, depreciation, and the like, and is not restricted to corporations. Corporate savings for 1941–1944 were estimated at $19.3 billion.[2]

TABLE 91.—NET PROFIT (AFTER TAXES) AS PERCENTAGE OF NET WORTH, 1940 AND 1943, FOR SAMPLE OF MANUFACTURING AND TRADE CONCERNS

Asset size, dollars	Manufacturing		Wholesale trade		Retail trade	
	1940	1943	1940	1943	1940	1943
50,000–100,000	10.7	41.4	14.2	28.0	12.5	19.3
100,000–250,000	10.3	20.8	10.2	17.9	9.0	14.8
1 to 5 million	9.5	11.6	8.0	11.5	7.7	10.8
10 million and over	10.4	9.6	4.1	8.1	8.7	9.4

SOURCE: *F.R.B.*, January, 1945, p. 23.

In an interesting article in the *F.R.B.*, Dr. Dirks summarizes the experience of small business. In general, small business improved its position more than large business, regardless of the criterion used, *e.g.*, margins on sales, or net profit (after taxes) as percentage of net worth.[3]

Table 91 presents some of the facts. In general, the margin of profits varies inversely with the size of assets.

[1] 5.4 billion according to *S.C.B.*, February, 1945, p. 5.

[2] *S.C.B.*, February, 1945, p. 5.

[3] F. C. Dirks, "Wartime Earnings of Small Business," *F.R.B.*, January, 1945, pp. 16–26.

Two additional comments on the subject of profits should be appended here: First, profits are a matter of definition. In this connection, a F.R. Board study of net income—based on private compilations (and for leading corporations)—yielded results somewhat different from the Department of Commerce figures for *all* corporations (see Table 92). According to the Federal Reserve figures, the rise of net income was less than 50 per cent from 1939 to 1943. Over-all figures, moreover, covered large variations for different industries. The contrast in results between this study and that of the Department of Commerce arises in part from the limited coverage in the former.

TABLE 92.—NET INCOME OF LEADING CORPORATIONS, 1939, 1943

(1940 = 100)

	1939	1943
All	84	125
Manufacturing and mining: war industries	77	112
Manufacturing and mining: nonwar industries	90	104
Railroads	50	491
Public utilities	95	89

SOURCE: *F.R.B.*, July, 1944.

Second, the largest gains were made in war industries. According to the Department of Commerce, corporate profits and dividend payments rose by 145 per cent in war industries from 1939 to 1943 (from approximately $1 to $2.5 billion) and 57 per cent in nonwar industries (from approximately $1.5 to $2.4 billion).[1]

4. SIGNIFICANCE FOR INFLATION

One indication, though not the best, of the relative gains of different groups is given by Chart 73 and Table 93. This table suggests that employees somewhat improved their *relative* position; that farm proprietors made very large relative gains; that corporate profits, despite a very large rise in relative tax burdens, were relatively stable as a share of all business payments; that the rise in these taxes was offset in part by relative declines in other business taxes and by a reduction in amounts set aside for depreciation and reserves.[2] The observations drawn from Table 93 have, of course, only limited significance. They should, for example, be considered in the light of man-hours, number of workers, output, etc. They give merely the changing pattern of

[1] *S.C.B.*, May, 1944, p. 8.
[2] *S.C.B.*, April, 1944, p. 10.

income distribution. Some groups gained more than others; and to this extent these groups might have contributed more to inflation.

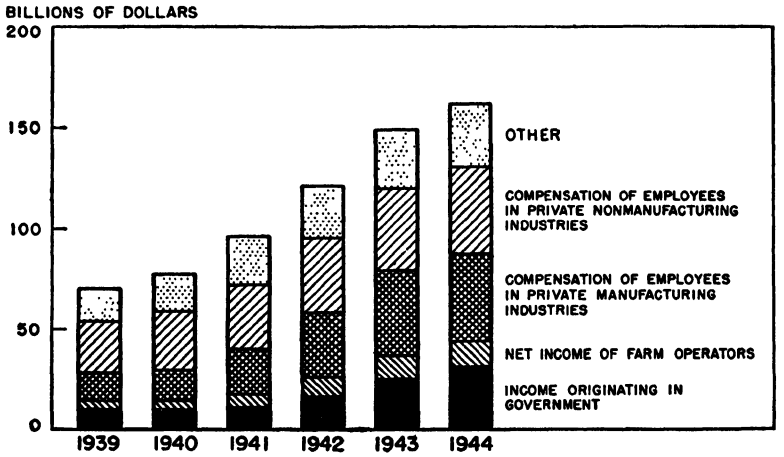

CHART 73.—Components of national income, 1939–1944, seasonally adjusted annual rates. (*Source: U. S. Department of Commerce.*)

TABLE 93.—PERCENTAGE DISTRIBUTION OF GROSS NATIONAL PRODUCT, 1939 AND 1943

	1939	1943
1. GNP:		
Government product	11.2	13.5
Business product or sales receipts	88.8	86.5
2. Allocation of business receipts from sale:		
Compensation of employees	50.2	51.6
Net income of farm proprietors	5.4	7.7
Net income of other proprietors	8.7	7.2
Interest	4.5	2.1
Net rents and royalties	2.9	2.4
Net corporate profits after taxes	5.4	5.6
Corporate income and profit taxes	1.5	9.2
Other business taxes	11.7	8.1
Depreciation, depletion, and other charges and reserves	9.8	6.1

SOURCE: *S.C.B.*, April, 1944.

The actual rise for important groups was as follows (Table 94). This uses a better basis to arrive at final results than that used by dividing up GNP (Table 93), which includes elements extraneous to national income.

TABLE 94.—NATIONAL INCOME BY DISTRIBUTIVE SHARES, 1939–1944

	Billion dollars			Percentage rise	
	1939	1943	1944	1939–1943	1939–1944
Total national income	70.8	149.4	160.7	111	127
1. Total compensation of employees	48.1	106.3	116.0	121	141
2. Net income—agricultural proprietors	4.3	11.9	11.8	177	175
3. Net income—other proprietors	6.9	11.6	12.3	68	78
4. Corporate profits after taxes	4.2	9.8	9.9	133	136
5. Interest and net rents	7.4	9.7	10.6	31	43

SOURCE: *S.C B*, April, 1944, p. 13; February, 1945, p. 5.

It is clear that the largest relative gains have been made by farmers; and then in that order by employees, corporations, other proprietors, recipients of rents and interest. When personal taxes are deducted, the relative gains of groups 1 and 2 are still greater, since they are less affected by taxes than the others.

Table 95 reveals official figures as adjusted by Dr. Kuznets. (The large relative gains of labor and agriculture and the relative losses suffered by property income are evident.)

TABLE 95.—AGGREGATE PAYMENTS—PERCENTAGE DISTRIBUTION, 1939, 1943

	1939	1943
1. Employee compensation	68.3	73.6
2. Entrepreneurial net income	15.8	16.7
Agricultural, included in (2)	6.1	8.6
Other, included in (2)	9.7	8.1
3. Property income	15.9	9.7

SOURCE: S. Kuznets, *National Product in Wartime*, prelim. ed., p. III-30, 1944.

In view of the relatively small percentage of income obtained by those with incomes in excess of $5,000 *(estimated at* 15 *per cent of income after payment of personal taxes in* 1944*), and the proportion of capitalist income other than farm income (after corporate taxation) to all income (approximately one-fifth), and in view of the large savings both by corporations and recipients of capitalist income, we may conclude that the rise of capitalist income contributed little to the rise of demand for consumption goods.* Business contributed, moreover,

to the fight against inflation in curtailing its demand for factors not only for capital expansion but, even more important, for capital maintenance. This is not to deny that what is gained in war may strengthen the inflationary forces in the postwar period. On another score, the rise of profits is unfortunate. As profits rise, stabilization of wages meets increased resistance.

What of the relation of rising profits and prices? The rise of corporate profits from 1939 to 1944 (prior to taxes) is estimated at $18 billion to $19 billion and for other enterprises at $3 billion to $4 billion. If profits had been stabilized at the 1939 level, the price level might then have been 12 per cent below the actual figures in 1944. *This is on the assumption that the* $21 *billion to* $23 *billion saved* (*about* 14 *per cent of national income*) *would have been passed on to consumers in lower prices and that there would have been no adverse effect on output.* We have, moreover, left out of account the rise of taxes. Against the increase of profits of $21 billion to $23 billion is to be put approximately $14 billion of additional taxation (exclusive of the added taxes under personal income taxation). *At most, then, the rise of profits through direct effects on prices charged might be held responsible for an increase in prices of* 4 *per cent.*[1]

This effect on prices would be felt particularly in war industries, for profits were especially high in corporate enterprises, which obtained the major part of war business. Chart 74 illustrates the rise of corporate profits, both before and after taxes. It shows the large amounts taken by taxes as well as the relative stability of dividends paid, despite an increase of gross profits of three to four times.

We may conclude that the main contribution of capitalist income to inflation was not through a rise of demand for consumption goods, but rather through the setting of prices at a sufficiently high level so that despite the rapid increase of taxes, profits remained higher than in 1939. Taxation drained off the major part of these profits and, therefore, the net contribution of profits to higher prices was but a few per cent of 1939 prices. Even this is undoubtedly an overestimate, for we must allow for personal taxation. Incomes of $5,000 and over were estimated at $30 billion for 1944 and taxes at $9 billion or more, or 30 per cent or more of this income.[2] Part of these taxes are in fact taxes

[1] These figures are, of course, of the roughest kind. The assumption is made, furthermore, that profits are a cost factor rather than a result of price. In the market they are undoubtedly both cause and effect in relation to prices.

[2] House Hearings on *Revenue Revision of* 1943, *passim.*

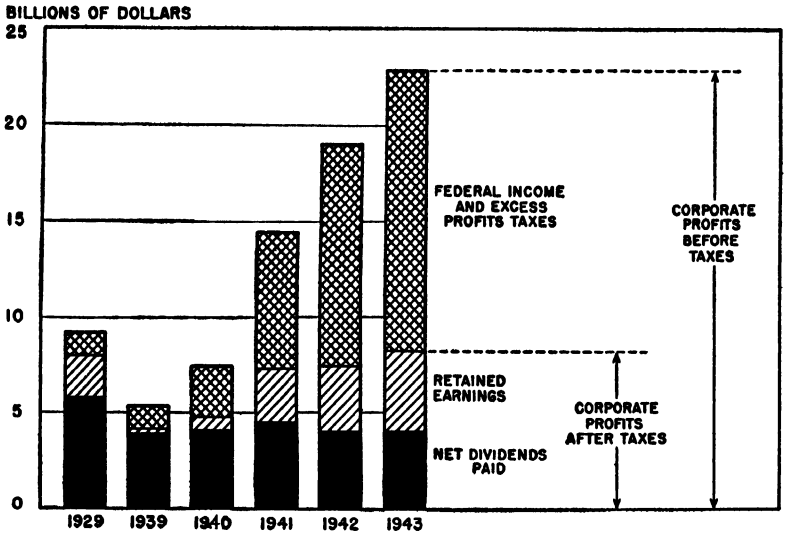

CHART 74.—Corporate profits before and after taxes, 1929 and 1939–1943. (*Source: U. S. Department of Commerce.*)

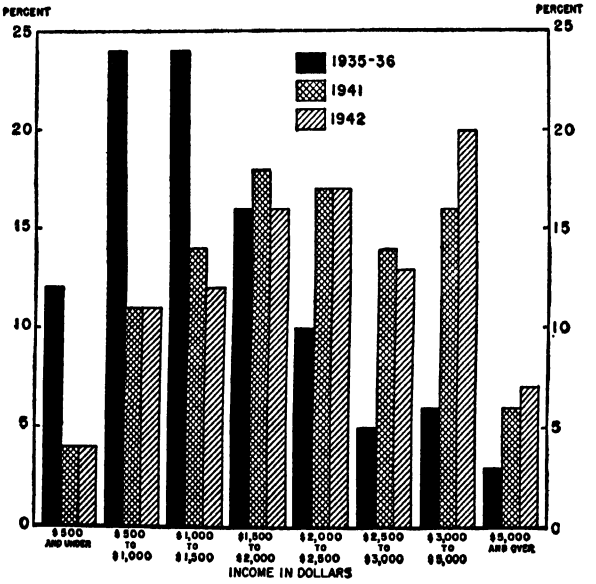

CHART 75.—Income of city families of two or more. (*Source: U. S. Department of Labor.*)

on profits. If, then, the tax receipts were not available, a corresponding amount of inflationary finance would have been required.

It would have been an admirable achievement, of course, if the inflationary effects of expansion of profits had been stopped entirely. This does not, however, mean that profits should have been kept down to prewar levels. An incentive was required to obtain the necessary expansion of output; and reserves are required for the adjustment to a peacetime economy.

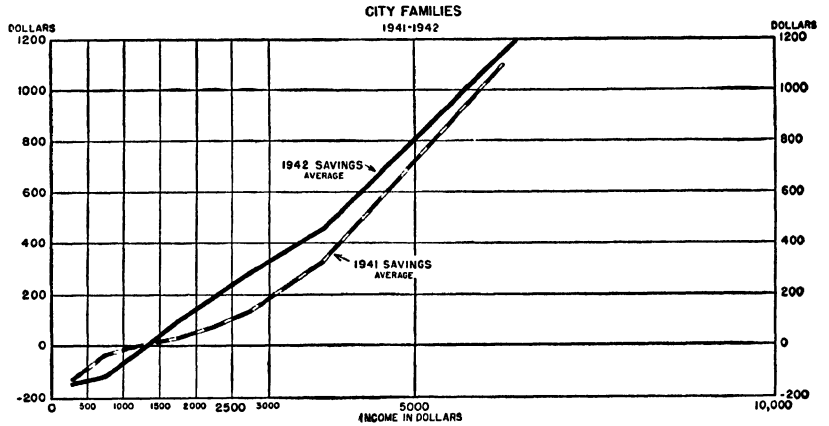

CHART 76. – Savings by income level. (*Source: U. S. Department of Labor.*)

In short, the main inflationary pressures come from the rise of noncapitalist incomes (inclusive of farm incomes) and not from capitalist incomes. The rise of incomes of farmers and employees from 1939 *to* 1944 *is estimated at* $75 *billion; for other capitalist income at but* $14 *billion.*[1] Furthermore, the latter should in no small part be considered not as costs but rather as surpluses resulting from prices. *Rises in wages and farm incomes are inflationary both because they increase costs and because a relatively large part of additional income is spent. On both grounds, nonfarm capitalist income is less inflationary.* In addition, personal taxation is heavier for the capitalist nonfarm income.

A partial and fortunate offset to inflation in the war period was the rise of savings by workers. This is explained in part by the increased number of recipients of incomes above the $1,500 level and the decline of recipients of incomes below $1,500 (see Chart 75), in part by unavailability of goods, and in part by savings campaigns

[1] *S.C.B.*, April, 1944, p. 13; September, 1944, p. 4; February, 1945, p. 5.

and the like (see Chart 76). As the average income rises, savings increase.[1] Another relevant consideration was the reduction of the take-home pay envelope relative to weekly earnings. The rise of both savings and of taxation (withholding tax) accounts for this development. Chart 77 makes this point clear.

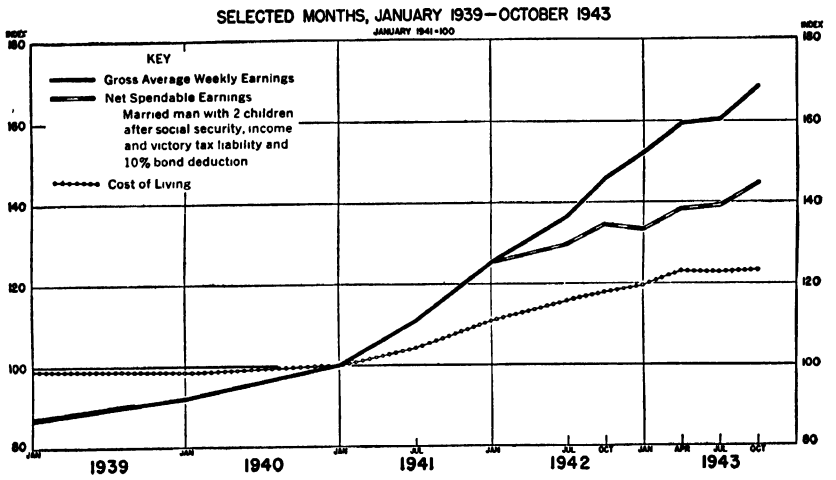

CHART 77.—Gross and net spendable weekly earnings of factory workers. (*Source: U. S. Department of Labor.*)

5. CONCLUSION

Before turning to the three notes at the end of this chapter (they raise some interesting questions but the reader need not consider them compulsory reading), I summarize the main findings of this chapter.

1. Rises in capitalist incomes other than farming were, on the whole, less than for noncapitalist income.

2. Expansion of capitalist incomes contributed relatively little to inflation. This conclusion rests on the following:

a. From 1939 to 1944 nonfarm capitalist income rose by $14 billion as compared with $75 billion for noncapitalist and farm income.

b. Large amounts were saved by business and by recipients of business income.

c. A heavy burden of taxation was imposed on this income.

[1] This is on the assumption that, with the rise, large changes in distribution do not have an equal and opposite effect on savings.

NOTES

I. Price Control and the Failure to Keep Profits Down

a. Introductory. This note is concerned with a problem puzzling to many. Why, in the light of price control, heavy taxation, the individual negotiation of procurement contracts for war, and renegotiation, did profits rise so much? [1] On one point there can be little doubt. Although the function of a price administrator is to control prices and not profits, it is inevitable that he has an effect on profits, if only incidentally. Prices are made up of costs and profits; if prices relative to costs are reduced by the administrator, then profits will suffer. The OPA has consistently held that each price regulation must, according to the act, be "generally fair and equitable." In their view, this does not mean profit control. But it does mean that if any price action is challenged, the "generally fair and equitable" provision requires examination of profits obtainable under a regulation in relation to profits *for the industry* in a base period.

In these notes, we consider briefly the principles of price control, for price control is one of the weapons used in the fight against inflation. Here it is made clear why modern price control and rising profits are compatible. We also discuss the failure of taxation to keep profits down and suggest that taxation of profits probably could not have been pushed much further. Finally, renegotiation contributes toward profits control. Here again, however, there is no intention to wipe out surplus profits. In fact, the philosophy of renegotiation is to reward the efficient, low-cost producer and in general to allow differentiation of profits according to the contribution to the war effort. Renegotiation supplements such general measures as price control and taxation.

b. The Act and Profits. The Emergency Price Control Act stipulates that maximum prices should be fair and equitable; but it neither limits profits nor guarantees them. It is required, however, to take profits into account insofar as these considerations are consistent with the purposes of the act. In the Executive Order of Oct. 3, 1942, the President was even more specific. Title 5 reads as follows: "The Price Administrator in fixing, reducing, or increasing prices shall determine price ceilings in such a manner that profits are prevented which, in his judgment, are unreasonable or exorbitant." [2]

c. Representativeness of 1936–1939 *Profits.* When it was necessary to take profits into account as a guide, the OPA generally related them to the base period 1936–1939. This is considered a normal period since it is reasonably recent and includes one very good year, one average year, and two bad years. This period seems to be a normal period in relation to output, consumption, and other economic variables of the years 1922–1940. But although this period may be taken to be a normal period if one considers most

[1] See Chs. IV and XIX of my *Price and Related Controls*, where these issues are discussed at length.

[2] This is discussed fully in Ch. IV of my *Price and Related Controls*.

of the variables, unemployment was unusually high and the return on capital was lower than it had been in the twenties. There seems to be, however, a downward trend in the return on capital and this may be a secular factor. The OPA did not see fit, as a rule, to take into account the return on invested capital, the reason being that it is very difficult to find out what is invested capital or to determine a fair or reasonable return on this type of capital.

Where use of 1936–1939 profits as a guide seems unjustified, they need not be used: experience of a particular industry back in 1936–1939 may have been substantially different from that of industry in general. Again, the application of the earnings standard for depressed industries might involve a substantial part of industry in losses. In such cases, the OPA will depart from the standards set by the 1936–1939 period. It may also be necessary to depart from those standards when considerations of supplies or consistency of price structures are decisive. That is, the OPA may grant adjustments in prices which go beyond the requirements of equity when necessary supplies may thus be increased.

d. Higher Costs and the Relevance of 1936–1939 *Profits.* In determining prices the OPA generally considered the ability of industry to absorb when a request for higher prices was made because of a rise of costs. In these cases the question of the relation of current profits to those of 1936–1939 arose. A price increase would also generally be required by the trade when the OPA, through its price regulation, would reduce industrial returns prior to taxes below those received during a normal period.

e. Individual Returns and Operations. But not all firms can be guaranteed normal, *i.e.*, base-period, profits. If 60 to 80 per cent of all firms can earn base-period profits on the basis of a stipulated price regulation, then it may well follow that a number of firms will not do so well and perhaps many firms may do unusually well. The administrator may make adjustments for individual firms to cover costs when essential supplies might otherwise be jeopardized. In ruling on pleas for adjustments, the OPA was disposed to take into account all the operations of a firm rather than any particular operation.

In setting formula ceilings, however, it was possible to take into account cost variations of particular firms. Even then, profits were not guaranteed. If losses were made in a base period, the formula ceiling may not pull a firm out of the red. The philosophy behind the formula ceiling is that each firm will be allowed adjustments to some extent according to changes in various costs.

Much controversy has centered around the issue of whether a firm should be asked to do a particular job on which it takes a loss or at least does not make its normal profit. Obviously an importer will not import bananas if he does not meet his variable costs, even if the general profits of his business are favorable. A manufacturer of spark plugs will not pack his spark plugs for the government at a loss, even if he does make a large profit on their manufacture. He will try to force the government to pack. In such cases,

however, the government may insist, taking into account the over-all picture for both the manufacturing and packing of spark plugs and possibly even the over-all profit position on all production. In general, however, a multi-product firm is not asked to sell at less than out-of-pocket expenses for any one item.

In some cases, the government will allow a price rise in commodity *A* if concessions are made by the firm in the sale of *B* or *C*. Concerns doing war business frequently earn adequate profits on this business to allow sales to civilians at less than full cost plus a fair profit margin. Although the general profit position is a significant guide, the price administrator must always keep in mind the effect on supply of a price below cost of any one item. Where, moreover, firms concentrate production on one item—and where this is the general practice—for the relatively few firms that sell this *and other items*, pricing for the commodity under discussion is necessarily determined on an individual commodity basis. The multiple-product firm can be considered further, in terms of the over-all profits position.

f. Other Criteria of Profits. The government is also inclined to take into account other criteria of adequacy of profits, for example, the percentage of profits to sales. If it is noted that the ratio of profits to sales is rising because of an increase in output, the government may well ask for a rollback of prices or refuse to grant a rise following an increase in cost. Where the improvement in profits is the result of increased efficiency, the government is less inclined to demand an adjustment in prices. In this connection Table 96 is of interest.

TABLE 96.* - CORPORATE PROFITS AFTER TAXES AS PERCENTAGE OF GROSS RECEIPTS

	1940	1942
Mining	3.0	6.1
Manufacturing	4.9	3.7
Trade	1.6	1.3
Transportation	1.6	3.8
Power and gas	13.0	12.3

SOURCE: *S.C.B.*, June, 1943, p. 27.

* For 1943 figures, see discussion for manufacturing and trade in the body of this chapter; also Tables 97 and 98.

It will be observed that in general there was a substantial rise in the profits in relation to gross receipts for some industries while the reverse was true for others. Table 96 is based on corporate profits after taxation. If the correct approach, however, is to consider corporate profits before taxation (as I believe), it will be found that in general the ratio of profits to sales has increased steadily. A report of the OPA, for example, shows that all corporations obtained 8.1 per cent return on net sales in 1939, 10.3 in 1940,

and 13.5 in 1941. This is based on an analysis of a sample of 1,324 large corporations.[1]

Later figures indicate that margins on sales (prior to taxation) declined somewhat since 1941; but they are still substantially above 1936–1939 levels. Margins after taxation are now substantially below the prewar level. Total profits both before and after taxation are still very high in relation to prewar. Here the increase in volume and, in many industries, reduction of selling costs, are of some importance.

TABLE 97.—2,187 LARGE CORPORATIONS—PER CENT RETURN ON NET SALES

Before taxation						After taxation					
1936–1939	1939	1940	1941	1942	1943 *	1936–1939	1939	1940	1941	1942	1943 *
6.4	8.5	10.6	13.8	12.1	11.5	6.9	7.0	7.5	7.1	5.1	4.3

SOURCE: OPA.
* 1942 and 1943 not strictly comparable.

We refer the reader again, as we did earlier in this chapter, to the discussion in the *F.R.B.* of January, 1945. In general, there was a rise in margins on net sales, and in profits before and after taxes in relation *to net worth;* and in general the *relative gains* were greater for small than for large business. Thus consider Table 98.

TABLE 98.—EARNINGS BEFORE TAXES AS PERCENTAGE OF SALES, FOR SAMPLE OF MANUFACTURING AND TRADE CONCERNS

Asset size, million dollars	Manufacturing		Wholesale trade		Retail trade	
	1940	1943	1940	1943	1940	1943
¼–1	3.1	9.0	1.8	4.1	2.6	7.5
5–10	8.1	12.4	4.2	6.0	2.9	8.0

SOURCE: *F.R.B.*, January, 1945.

g. Stabilize Profits before or after Taxes? A general question is raised by many as to whether, in fixing prices, the price-control agencies should take into account the profit position *before* or *after* payment of taxes. When the government is taxing away two-thirds of the total profits in direct business taxation, it is surely a very important issue whether one or the other is

[1] OPA, *Third Quarterly Report* (period ended Oct. 31, 1942), p. 16. Prof. Mills finds that net profits, after taxes, per unit of product for manufacturing corporations varied as follows: 1939 = 100; 1942 = 98; first quarter 1943 = 93. *Prices in a War Economy*, p. 58.

selected. The general view of the government was that in fixing prices, when profits have to be taken into account, the government should concentrate on profits before payment of taxes. In other words, prices should be fixed so low that profits, prior to payment of taxes, should not rise greatly above the 1936–1939 level. This does not necessarily mean that the OPA will fix prices in a manner to prevent profits from rising above the 1936–1939 level. In practice this would be impossible for the OPA to do, both because of the need of incentive to obtain a very large rise of output of the proportions of two-thirds or more, and because in some important areas the OPA has little or no authority. It does mean, however, that, when price adjustments are requested, profits on sales prior to payment of taxes will be a relevant consideration as will total profits before taxation. Particularly where adjustments in prices are asked, the government takes into account any change in profits as compared to 1936–1939 prior to payment of taxes.

If the government took as its measure profits after taxation, it would be an implicit assumption that business is not supposed to bear any of the burdens of war taxation—that they are merely collecting agents, then, for the Treasury, the consumer paying ultimately in higher prices. The government, of course, operates on no such assumption in wartime.

In practice the wartime need of introducing general price measures which may incidentally result in some firms making large profits—the modal firm making average profits and the submarginal firm making less than average profits—makes it impossible, irrespective of any price-control measures, to stabilize profits at the prewar level in a fluid period like the present. In many cases, however, the net effect of taking into account profits prior to taxation results in substantial savings to consumers and the government.

h. OPA and the Large Rise of Profits. The figures above are evidence that the OPA did not prevent large rises of profits. A rise of corporate profits from $5 to $24 billion prior to taxation bears this out. When the government has to concentrate on supply considerations and when the approach is through general price regulations, large excess profits are bound to arise. When recourse is had to differential pricing such as the copper premium plan and prices are adjusted to costs for individual firms, the rise of profits may be kept down.[1] Formula ceilings tend to have similar effects; but unfortunately they present difficulties of enforcement.[2]

The OPA's failure to prevent runaway profits even for standard commodities was the subject of comment before the Senate Finance Committee, where the chairman of the War Department Price Adjustment Board argued for renegotiation even on contracts for standard commodities on the ground that OPA regulations had failed to prevent large rises of profits.

Nineteen manufacturers of perishable tools increased their sales less than six times from the base period to 1942; but net profits before taxation rose from $5 to $62 million, or more than twelve times. The ratio of profits to sales rose from 17.1 per cent in 1936–1939 to 40 per cent in 1942.

[1] See Ch. XI of my *Price and Related Controls.*

[2] *Ibid.*, Ch. IX.

Ten lumber companies had combined sales of $106 million in 1942, a rise to 2½ times the sales of the base period. Profits rose to five times the base level, and the ratio of profits to sales from 11.8 to 26.1 per cent. Fifty-three cotton textile firms had combined sales of $549 million in 1942 against $207 million in the base period. The respective rises in sales, profits, and the profits-to-sales ratio were to 2⅔, 9, and 3⅓ times that of the base period.[1]

In summary, profits will rise despite price control. General price measures must allow large profits to low-cost producers; considerations of supply frequently require liberal pricing; practical price fixing does not generally allow of price reductions *pari passu* with the growing economies of expanding output; finally, there is the problem of failure to obtain compliance in price regulations.

II. Taxation and Profits

At present high levels of corporate income and excess-profits taxes the government siphoned off a substantial part of profits. Whereas in 1929 total corporate profits after taxes were 87 per cent of profits before taxes, in 1942 they were only 42 per cent. The figures for 1943 and 1944 (estimated) were 39 and 39-40 per cent. In 1942 a substantial rise in tax rates had the effect of reducing the rise of profits after taxation to less than 1 per cent over the period 1941, but profits before taxation were up 35 per cent. In other words, the large increase of tax rates had the exclusive effect of absorbing increased profits of the year 1942 over the year 1941. Corporate profits after taxation have not varied greatly since 1942, the largest increases having already been made by 1941. Since 1943, profits seem definitely stabilized (Table 99).

TABLE 99.—CORPORATE PROFITS AFTER TAXATION

	Billion Dollars
1939	4.2
1941	8.5
1942	8.7
1943	9.8
1944 *	9.9

SOURCE: *S.C.B.*, April, 1944, p. 12; September, 1944, p. 4; and February, 1945, p. 5.
* Estimated.

It appears that corporation profits after taxation in 1943 and 1944 were $5.6 and $5.7 billion, respectively, above those in 1939, a rise of about 133 per cent. This increase may not be so large as it at first seems if an allowance is made for the rise in prices and also for the possible losses in the conversion period. Nevertheless, despite the very high rates of taxation, net income of corporations was much higher than prior to the war. We may, therefore, conclude that taxes are not likely to be imposed at rates which

[1] J. M. Dodge, chairman, War Department Price Adjustment Board, testifying before the Senate Finance Committee, *The New York Times*, Dec. 12, 1943.

will exclude very large increases in profits. At least our experience in this war suggests this conclusion. The excess-profits duty rate in 1943 was 90 per cent, and the combined normal and surtax rates on corporate income over $50,000 was 40 per cent.[1] An upper limit of 80 per cent of corporate profits was placed on all taxes of corporations. In addition, of course, income tax is assessed on recipients of dividends. The average burden of personal taxes for 1944 was estimated very conservatively at 30 per cent of incomes in excess of $5,000. Corporations, then, paid in taxes 61 cents for each dollar of net income and those in $5,000 brackets and higher paid 30 per cent or more additional on roughly one-half of the net income paid out.[2]

It is dubious that a much higher rate of return could be obtained from corporations by taxation. Possibly 10 per cent more of the net profits of corporations might have been obtained without any great damage to the economy in wartime. That would have resulted in an additional yield of $2.5 billion in 1944 and have brought all corporate taxes, inclusive of excess-profits duties, up to 70 per cent. It would, however, be necessary to increase income taxes to some extent to make up for the loss on income tax yields resulting from the failure to pay out approximately $1.25 billion net of dividends. I assume here that approximately one-half of corporate profits after payment of taxes is distributed as dividends.

The higher the rates of taxation, of course, the more difficult problems are raised for individual firms and particularly those firms that undertake large risks. This is, for example, especially true of corporations that normally expect to earn a high profit only a few years in the run of the average business cycle. In this connection it is interesting to observe that in 1939 corporations with no net income suffered losses of $1,977 million and in 1944 the estimated figure was $1,500 million.[3] These figures suggest that at any one time—even in prosperous periods—a large proportion of corporations lose money.

That approximately two-thirds of the total taxation from corporations came from the excess-profits tax is of some significance. The yield of the excess-profits tax depends in no small part upon the income in the base period and the amount of capital of each corporation. The firm that had large earnings or much capital in the base period was on the whole in a better position than firms not so favorably situated. All kinds of problems of injustice as between individual firms arose. As is to be expected, the higher the tax rate, the more will these apparent injustices affect business morale. If total corporate taxation is to be increased by 10 per cent, however, reliance must be had primarily on an increase in corporate income taxation.

[1] *Revenue Revision of* 1943, *passim.*

[2] *Cf.* Chamber of Commerce, *The Problem of Business Incentives*, p. 27, 1943. Here it is estimated that if a corporation invests $20 million and earns 10 per cent or $2 million, it will pay taxes of $1,210,000. If the corporation is owned by one individual with no other source of income, the net yield on the investment would be $\frac{9}{10}$ of 1 per cent. This yield is undoubtedly inadequate to cover risks.

[3] House Hearings on *Revenue Revision of* 1943, *passim.*

But this method raises serious problems regarding justice as between corporate business enterprise and noncorporate business enterprise. A rise in the normal or the surtax personal income tax does not exactly solve the problem since it would be bad taxation policy to adjust the whole personal income tax structure in order to deal with the problem of incomes of a part of the total group, namely, business income.

Any substantial increase of business taxation had to be accompanied by added taxes on low-income groups. But in view of the uncertainty of the financial position of business after the war, no substantial rise of business taxes could be recommended. Even 10 per cent of the yield was probably too much.[1]

One strong reason against additional taxation was the need of postwar reserves.[2] It is possible, however, to exaggerate the need for reserves, especially since corporations were then accumulating about $4 billion to $5 billion yearly out of their net income and also because the large backlog of expenditures for depreciation or maintenance will probably be much more effective in the postwar period than equal amounts spent before the war and therefore to that extent will provide corporations with a much larger amount of capital than might be indicated by a consideration of the number of dollars involved. Furthermore, as was suggested by the Treasury, it might be much wiser to deal with corporate problems of conversion through special adjustments with individual corporations than to make general concessions in the tax structure.

Finally, as was noted in Chapter XV, we need not pay too much attention to incentives in wartime. The problem is certainly real for a number of corporations, especially those that take large risks; but in general, in wartime when the market is really a sellers' market, incentive does not play a very large part. When corporations are earning $9 billion after taxation, as compared to $4 billion before the war, there is no doubt but that there is an incentive to increase output and reduce costs. This generalization holds for most firms, but not for the marginal or submarginal ones.

It is clear that taxation cannot deal with the problem of large profits unaided by other measures. We have already discussed the issue of price control which to some extent has the effect of controlling profits but certainly does not do a very effective job in that area. The final approach is through renegotiations of contracts and we turn to that problem in Note III of this chapter. It should be observed that renegotiation arises only on contracts for the production of war goods. This is, however, a very important area both because the government spent about half of the national income for war and also because profits were especially large in this area. At the

[1] *Cf.* S. M. Livingston and E. T. Weiler, "Can Business Finance the Transition?" *S.C.B.*, February, 1944, pp. 9–11; Keith Butters, *Business Taxes and Postwar-Reserves*, 1944; C. C. Abbott, *Business Finances during the Critical Transition from War to Peace*, 1944. Optimism concerning adequacy of reserves is greatest in the first study and least in the last. *Cf.* Ch. XXVI.

[2] The President made no recommendations for a rise in taxes in his budget message of January, 1945.

very outset we should observe, however, that since corporate profits before taxation rose three to four times as compared to the prewar period, it is quite clear that neither price control nor renegotiation was overly successful in keeping down profits. Profits before taxation, after all, reflect the effect of renegotiation to a considerable degree, and they were estimated at $25 billion for 1944. To some extent, the gains from any reduction of prices on future contracts resulting from renegotiation will be obtained later.

III. Renegotiation [1]

The Truman Committee put the subject well:

"Taxes alone will not do the job because (*a*) higher corporate tax rates are likely to encourage higher costs and discourage economical production; (*b*) no scheme of taxation has been devised which is sufficiently flexible to provide an incentive for efficient low-cost production; (*c*) a profit percentage which would barely reward one war contractor with one type of financial structure would bankrupt a second contractor with a different financial set-up, and would provide inordinately excessive profits for a third contractor with a still different financial problem."

In a press release of Feb. 9, 1943, the Army and Navy said that "any single profit yardstick is invalid because of wide variations among contractors in investment, efficiency, past earnings, government assistance, turnover, and inventive contribution. However, in general, the margin of profit which a company makes on its expended war sales may be limited to one-quarter or one-third of the margin of profit on peacetime sales."

Renegotiation of contracts is required when the establishment of a fair and reasonable price awaits further experience. At the time of signing of contracts, costs and profits are frequently not known with a reasonable degree of precision.

According to the Joint Statement, Section 403 on renegotiation is not a tax act designed to raise revenue, but a price adjustment act designed to lower costs. It is held that taxation is ineffective in meeting all the problems of costs and incentives. To quote:

"*First.* War matériel contracts, which have generally been profitable, sometimes are excessively so because many war industries have had to be created under forced draft. In many cases profits have been unpredictable because the production of repetitive items has increased by geometric proportions."

"*Second.* War industries lack the normal competitive incentive for low-cost, efficient operation. The Government in many instances must vie for

[1] In addition to the report on *Renegotiations of War Contracts* of the Truman Committee, Senate Report 10, pp. 1–5, March, 1943, see *Joint Statement by the War, Navy and Treasury Departments and the Maritime Commisssion*, "Purposes, Principles, Policies and Interpretations," under Section 403 of the Sixth Supplemental National Defense Appropriation Act 1942, Mar. 31, 1943; House Report 733 on *Renegotiation of War Contracts* (October, 1943); and also Chs. XIX and XX of my *Price and Related Controls*, and Ch. XXVI of this volume, where additional references will be found.

every available source of supply, regardless of cost. Neither taxation nor any proposed profit limitation formula restores this incentive. In fact, taxation and most limitation formulas put a premium on high costs." [1]

The Truman report stated as follows:

"We must win the war regardless of cost. We must therefore have both high quality and large volume production, even though the cost be staggering. The dollar cost of war equipment, however, cannot be ignored. In addition to the desirability of keeping war costs at a minimum because of the necessity of paying those costs out of taxes, high costs mean that more materials and more man-hours are used. Both are exceedingly scarce. To obtain the best production for war, we must take care to use them efficiently." [2]

It was also held by the Truman Committee that, where the government had to experiment with new products and deal with quantities with which it had no previous experience, it was necessary for the government to protect itself through renegotiation provisions. Especially in the case of lump-sum contracts where costs could be nothing more than a wild guess, it was necessary to proceed with renegotiation. This was particularly true of the large number of contracts signed in the early days of the war.

Renegotiation was not expected to apply over the whole economic field. In fact, the government held that in many cases experimental pricing might be used for a short period, perhaps four months, and on the basis of this experience contracts might be readjusted on a more permanent basis. In such cases, if the producers produced at low cost, they would be given an adequate incentive and, therefore, would obtain larger profits. Moreover, in all cases where costs were clearly established, it would not be necessary to apply the renegotiation principle. The exact area of coverage was still a matter of discussion in 1944. In a spirited debate early in 1944, a Senate committee was prepared to eliminate standardized commodities and products produced by subcontractors that do not go into delivered items.

According to the Truman Committee, taxation was certainly not the most important or even an important aim of renegotiation. It was held, for example, that up until the early part of 1943 the government saved only $1.2 billion on renegotiation contracts and when allowance was made for the taxes of this amount the net saving of the government was only $300 million. In a later statement quoted in *The New York Times* of Dec. 12, 1943, Under Secretary Patterson said before a Congressional committee that the government had already saved $5,200 million, $1,500 million of which would not have been recovered by excess-profits taxes.[3] This is of course an item of some importance and if the war had continued through 1946 and expenditures for munitions and construction had attained a total of $200 to $250 billion,[4] it certainly would not have been too optimistic to put the savings at 5 per cent of these expenditures, say $12 billion before, or $3 to

[1] *Joint Statement . . ., op. cit.*, p. 3.

[2] *Senate Report* 10, p. 1.

[3] *Cf.* also *Renegotiation of War Contracts*, p. 6. (Estimates given at beginning of this chapter.)

[4] Senate Hearings *To Continue the C.C.C.*, p. 174, 1943.

$4 billion after taxation.[1] Until May, 1943, the savings were roughly about 6 per cent of the contracts involved.[2] Of course, only a limited percentage of all contracts will be subject to renegotiation and, therefore, the relevant figure is not the total of all governmental expenditures but those that will be subject to renegotiation.

Just a word concerning the incentives involved in the renegotiation procedure. As the Truman Committee stated, "When Producer *A*, within a given period, produces 100 tanks at a cost of $10,000 each, while Producer *B*, within the same period, produces only 50 similar tanks at a cost of $15,000 each, who can contend that it is excessive, unfair, or unpatriotic for *A* to receive a substantially greater profit both in percentage and in dollars, than *B*?" [3] Or again, the committee stated as follows: "Yet, an inflexible formula, or higher excess-profits tax limiting 'profits' alone would treat the effective producer the same as the ineffective producer, the high-cost producer the same as the low-cost producer, and an important incentive to the able and efficient would be lost. This dilemma can be solved by proper administration of a flexible provision for price adjustment. . . ." [4]

Finally, in the Joint Statement, the following points were made as regards the method of dealing with excessive profits. The government official should take into account such matters as price reduction and comparative prices, efficiency in reducing costs, economy in the use of raw material, efficiency in the use of facilities and in the conservation of man power, character and extent of subcontracting, quality of production, complexity of manufacturing technique, rate of delivery and turnover, inventive and developmental contribution, and cooperation with the government. In other words, where the contractors were efficient, saved materials, cooperated with the government, produced commodities when they were needed, etc., the amount of profits allowed would be larger than otherwise.[5]

Renegotiation is then a procedure by which the government protects itself in periods when it has to make contracts quickly and when costs are not easily established. It is also a procedure for dealing with the problem of curtailing costs of raw materials and factors of production. Contributions toward reduction of money war costs are significant, but not so greatly significant as many think, though perhaps larger than some of the spokesmen for the government contended. It is an excellent technique for treating problems of each contractor and tailoring his operations to the requirements of the war economy.

[1] In the aforementioned letter to *The New York Times*, Under Secretary Patterson estimated possible savings at $3 billion (Dec. 12, 1943).

[2] Over-all figures are of limited significance. The Army presented the total of contracts *involved* and savings effected. The Navy, on the other hand, dealt only with total contracts and did not seem to tie up the savings with *renegotiated* contracts. For the former, the ratio of savings to renegotiated contracts was 10 per cent prior to taxes: the contracts were for $20 billion and the savings $2 billion. *Renegotiation of War Contracts*, p. 6.

[3] *Senate Report* 10, p. 5.

[4] *Ibid.*, p. 6.

[5] *Joint Statement . . . , op. cit.*, p. 8.

By way of summary, we may say this. *Total business profits over* 5 *years of war (fiscal* 1941–1945) *may be very roughly estimated at* \$120 *billion and total war expenditures at* \$275 *to* \$300 *billion, of which perhaps two-thirds were for construction and munitions and the remainder for pay, subsistence, agriculture, lend-lease, and civilian war activities. Taxes might account for two-thirds of the profits, or* \$80 *billion. Of the remainder* (\$40 *billion), it is possible that* \$4 *to* \$5 *billion might be obtained through renegotiation net after taxation.*[1] Some of the worst excesses are thus eliminated and incentive is not seriously impaired. At best, renegotiation can be a partial cure of excess profits. At best, it provides a tailoring of profits according to contributions to war efforts. Its coverage is limited and there are difficult problems of administration, both of which reduce the net amounts thus siphoned off.[2]

[1] *Cf. Budget*, 1946, p. vii.

[2] For a good discussion of the principles of renegotiation, the applicability of formulas, the relation of renegotiation to taxes and reconversion needs, the area to be covered, etc., see House Report 733 on *Renegotiation of War Contracts*, October, 1943.

Chapter XIX

The Rise of Pay Rolls

1. INTRODUCTION

It must be clear by now that the rise of pay rolls is the most important single factor contributing toward inflation. Its effects are felt both in rising costs and increased demand.

The next four chapters are devoted to the discussion of wages and inflation. This opening chapter considers the rise of pay rolls, analyzes the contribution of important components to this increase, and dwells on the relation of rising wages and demand for consumption goods. Chapter XX analyzes further the increase in basic wage rates. Chapter XXI is probably the most important chapter of the four, for it consolidates the material in the previous two chapters and assesses the country's wage policies. It shows the relation of wages and the cost of living; wages and productivity; the relation of man-hours and the total wage bill; the contribution of rises in basic wage rates and upgrading. Also appraised are our wage policies in terms of incentives required and the practical limits of a noninflationary wage policy. Chapter XXII, also on wages but of less importance than the others, presents the legal, administrative, and statistical aspects of the War Labor Board (WLB) wage policy.

In the discussion of wage increases, we would do well to distinguish various concepts. The percentage rise from 1939 to 1944 is given in Table 100.

Series (2) in Table 100 excludes supplementary payments (relief, social security, etc.); the rise is less than under (1). Supplementary payments became of declining relative significance. Since the rise of government pay rolls was particularly sharp, their exclusion in (3) accounts for the smaller rise in (3) than in (1) or (2). Finally, the marked rise in (4) may be associated with (*a*) the relatively larger rise of increases for those receiving less than $3,000 and (*b*) the marked gains made by those top earners, who are disproportionately covered under social security.

TABLE 100.—PERCENTAGE RISE OF WAGES AND SALARIES

	1943/1939	1944/1943
1. Total compensation of employees	131	9
2. Salaries and wages	119	9
3. Salaries and wages, exclusive of government	109	*
4. Pay rolls covered by old-age and survivors insurance and railroad retirement	126	*

SOURCE: *S.C.B.* and *S.S.B.*
* Not available.

2. AN ANALYSIS OF WAGE INFLATION [1]

In the five years from January, 1939, to January, 1944, wages in manufacturing industries rose by 250 per cent. Average weekly earnings

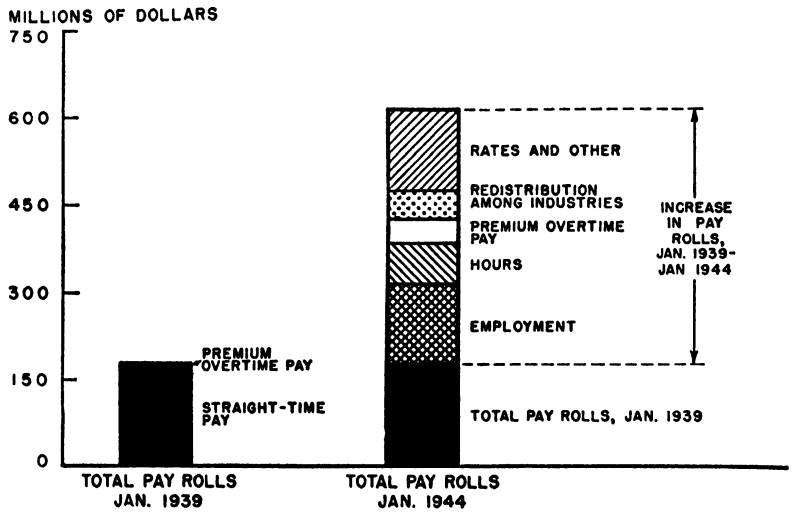

CHART 78.—Composition of manufacturing pay rolls. (*Source: U. S. Department of Commerce.*)

were up 95 per cent, and the number of employees 78 per cent. The most important factors accounting for the rise in manufacturing pay rolls are revealed in Table 101 and Chart 78.

[1] See especially E. C. Bratt and C. H. Danhof, "Components of Wartime Wage Changes," *S.C.B.*, September, 1944, pp. 17–18, and H. M. Douty, R. J. Myers, and H. D. Bloch, "Wages in Manufacturing Industries in Wartime," *BLS Bull.* 756, November, 1943.

TABLE 101.—FACTORS ACCOUNTING FOR CHANGES IN MANUFACTURING PAY ROLLS, JANUARY, 1939–JANUARY, 1944

	Per cent
1. Increased employment	31.3
2. Increased hours	16.3
3. Increased overtime premiums	9.5
4. Redistribution among industries	11.3
5. Other, chiefly increased rates	31.6

SOURCE: E. C. Bratt and C. H. Danhof, "Components of Wartime Wage Changes," *S.C.B.*, September, 1944.

Table 101 suggests that the important factors in pay rolls were a rise in man-hours of employment (items 1 and 2) and a rise in average hourly earnings (items 3, 4, 5). The latter is, however, made up of many components. In particular the rise of overtime premiums and the redistribution of workers to higher paying industries account for about two-fifths of the increase in the average hourly wage. Item 5 is an omnibus one which includes a rise in basic wage rates. It is also related to changes in the proportion of workers on late shifts with wage differentials, changes resulting from the shifts of workers from low-wage to high-wage occupations; upgrading and promotions; and rises in incentive pay.[1]

It is difficult to appraise the importance of these last items as against the change in the basic wage rate. The significance of the increases in basic wage rates will be assessed in a later chapter. Prof. Slichter, analyzing the rise of the wage bill from 1939 to 1943 (all wages and salaries), estimated that one-half of the rise was associated with an increase of man-hours, one-quarter with a rise in the basic wage rate, and one-quarter with upgrading. In other words, he weighted upgrading as heavily as the upward revision of basic wage rates.[2]

Results of an official study check pretty well with this.

[1] In a study late in 1944, the BLS listed changes in 15 items that influenced total wage payments: changes in hourly wage rates and in liberality of incentive pay; adjustments in hourly rates in recognition of merit, etc.; changes in output of workers paid on an incentive basis; rise of incentive payments and in relative importance of individual companies or establishments; changes in the composition of the labor force and the relative importance of regions or localities; modifications of provisions for premium pay for work on extra shifts; changes in extent of extra-shift work at premium pay, in occupational structure, in provisions for premium pay for overtime work and in relative importance of individual industries; rise in the prevalence of overtime work at premium pay and in weekly hours of work. *Wartime Wage Movements and Urban Wage-rate Changes*, BLS Serial *R* 1684, October, 1944, p. 3.

[2] S. H. Slichter, "The Labor Crisis," *The Atlantic Monthly*, February, 1944. *Cf. Ninth Monthly Report of the National War Labor Board*, Jan. 1, 1944, p. 8.

TABLE 102.—AVERAGE MONEY EARNINGS OF WORKERS IN MANUFACTURING
(January, 1939 = 100)

	July, 1941	July, 1942	July, 1943
1. Average weekly earnings	127.7	157.1	184.4
2. Average hourly earnings	116.3	135.4	152.4
3. Estimated straight-time average hourly earnings	113.6	129.9	145.1
4. Item (3) adjusted for interindustry shifts	110.6	121.8	132.1

SOURCE: H. M. Douty, R. J. Myers, and H. D. Bloch, "Wages in Manufacturing Industries in Wartime," *BLS Bull.* 756, November, 1943.

Table 102 also suggests that

1. From January, 1939, to July, 1943, the allowance for increased overtime and adjustments for interindustry shifts accounted for two-fifths of the rise in average hourly earnings.

2. The year of largest wage increases was July, 1941, to July, 1942 (approximately 25 per cent for the average weekly wage).

3. The annual *rate* of increase for *weekly earnings* was less in the following year, and still less in the six months ending January, 1944.[1]

4. Estimated straight-time hourly earnings, *adjusted*, continued to rise almost as rapidly in the year ending July, 1943, as in the preceding year.

This should not be taken as a reflection on the WLB; in fact, the explanation is undoubtedly upgrading, rise of incentive pay, movement to higher paying plants, and the like. At least for the six months ending January, 1944, there may even have been a decline in straight-time hourly earnings adjusted.[2]

That more than 11 per cent of the rise in pay rolls from early 1939 to early 1944 was accounted for by a redistribution of workers is largely explained by the following:

The number of workers in war industries rose in those years from 2.8 to 8 million, and that in nonwar industries from 4.9 to 5.6 million. A differential of 34 per cent in straight-time hourly wages in favor of war industries prevailed both in 1939 and in 1944. (There was a rise in the absolute differential.) These large relative gains in numbers for war industries account, then, for the increase in wages here associated with

[1] Based on a comparison of figures in Table 102 and those in the *S.C.B.* studies.

[2] *Cf.* Ch. XXII, where a comparison of two months' periods—prior to and after stabilization—yields results somewhat more favorable to the government.

redistribution.[1] (*Cf.* Charts 79 and 80 for the large weekly earnings, and the large rise in employment in war industries, and the corresponding changes for food and textiles.)

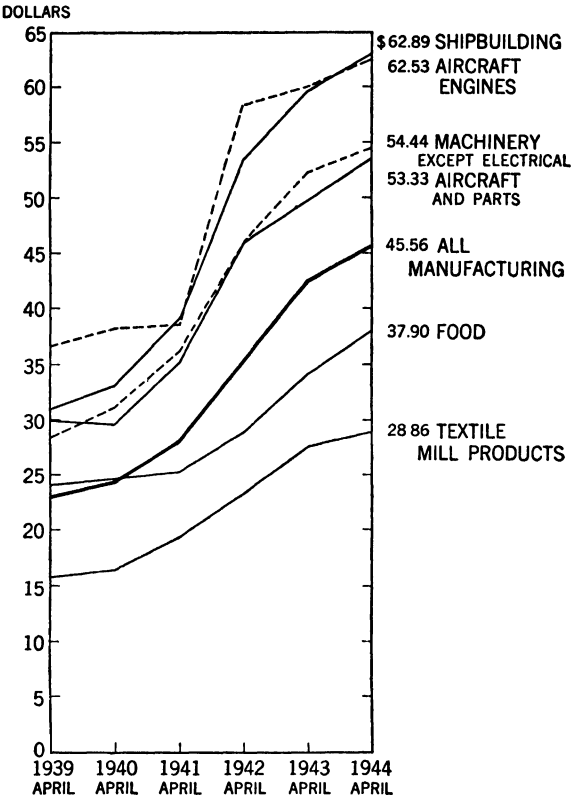

CHART 79.—Weekly earnings in selected industries. (*Source: Bureau of Labor Statistics.*)

It is in general necessary to distinguish war from nonwar industries. In Table 103, for instance, it will be observed that the rise of pay rolls was much larger for war than for nonwar industries, and that the rise for war paralleled that for durable-goods industries, and that for nonwar that of nondurable-goods industries.[2]

Pay rolls in war industries accounted for about 80 *per cent of the total rise of pay rolls from January*, 1939, *to January*, 1944. Pay rolls in nonwar industries accounted for but 20 per cent. *Whereas in war industries, the rise in straight-*

[1] *S.C.B.*, September, 1944, p. 18.
[2] *Ibid.*

time hourly earnings accounted for less than one-third of the total increase in pay rolls, this factor accounted for more than one-half in nonwar industries. An increase of employment is responsible for more than two-fifths of the rise of pay rolls in war industries; and less than one-fifth in nonwar industries.

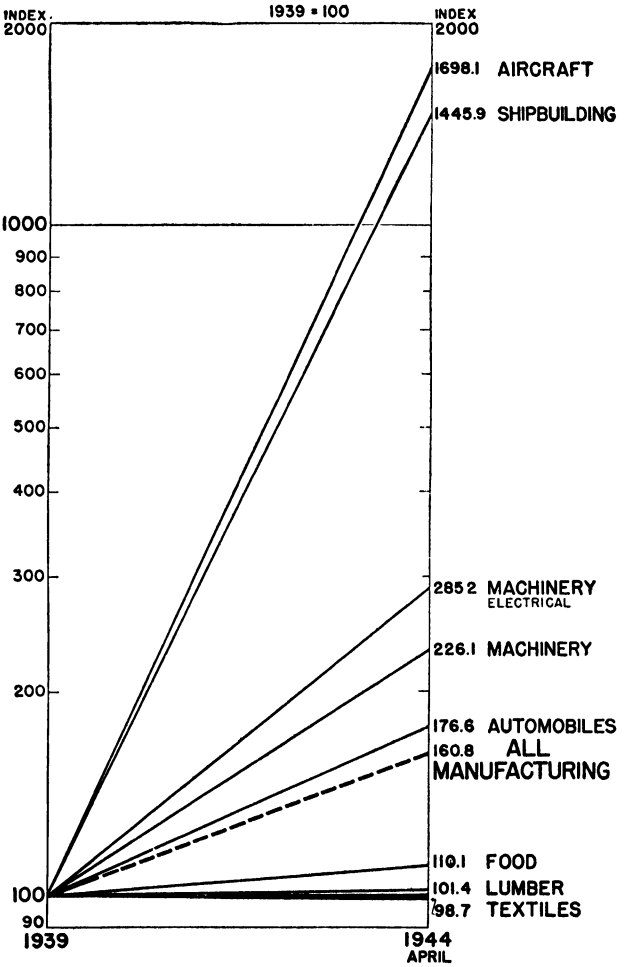

CHART 80.—War changes in factory employment. (*Source: Bureau of Labor Statistics.*)

It is interesting also that the components accounted for relatively the same part of the rise in pay rolls in war and durable-goods industries, on the one hand, and nonwar and nondurable goods, on the other.

TABLE 103.—INFLUENCE OF COMPONENT FACTORS ON INCREASE IN MANUFACTURING WAGES, JANUARY, 1939–JANUARY, 1944

(In thousands of dollars per week)

	Total increase in pay roll	Influence of increase in straight-time hourly earnings	Influence of added employees	Influence of increased hours	Influence of overtime premium
Total, all manufacturing	439,125	155,988	162,551	78,969	41,618
Durable-goods industries	339,721	108,329	138,007	60,752	32,634
Nondurable-goods industries	99,402	47,658	24,544	18,217	8,983
War industries	347,625	106,124	145,941	61,958	33,602
Nonwar industries	91,500	49,863	16,610	17,013	8,015

SOURCE: *S.C.B.*, September, 1944.

In nonmanufacturing industries, the rise of wages was not nearly so large as in manufacturing industries. This is evident from the fact that total wages rose little more than 100 per cent, whereas in manufacturing they rose by 250 per cent. Chart 81 reveals the relative importance of the factors accounting for the rise of wages in manufacturing and

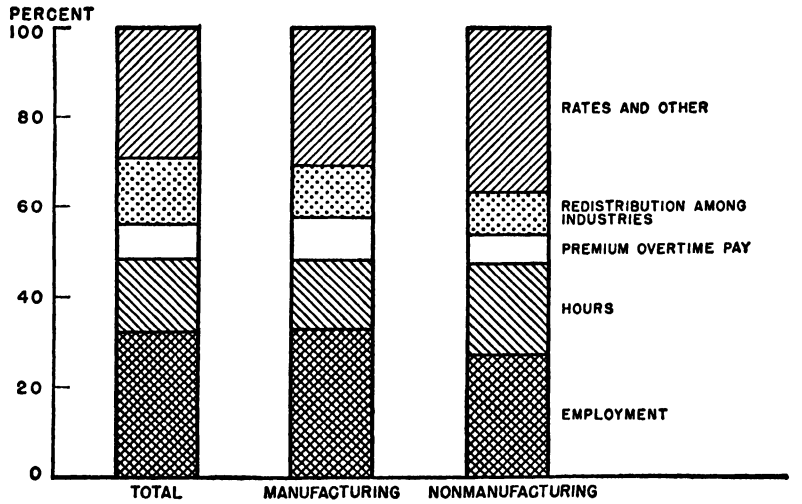

CHART 81.—Factors accounting for the increase in civilian nonagricultural pay rolls, 1939–1943. Data for total and nonmanufacturing are for wage earners and salaried workers; manufacturing, for wage earners only. (*Source: U. S. Department of Commerce.*)

nonmanufacturing industries. *Rise of employment, redistribution among industries, and premium overtime pay weighed more heavily relatively in the total gains for manufacturing; the rise of rates and hours was relatively more important for nonmanufacturing industries.*[1] This does not of course mean that wage rates rose more in nonmanufacturing than in manufacturing. Rather the reverse occurred. The figures accounted for *relatively* large gains for manufacturing and small ones for nonmanufacturing.

We should also note (Table 104) that the rise of salaries in manufacturing was not nearly so large as that in wages. Despite a substantial increase in hours, annual salaries apparently rose but 15 per cent from 1939 to 1942. A rise of wage rates undoubtedly was not a major factor in the rise of salary payments. Increases in numbers and hours per week were clearly more important.

TABLE 104.—FACTORY SALARY WORKERS IN ALL MANUFACTURING (NONWAGE EARNERS), 1939–1944

	December, 1939	December, 1942	December, 1944 *
Salaries, billions of dollars	4.68	6.91	7.63
Salaries, percentage rise	....	48	63
Number of workers, percentage rise	....	28	40
Annual earnings per worker, percentage rise	....	15	16

SOURCE: NRPB, *Demobilization and Readjustment*, p. 88.
* 1944, estimated in 1943.

A later study throws further light on these matters (see Tables 105*a* and 105*b*).

TABLE 105*a*.—PERCENTAGE RISE OF EARNINGS OF FACTORY WORKERS, JANUARY, 1941–APRIL, 1944

Percentage Rise	Per Cent
Gross weekly earnings of factory workers	71
Gross hourly earnings of factory workers	48
Gross hourly wage rates of factory workers	26
Gross hourly wage rates due to general increases	16

SOURCE: *Wartime Wage Movements . . .*, BLS Serial *R* 1684, October, 1944.

[1] *S.C.B.*, September, 1944, p. 19. *Cf.* Senate Hearings *To Continue C.C.C.*, pp. 189–190, 1943. It is estimated that from August, 1939, to September, 1943, the hours of employment rose by 11.3 per cent for all nonagricultural employment and 18.6 per cent for manufacturing; and average hourly wage rates rose 20.3 per cent in nonmanufacturing and 59.1 per cent in manufacturing.

TABLE 105*b*.—CHANGES IN WAGES OF MANUFACTURING EMPLOYEES

(By per cent of change)

	January, 1941 - October, 1944	January, 1941- October, 1942	October, 1942 - October, 1944 *
Average gross weekly earnings.....	76.3	46.0	20.8
Average gross hourly earnings.....	50.9	30.7	15.4
Average straight-time hourly earnings	43.9	26.4	13.9
Average straight-time hourly earnings (adjusted for interindustry shifts)..	36.7	21.5	12.5
Average straight-time hourly earnings by occupations (urban wage rates)	30.0	17.0	11.3
Wage-rate schedules.....	19.7	15	4.1 † (all industries) 3.2 (manufacturing industries estimated)

SOURCE: WLB.

* These data are computed with September, 1942, as the base in order to show the changes which have occurred since the stabilization date. Data in the two other columns are on a January 1941, base in order to show the changes which have occurred since the base date of the Little Steel formula.

† The figure of 4.1 per cent is for both manufacturing and nonmanufacturing industries. Greater percentage increases in nonmanufacturing industries as compared with manufacturing industries seem to have occurred from October, 1942, to October, 1944.

It will be noted that in this period of 3¾ years (Table 102 covered 4½ years beginning January, 1939) the rise in *wage rates* was only 37 per cent of the percentage rise in gross weekly earnings. This compares with 53 per cent for the ratio of the rise of *straight-time hourly earnings* to the rise of average weekly earnings from January, 1939, to July, 1943 (derived from Table 102).

Further, it is to be pointed out here that in the 21 months from January, 1941, to October, 1942, urban factory wage rates rose by 0.8 per cent per month; during the following year, the increase was 0.6 per cent per month; during the six-month period from October, 1943, to April, 1944, the average increase dropped to 0.3 per cent per month. This decline is held to reflect the growing effectiveness of WLB wage control.[1]

Table 105*b*, which was released in February, 1945, by the WLB, gives the outlines of wage history over a somewhat longer period. The last series (wage-rate schedules) corresponds to basic wage rates, *e.g.*, the rate for a given task per unit of time. It will also be observed from this

[1] BLS Serial *R* 1684, *op. cit.*, pp. 1–2.

table that the increases were substantially less in the two years ending October, 1944, than in the 21 months ending October, 1942, and particularly for wage-rate schedules.[1]

3. THE STEADY RISE OF THE WAGE BILL

1. Salaries and wages continued to rise in increasing absolute amounts after 1939 and until 1944, and in increasing relative amounts until 1943. This is evident from Table 106. *Even in* 1943, *despite the*

TABLE 106.—SALARIES AND WAGES, 1939–1944

	Billion dollars		Rise, per cent	Rise, pay rolls (manufacturing), per cent	Rise, average annual salary-wage (manufacturing), per cent
	Total	Rise			
1939	44.2				
1940	48.6	4.4	10	17	6
1941	60.8	12.2	25	40	15
1942	80.8	20.0	33	43	22
1943	103.1	22.3	28	33	17
1944	112.8	9.7	9		

SOURCE: Calculated from materials in *S.C.B.*, April and September, 1944, and February, 1945.

stabilization of the total amount of employment since the middle of 1942 *and despite heroic wage stabilization policies introduced in* 1942, *the percentage rise was no less than* 28 *per cent and the absolute rise,* $22.3 *billion.* (From July, 1940, to July, 1942, nonagricultural employment rose 5.5 million; from July, 1942, to July, 1944, there was an estimated decline of 300,000.) Approximately $8 of the $21 billion rise, however, is associated with the expansion of the government pay roll; and that largely for the armed services. Chart 82 reveals the large gains in pay rolls relative to manufacturing employment up to late 1943.

2. A measure of stabilization was obtained by 1944. Nevertheless, even in that year, with total employment downward, the redistribution of workers effected, and the hours largely stabilized, the rise in the wage bill was estimated at $9.7 billion. Here, again, the growth of military forces is relevant.

[1] See *Report to the President on the Relationship of Wages to the Cost of Living, etc.*, February, 1945, by public members of the WLB, especially Appendix D, for full explanation of definitions of each item.

3. As might be expected, the percentage rise in manufacturing was about two-thirds more than all pay rolls in 1940 and 1941, and substantially larger in 1942 and 1943. This is explained by factors already enumerated. In the years July, 1942, to July, 1944, employment in munitions industries (a large part of manufacturing) rose by almost 3 million. This gain was made possible by reductions in construction and nonindustrial employment. Employment elsewhere (with the exception of Federal war agencies) was relatively stable.

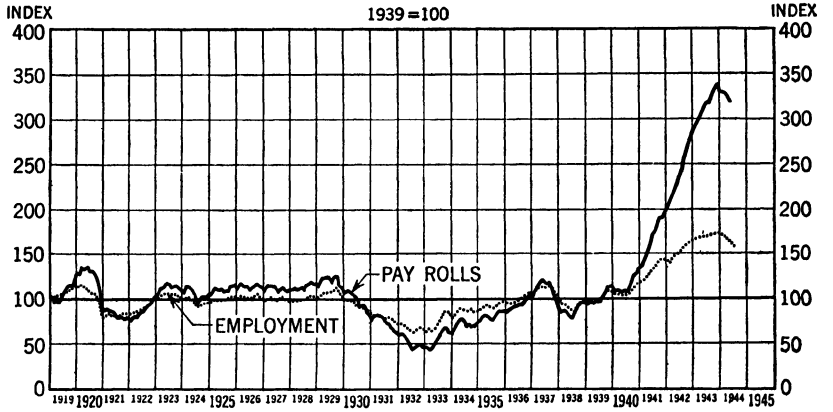

CHART 82.—Employment and pay rolls, all manufacturing industries. (*Source: Bureau of Labor Statistics.*)

4. A rise in the average annual wage in manufacturing of 17 per cent in 1943 clearly reflects strong inflationary pressures. In that year the rise of hours was about 5 per cent or, if overtime additions are included, a rise of about 7 per cent in the pay roll is explained. The remainder must be accounted for by continued movement into high-paying occupations and industries and further rises in basic wage rates (to be commented on later). In that year, we should note, the cost of living was virtually stable.[1]

4. CONCLUSION

We may summarize this chapter briefly as follows:

1. Official investigations suggest that the rise in pay rolls, both manufacturing and nonmanufacturing, is accounted for in almost

[1] For hours, see *Hours of Work in Manufacturing*, 1914–1943, BLS Serial *R* 1635, p. 7; for employment, see *Manpower Requirements in* 1944, BLS Serial *R* 1598, p. 5.

equal proportions by a rise of man-hours and an increase in the average hourly rate.

2. Approximately two-fifths of the rise in the average hourly rate for manufacturing is associated with the increased premiums for overtime and redistribution of labor in favor of high-paying war industries.

3. The remainder, approximately 30 per cent of the total rise in manufacturing for the five years ending January, 1944, is associated with an increase in the average straight-time hourly earnings. In part the rise of 30 per cent is explained by an increase in basic hourly wage rates; but in part by other factors. The next chapter will be concerned with a further analysis and breakdown of this increase.

4. Despite the relative stabilization of employment by the middle of 1942 and the introduction of impressive stabilization programs, the growth of the total pay rolls continued to be altogether too large in 1943 and was substantial even in 1944.

5. The contribution of the various components to rising pay rolls is not by any means identical for manufacturing and nonmanufacturing industries, or war and nonwar industries. Nor was the rise nearly so great in nonmanufacturing as in manufacturing industries. And the rise of salaries was not nearly so great as that of wages.

6. Finally, on the basis of crude statistics for the distribution of consumption and income and the relative growth of the components of income, it is concluded that wages and low salaries may well account for three-quarters of total consumption and the major increase in total consumption in war. The note that follows discusses this problem.

NOTE ON WAGES AND CONSUMPTION

For the reader who is interested, here are further details on the relation of wage payments and consumption. Recipients of low incomes account for a large part of national consumption; economies of consumption must fall heavily on them. In 1935–1936 those with incomes under $2,000 received 51 per cent of all income payments and accounted for 60 per cent of all expenditures on consumption. A slightly different breakdown of the figures shows that those receiving incomes under $780 accounted for 14 per cent, and those under $1,450 for 42 per cent of all expenditures on consumption.[1]

According to a study for the year 1942, the largest part of consumption falls to those with incomes of $5,000 or less (Table 107).

An OPA study underestimated consumption by low-income groups. Total consumption was given at $74.5 billion, whereas the Department of Commerce put the figure at $82 billion. The difference is explained in no

[1] National Resources Committee, *Consumer Expenditures in the U.S.* (1939), pp. 48–51.

small part by the inclusion in the former of only civilian noninstitutional population. Since the consumption excluded is almost wholly that of low-income groups, the figures understate the consumption of these groups. It will be observed that the lower the percentage of income to the percentage of spending units, the higher the percentage of consumption to the percentage of money income.

TABLE 107.—PERCENTAGE DISTRIBUTION OF SPENDING UNITS, MONEY INCOME, AND CONSUMPTION

	Number of spending units	Money income	Consumption
Under $1,500.....	40.6	13.7	19.0
Under $3,000.....	74.4	41.9	51.9
Under $5,000.....	92.0	68.1	78.8

SOURCE: OPA, *Civilian Spending and Saving* 1941 *and* 1942. *Cf. S.C.B.*, September, 1943.

Consumption in 1942 was, then, predominantly by groups with incomes of less than $5,000, and more than half of total consumption was by those with incomes of less than $3,000. Wage earners thus accounted for a large part of total consumption, though undoubtedly a substantial part of consumption by those with incomes of less than $3,000 was by nonwage earners.

Employee compensation from 1939 to 1944 rose by an estimated $68 billion, or 76 per cent of the income rise.[1] By 1943, the average salary wage per employee in manufacturing was $2,363; in transportation, $2,336; in mining, $2,178; in trade, $1,595; and in government, $1,450. In the automobile industry the average was no less than $3,101. From 1939 to 1943 the rise in the average pay roll for manufacturing was almost three-quarters.[2] *In view of the large part of total consumption accounted for by low and moderate incomes and in view of the large contribution of the rise in wages and salaries to the total increase of income, it may be agreed that the main inflationary pressures originated in rising pay envelopes.*

Figures on incomes and consumption require some elaboration.

First, part of the rise is accounted for by an increase in salaries. (In the steel industries about one-sixth of the total pay roll in this period went to salaried workers—a large part of these received, of course, less than $3,000. Part were, however, high-income recipients.)[3] Some part of total pay rolls was income of more than $5,000—at the most, probably 5 to 10 per cent.

Second, many families have two or more workers; in those cases the income of the spending unit would rise above $3,000. Wage earners, in other words, account for part of the consumption of the $3,000 to $5,000 class; and this may offset consumption by nonwage earners in the $0 to $3,000 class.

[1] *S.C.B.*, April, 1944, p. 13; February, 1945, p. 5.

[2] *S.C.B.*, April, 1944, p. 14.

[3] American Iron and Steel Institute, *Steel Facts*, August, 1944, pp. 4–5.

Some relevant figures for national income, wages and salaries, and consumption by low-income groups are given in Table 108. Item 3 understates

TABLE 108.—NATIONAL INCOME, WAGES AND SALARIES, AND CONSUMPTION, 1942–1944

(In billions of dollars)

	1942	1943	1944
1. National income	122	149	161
2. Wages and salaries	80	103	113
3. Pay rolls covered by Federal retirement programs *	61	76	
4. Consumption, incomes <$3,000	46	Not available	
5. Consumption, incomes <$5,000	67	Not available	

SOURCE: *S.S.B.*, August, 1943; February, 1944; *S.C.B.*, April, 1944; February, 1945.

* Includes old-age and survivors insurance and railroad retirement.

wage payments since coverage under the social-security program is not complete; domestic servants and government employees (to some extent covered elsewhere) are not included, for example.[1] A large part of the difference between items 2 and 3 is accounted for by salaries of business executives and the like, by military pay, and by compensation to employees in war agencies. The salaries and wages of governmental agencies, exclusive of subsistence payments to armed forces, rose from $6.2 billion in 1939 to $22.0 billion in 1943.[2]

In 1942, the figures for consumption given by the aforementioned OPA Study on *Civilian Spending and Saving* 1941 *and* 1942, were $39 billion and 52 per cent of the total consumption by those with incomes of less than $3,000; and $59 billion and 79 per cent by those with incomes of less than $5,000 (Table 107). If we should correct these figures for consumption by the armed forces and those in institutions, the totals would be around $46 billion or 56 per cent for incomes less than $3,000; and $67 billion or 82 per cent for those with incomes less than $5,000. Wages taxable under the old-age and survivors insurance program in 1942 were $53 billion and, as was noted, the major retirement programs covered $61 billion of wages. Wages and salaries under $3,000 were undoubtedly substantially higher, for amounts not covered were larger than the part of incomes in excess of $3,000 covered by the $61 billion estimate. Even if the correct figures were only $60 billion, the application of a ratio of 90 per cent of consumption to income, as is given by the OPA study for incomes under $3,000, would yield consump-

[1] In 1940, inclusive of agricultural workers, farm operators, public employees, self-employed casual workers, and those on work relief, almost 30 million were excluded. Seymour E. Harris, *Economics of Social Security*, p. 351, 1941. *Cf.* NRPB, *Security, Work and Relief Policies* (1943), pp. 207–211. Noncoverage is explained not only by the exclusion of occupation but also by minimum standards of coverage in relation to wage payments and periods covered.

[2] *S.C.B.*, April, 1944, p. 15.

tion of $54 billion, or an amount much in excess of the total consumption estimated here for those with incomes of less than $3,000. We still have to account for consumption of other low-income groups (*e.g.*, farmers). Possibly the OPA ratio of consumption to income is rather high for low-income groups; and allowance should be made for the number of working families (many with two and three workers) who earn in excess of $3,000. In other words, the estimated high level of workers' consumption relative to total consumption for incomes of less than $3,000 is explained to some extent by the fact that consumption, included under the $3,000 to $5,000 class, is in part to be allocated to the working population. *We may conclude that in* 1942 *labor's consumption—totaling at least* $60 *billion—accounted for about three-quarters of total civilian consumption. In summary, the large rise of pay rolls contributes materially to the excess of demand for consumption goods.*

Trends for 1942, moreover, continued into 1943.[1] The rise of total compensation of employees was $21.5 billion (inclusive of military pay and government pay of family allowances), of covered pay rolls at least $15 billion, and total consumption $9 billion. For 1944, the estimate for employee compensation was a further rise of $11 billion and of consumption $5 billion additional.[1] The figures for 1943 and 1944 are presented in Table 109.

TABLE 109.—COMPENSATION OF EMPLOYEES, PAY ROLLS, AND CONSUMPTION, 1943 AND 1944

(In billions of dollars)

	1943	1944
Total compensation of employees	105	116
Pay rolls covered under old-age and survivors insurance and railroad retirement	76	*
Consumption	91	96

SOURCES: *S.S.B.* and *S.C.B.*

* Not available.

We have noted, then, in this and the preceding chapter that low-income groups, and particularly those earning wages and lower salaries, accounted for the largest part of consumption. These groups, moreover, improved their position greatly during the war. I am not arguing that they obtained a disproportionate share of the gains but rather that their gains resulted in large pressures on consumption markets. In fact, subsequent estimates indicate that other groups also improved their position substantially, and in some cases fared better than labor (*cf.* preceding chapter). Wages and salaries, however, rose

[1] *S.C.B.*, February, 1945, p. 5.

from 65 per cent of national income in 1939 to 67 per cent in 1942, 69 per cent in 1943, and 70 per cent in 1944.[1] It will be recalled from the preceding chapter, however, that the share going to employees out of allocated receipts from business sales rose relatively little.

[1] See J. T. Dunlop, *Wage Determination under Trade Unions*, 1944, especially Ch. VIII, for a discussion of limitations of such comparisons of income distribution. He makes especially clear the importance of the varying (in time) *weights* of different industries: in some, wages are a large part of income and in others a small part.

Chapter XX

Wage Payments in Relation to Basic Wage Rates

Our discussion of pay rolls so far has been largely in terms of the relative contribution of the rise of man-hours and of hourly earnings to wage inflation. The rise in average hourly earnings was further broken down into straight-time hourly earnings and rises associated with an increase in premiums for overtime and a shift to higher paying industries. Our problem now is a further analysis of straight-time hourly earnings. Changes in straight-time hourly earnings are the result not only of an increase in the basic wage rate (*i.e.*, a payment per hour during the normal working week for performing a given task) but they also reflect increase of overtime, promotions, upgrading, the increased importance of high-paying war industries, and the like.[1]

The War Labor Board (WLB) has consistently held that, in the course of its control of wages, the major increases in pay rolls and even in the straight-time hourly earnings are associated with factors other than the rise in basic wage rates. For example, they stated that the combined effect of all their April, 1943, decisions was to increase the monthly pay roll of wage and salary earners by almost $4 million on the basis of a 40-hour week, or $4.4 million on the assumption of a scheduled 48-hour week. This estimate compares with a monthly wage and salary bill of $6.1 billion for nonagricultural wage and salary earners exclusive of government, and it also compares with the average monthly increase of $78.5 million in total wage and salary payments, exclusive of government, during the period September, 1942, to March, 1943.[2]

For the period September, 1942, to February, 1943, the WLB found an increase in total manufacturing wages of 13.5 per cent. But

[1] For a complete list of relevant factors, see pp. 286, 291, 302.

[2] *Second Monthly Report of the National War Labor Board*, June 1, 1943, p. 15.

the expansion associated with a rise in the basic wage rate is held to be only 99/100 of 1 per cent of September manufacturing wages. Even this reflects more than *basic wage rate* variations. The following factors, over which the WLB had no control, were operative (they tend to increase hourly *earnings* more than *basic wage rates*):

"1. Shifts to higher paying firms within each of the twenty major manufacturing industry groups.

2. The upgrading of experienced workers to higher paying positions in order to utilize their services more effectively.

3. Greater output under piece rate and bonus plans as a consequence of greater effort, technical changes, and better flow of materials.

4. Changes in the amount of vacation pay under established plans as a result of employment changes and variations in the seniority of the work force.

5. The net effects of the average hourly earnings at which new employees —not employed in September—were working in February." [1]

In its *Fifth Monthly Report* [2] the WLB commented further on the distinction between total wage payments and changes in wage rates.

"The continuing increase in the weekly earnings of labor is primarily the result of forces necessarily inherent in the physical expansion of war production. It is only secondarily the consequence of administrative action taken by the War Labor Board under the policy of economic stabilization.

"Therefore, it would be a mistake to conclude from the continued rise in weekly earnings that the wage stabilization program is ineffective. Such a misunderstanding might arise from confusing *wage rates* with *wage earnings*, and from a failure to analyze carefully the forces which determine the average hourly and weekly earnings of labor.

"From the time of the International Harvester Decision (April 15, 1942), the Board has explicitly recognized the importance of stabilizing wage rates as an element essential to direct price control.

. . . . . .

"It is important to note that, in all cases of factors affecting the earnings of labor over which the Board has no control, the increases are primarily the results of expanding war production and a better distribution of the labor force, or are the automatic effects of long-established legal and industrial relations practices." [3]

In Table 110 (reproduced here from the same report, page 8), it will be noted that for weekly earnings in private nonfarm employment

[1] *Ibid.*, p. 17.
[2] Sept. 3, 1943, p. 6.
[3] *Ibid.*, p. 7.

from October, 1942, to May, 1943, the WLB held itself responsible for an increase of only $^{8}/_{10}$ of 1 per cent as compared to a total increase of 10.7 per cent in manufacturing pay rolls. "Most of the 3.1 per cent increase in manufacturing related to 'other factors' is the combined effect of (1) increases in earnings with larger output under existing incentive pay plans and (2) merit increases, promotions, and reclassifications, under established schedules." [1]

TABLE 110.—CHANGES IN WEEKLY EARNINGS IN PRIVATE NONFARM EMPLOYMENT, OCTOBER, 1942-MAY, 1943

Forces contributing to the rise of weekly earnings	Individual contribution of these forces to total percentage increase of average weekly earnings in	
	Manufacturing employment, per cent	Other private nonfarm employment,† per cent
Change in average weekly earnings: effects of all forces together *	10.7	4.3
I. Contribution of increase in hours worked per week (on basis of straight-time pay for added hours)	3.7	0.4
II. Contribution of increase in gross average hourly earnings; due to all forces	7.0	3.9
a. Due to increase in proportion of overtime pay with more hours of work	1.2	0.8
b. Due to relative expansion of high-wage industries	1.9	Not calculated
c. Due to actions of WLB:		
Increases in basic wage rates	0.4 †	0.2
All other adjustments affecting hourly earnings authorized or directed	0.4 *	0.2 *
d. Due to all other factors	3.1 †	2.7

SOURCE: Wage Stabilization Division, NWLB. Underlying weekly earnings, hours, and gross and straight-time hourly earnings data are from BLS for manufacturing and from the Research Division of OPA for nonmanufacturing. The contribution of the factors affecting hourly earnings in manufacturing is subject to minor revision. The total effects of all actions by the board on over-all average weekly earnings in manufacturing must be assumed to have been not more than $^{5}/_{10}$ of 1 per cent.

* Rough but generous estimate.

† Preliminary.

In its *Ninth Monthly Report*, the WLB reported more fully on the net changes over the first year of stabilization from October, 1942, to September, 1943. The board's direct influence on hourly earnings

[1] *Ibid.*, p. 9. See Table 110 for "other factors."

was held to be through specific case actions involving general increases in basic wage rates. The second channel of board control included approval under the following actions: incentive pay plans, shift differentials, vacations with pay, etc. It is not easy to measure how decisions on these affected earnings. A third channel included increases which did not require board approval: equal pay for equal work, increases required under the Fair Labor Standards Act, etc. Finally, the board influenced hourly earnings through adjustment in the pay of individual workers made for merit or length of service, job classification, etc.

In the first year of wage stabilization, the board was responsible, through rises approved in basic wage rate cases, for a rise in *factory* straight-time average hourly earnings of 1.09 cents, or 1.5 per cent of the average level of straight-time hourly earnings prevailing at the beginning of stabilization. Obviously wage inflation for which the WLB may be held responsible was greater than the amount indicated. Increases in hourly earnings arose under three other categories mentioned. The WLB should be held only in part, if at all, responsible for many increases granted by employers, which are direct or disguised violations.

We may compare the changes in numerous variables over the first year of stabilization [1] (see Table 111).

TABLE 111.—PERCENTAGE RISE IN SEVERAL ECONOMIC VARIABLES DURING FIRST YEAR OF WAGE STABILIZATION

	Per Cent
All income payments	17.9
Wages and salaries	19.6
Factory:	
a. Wage-earner pay rolls	21.2
b. Factory man-hours	8.7
c. Weekly wages	15.4
d. Hourly earnings	10.8
e. Straight-time average hourly earnings	7.3 *
f. Adjustments in basic wage rates ordered or approved by the WLB	1.5

* The rise for hourly earnings is reduced by about 18 per cent to allow for increases resulting from additional overtime, and about 16 per cent for the shift of workers to more productive industries. In this manner 10.8 in (*d*) is reduced to 7.3 in (*e*).

Of the rise in total wage payments, decisions of the WLB accounted for a very small percentage; in the first year of stabilization (through

[1] *Ninth Monthly Report*, pp. 6–9.

September, 1943) the WLB accounted for apparently 20 per cent of the increase in straight-time average hourly earnings in factories. Unfortunately, however, not all increases under the jurisdiction of the WLB are reflected in this figure; and numerous evasions should not be underestimated. *Nevertheless, the largest increases in pay rolls are certainly not to be associated either with an increase of basic wage rates or with the policies of the WLB, but rather with the rise of man-hours, upgrading, increases of overtime, rise of hourly earning for piece workers, and the like.*

Results yielded in Tables 110 and 111 confirm the general conclusions reached in the preceding chapter for wage rises over a period of five years. Approximately one-half of the rise in pay rolls is accounted for by a rise of hourly earnings. Of the rise in average hourly earnings, perhaps two-fifths, or a little more, may be explained by an increase in the proportion of overtime pay and the relative expansion of high-wage industries. The increase of straight-time hourly earnings accounts for one-third of that in wage-earner pay rolls. Now we are told that action by the WLB is responsible for about 20 per cent of this one-third.[1] *For the first year of stabilization, the WLB is held responsible for only 7 per cent of the rise in factory pay rolls* (Table 111).

The contribution of upgrading is not clear. If we include in it the rise due to movements into high-wage industries and also reclassifications, promotions, and in general movements into higher paying jobs (normal and abnormal), then upgrading may well account for 45 to 50 per cent of the rise in average weekly earnings, and substantially less (perhaps one-third) of the increase in total pay rolls.[2] Actually, this is too broad a definition of upgrading, especially since "due to all other factors" includes incentive payments associated with a rise in productivity. Where a worker in the same job produces more and is paid more, the gains should not be included under upgrading. A reasonable guess for what is generally subsumed under upgrading is that it accounts for about 25 per cent of the rise in average weekly wages and 15 to 20 per cent of the total wage bill.

We may conclude, then, that the largest rises in the wage bill were associated with the increase in man-hours of employment and the various factors that tend to raise the average hourly earnings (*e.g.*, increased importance of overtime, rise in the significance of incentive

[1] Table 110. Item II*c* = 0.8 or approximately 20 per cent of II − (II*a* + II*b*) = 7.0 − 3.1. Table 111. Item *f* is approximately 20 per cent of *e*.

[2] 1.9 + 3.1 (due to other factors) = 5.0 per cent, and the total rise is 10.7 per cent (October, 1942–May, 1943).

pay, movements to higher paying industries and occupations)—but are not to be classified as a change in the basic wage rate. Since the introduction of the stabilization program in October, 1942, moreover, decisions by the WLB accounted for a relatively small part of the rise in pay rolls. The increase in rates seems to have been reduced since the WLB began to operate under adequate legislation. Thus, it will be recalled that, whereas in the 21 months ending October, 1942, urban factory wage rates rose by 0.8 per cent per month, the rise was but 0.6 per cent in the following year and but 0.3 per cent in the period October, 1943, to April, 1944. General wage increases were, finally, of much less importance from October, 1942, to April, 1944, than in the preceding 20 months. In the earlier period they accounted for 10 per cent of a total rise of 17 per cent in wage rates; in the latter period only 2+ out of 9 per cent.[1]

[1] *Wartime Wage Movements* . . . , BLS Serial *R* 1684, October, 1944, pp. 1–2. According to the latest figures available—October, 1943 September, 1944—factory average hourly earnings were up 4 per cent and weekly earnings about 3 per cent. *S.C.B.*, December, 1944, p. S-13.

Chapter XXI

Appraisal of Wage Policies

In Chapters XIX and XX we dealt primarily with the statistical aspects of the rise in pay rolls and in particular with the contribution of various factors to the rise in wage payments. In this chapter our task is to sum up the material in those chapters and to indicate its relevance for an over-all appraisal of our wage policies. In particular we should assess the relation of wage payments and inflation and consider the extent to which our war economy might have been spared wage inflation.

1. AN ANALYSIS ON THE BASIS OF MATERIALS IN CHAPTERS XIX AND XX

First, it is clear that executive orders limited the authority of the War Labor Board (WLB). (More on this in the next chapter.) On the basis of estimates of the WLB for the first year of stabilization, rises in basic wage rates ordered or approved by the WLB accounted for but 20 per cent of the increase in *straight-time average hourly earnings* in factories and but 7 per cent of the total rise of factory pay rolls. For a somewhat shorter period, increases in basic wage rates accounted for but 6 per cent of the increase in *gross average* hourly earnings, and all other adjustments affecting hourly earnings authorized or directed by the WLB accounted for an additional 6 per cent.

Second, the upward movement of wage pay rolls continued at a rapid rate, though somewhat diminished in the first year of the WLB's stabilization program. In part, the explanation is given in the first paragraph above. Despite the efforts of the WLB, pay rolls increased by $22.3 billion in 1943, as compared with $20.0 billion in 1942. A further increase of $10 billion occurred in 1944. *The increase in* 1943 *in particular was large in the light of the relative stabilization of civilian employment after the middle of* 1942. Government pay rolls increased by $8 billion in 1943, however; and in 1944, the rise in government pay

rolls accounted for almost one-half of the increase in income payments.[1] In short, pay rolls continued to rise despite the stabilization program and a current tendency for employment to decline. In no small part the explanation was the increase in military personnel.

At least some part of the rise, other than that associated with decisions of the WLB, must be related to increases in basic wage rates. From October, 1942, to May, 1943, "all other factors" accounted for 40 per cent of the rise in gross average hourly earnings. There can be little doubt but that a significant amount of spurious upgrading and promotions—not justified by changes in the tasks assigned or by rises in output—were included here. Employees, when denied increases in basic wage rates, find ways of evading WLB regulations; and this is sometimes done in collusion with employers.

Third, the largest part of wartime wage inflation in manufacturing is associated with factors over which a government has little control. Inclusive of the premiums for overtime, the rise in man-hours accounted for almost 60 *per cent of the increase; and movements into higher paying industries, an additional* 10 *per cent.* The remainder—30 per cent—included rises in basic wage rates (in part as an offset to the increase in the cost of living) and any rise of productivity not reflected in shifts to war industries, other forms of upgrading, higher pay for late shift differentials, promotions, merit increases, etc.

Fourth, a word should be said concerning the rise of wages in relation to the cost of living.[2]

From 1939 to 1944, total compensation of employees rose 143 per cent. This is to be compared with an increase in the cost of living of 25 per cent in the same period. *Clearly there is no justification for raising further the total wage bill—which rose five to six times as much as the cost of living—on the ground that wages must keep pace with the rising cost of living.*

Many will point out, however, that the appropriate relation is between the pay envelope of *each* worker and the cost of living. We therefore present figures (Table 112) for *real* (money corrected by the rise in the cost of living) weekly earnings. They rose substantially.

Weekly earnings were larger in part because of the increased number of hours, the relative growth of overtime premiums, and the shift to higher paying industries. Defenders of the thesis that wages should

[1] *S.C.B.*, September, 1944, p. 4; February, 1945, p. 4.

[2] Based on H. M. Douty, R. J. Myers, and H. D. Bloch, "Wages in Manufacturing Industries in Wartime," *BLS Bull.* 756, November, 1943, pp. 15–16; and *S.C.B.*

move with the cost of living will, therefore, contend that the straight-time average hourly wage adjusted for interindustry movements should rise as rapidly as the cost of living. In fact, it rose more rapidly. Up to July, 1943, real hourly wages were 6 per cent above the January, 1939, level for manufacturing.

TABLE 112.—REAL WEEKLY EARNINGS, 1939–1944
(January, 1939 = 100)

	All manufacturing	Nondurable goods
July, 1942.....	133.8	114.3
July, 1943.....	148.5	127.0
July, 1944.....	155.0	

SOURCE: *BLS Bull.* 756, *S.C.B.*, September, 1944.

Even basic wage rates may well have gone up as much as the cost of living. No one really knows how much basic wage rates increased. A guess based on the WLB estimate would be that factory workers *in the first year of stabilization* had a rise in their basic wage equal to 7 per cent of the total increase in pay rolls. To this we might add an additional 7 per cent for the concealed rise included in "all other factors." This increase of 14 per cent would offset a rise of about 35 per cent in the cost of living for workers in manufacturing and substantially less for workers in nonmanufacturing.[1] Actually (as we shall see below) the rise in basic wage rates for all labor was probably less than 25 per cent. In a report by the WLB released early in 1945, the rise in basic wage rates was 20 per cent.[2]

2. WAGE RATES, THE COST OF LIVING, AND PRODUCTIVITY

Let us consider the relation of wartime wage rates to the wartime cost of living. *Labor's case for a rise in basic wage rates to parallel the rise in the cost of living was not strong.* Under the Little Steel formula, rises up to 15 per cent had generally been allowed; and the increase in the cost of living by the war's end was at least 30 per cent. (This allows for the understatement in official index numbers.) Had the Little Steel for-

[1] The total rise in manufacturing pay rolls was 250 per cent. Fourteen per cent of 250 equals 35 per cent. If basic wage rates account for the same relative rise in nonmanufacturing as in manufacturing, the increase in basic wage rates would be substantially less than 14 per cent in the former.

[2] *Cf.* Ch. XX.

mula been actually broken (instead of bent), then a further rise in wage rates of 15 per cent might have been indicated. *In view of the large rise in weekly earnings and in the total wage bill, labor's command over goods had substantially increased in the course of the costliest war of all times. Labor was able not only to maintain its position but also to increase its purchasing power in terms of both present and future goods.* Labor had improved its position in the course of the war at least as much as other groups, with the sole exception of farmers; and the latter's position in 1939 was relatively unsatisfactory. It should be emphasized that any further rise in basic wage rates, even if justified by an increase in the cost of living beyond 15 per cent, would further have raised the cost of living, contributed toward the breakdown of price control, stimulated the farm bloc to increase its demands, and further accentuated the problems of post-war readjustment.

These remarks apply to the war period when inflation was a threat. In the early postwar, the abandonment of the Little Steel formula is justified so long as any wage concessions do not require increases in ceiling prices. A rise of labor income is not to be feared when the country's energies are once more directed almost exclusively to producing civilian goods. The government's decision of August, 1945, to allow increases of wages voluntarily agreed upon when rises in price ceilings are not required can therefore be readily approved.

There is also the relation of wage payments and productivity. Most will agree that, if the productivity of the worker rises, he should obtain compensation in higher wage rates. In Chapter VI, it was noted that man-hour output in the first few years of the war had risen but 4 to 5 per cent in a large number of manufacturing and mining industries. Hourly wages rose much more than the rise in man-hour output; and more if allowance is made for the rise of unit prices. *One must not assume, furthermore, that a parallel movement of wage rates and productivity would exclude inflation. The important fact still is relevant that the workers produced almost as much of war as of nonwar goods. The former were not available for purchase.* In short, even if wages rise only with increased productivity, inflation will still be a threat.

Much can be treated under productivity. There is, for example, the 11 per cent of the total rise in pay rolls in five years, which is accounted for by the shift of workers to higher paying industries. Wages in higher paying industries, let us observe, do not here reflect *correspondingly* higher physical productivity. They reflect in no small part

the willingness of the government to pay adequately high prices to attract the necessary factors. A rather large rise in productivity of war industries is associated with important economies of expanding output as well as the higher rewards offered on public contracts.

Upgrading, increases of incentive pay, shifts to higher paying occupations and factories within an industry, and the like may all be included under payments for higher productivity. Excluded under payments for higher productivity are upgrading and promotions to the extent to which they are in fact disguised increases in basic wage rates. Total rises in payments under the general head of productivity may total 20 per cent of the rise in wage payments. This total rise in payments seems a much larger one than any actual rise in physical productivity; but it may not be larger when corrected for the increase in unit prices.[1]

3. WAGE INCREASES BY INDUSTRIES

We turn to another aspect of the rise of pay rolls. In general, *annual* wages have tended to rise more in industries in which the *total* wage bill has grown greatly. There are exceptions—in the government, for example, where the large growth of military personnel prevented average wages from rising significantly. This association of the rate of rise of total pay rolls and of the annual average wage is explained in part by the increased incentives offered to attract additional workers. Higher pay reflects to this extent an increase of pay not intimately associated with a rise of physical productivity (see Table 113).

TABLE 113.—WAGES AND SALARIES—PERCENTAGE RISE, 1939-1943

	Total pay roll	Annual wage
Government (Federal, state, and local)	253	3
Manufacturing	209	74
Contract construction	137	102
Transportation	86	41
Mining	73	59
Service	48	44
Trade	46	31
Finance	25	18

SOURCE: Calculated from *S.C.B.*, April, 1944.

In the war years the industries in which especially large rises in average annual pay occurred were generally those which increased the number of

[1] *Cf.* Ch. VI.

their employees a maximum. Table 114 reveals the relevant facts for the years 1939 to 1942. Undoubtedly here the great need for new workers as well as the higher average productivity would tend to press wages upward. Government was the notable exception. Despite a rise of employees of 45 per cent, the average annual earnings in government declined. Mining was unable to attract additional workers despite the large gains in annual wages. The explanation is in part the greater attractiveness of other industries and the rather low mobility of workers into mining areas. In short, the industries of paramount importance for the war effort tended to offer the incentive of large rises of wage rates and thus attracted large numbers of new workers.

TABLE 114.—WAGES AND NEW WORKERS, 1939–1942

	Annual average earnings 1942, dollars	Percentage rise in average earnings, 1939–1942	Percentage rise in numbers of employed, March, 1940–December, 1942
Manufacturing	2,043	56	52
Construction	1,561	37	31
Transportation	2,043	24	17
Trade	1,435	18	
Finance	1,755	11	9
Services	1,160	25	
Mining	1,820	31	No change
Government	1,381	−1	45

SOURCE: *S.C.B.*, March, 1943; and NRPB, *Demobilization and Readjustment.*

4. THE RELATIVE IMPORTANCE OF RISES IN BASIC WAGE RATES

It is not easy to draw very precise conclusions from the conflicting statistical evidence of these three chapters on wages. Let us pull the threads together. First, the rise in employee compensation in the years 1939 to 1944 was about 140 per cent.

Second, over a period of 4 years ending July, 1943, a rise in *straight-time average hourly earnings adjusted for interindustry* shifts was 32 per cent. The figure for 5½ years ending 1944 may be estimated at 35 to 40 per cent.

Third, over the 5-year period ending January, 1944, a rise of wage rates (effects of overtime and redistribution over industry have been abstracted) accounted for 31 per cent of the rise in manufacturing pay rolls.

Fourth, the WLB for the first year of stabilization put the rise in wages associated with increases in approved basic wage rates at 7

per cent of the rise in total pay rolls. This rise of 7 per cent relates to the total increase in manufacturing pay rolls in one year. If this were the appropriate percentage for the entire period, then with a total rise of pay rolls in manufacturing of 250 per cent the increase in approved basic wage rates would correspond to a 17 per cent rise in the cost of living; and if 7 per cent were an underestimate, it would be more. For the first 2 years of stabilization (ending October, 1944), the rise in basic wage rates was put at but 4 per cent.

Fifth, the BLS associated the increase in rates for the year ending April, 1944, primarily with promotions, merit increases, and the like.

From all of this we conclude that, at the most, rises in basic wage rates accounted for one-fifth of the total rise in pay rolls from 1939 *to* 1944. *The minimum figure was probably about* 15 *per cent, the maximum* 25 *per cent.* It was substantially more for manufacturing pay rolls than for nonmanufacturing. By 1943 manufacturing pay rolls were 210 per cent above 1939 levels, and nonmanufacturing 110 per cent.[1] *And the correct figure for the rise in basic wage rates for manufacturing and nonmanufacturing may be of the order of* 20 *per cent.*[2] Rises in basic wage rates were less than indicated by over-all figures for changes in rates, because the residual increase in wage rates (accounting for 31.6 per cent of rises in pay rolls for 5 years) included rises in incentive pay, night-work differentials, redistribution by occupations, etc. The rise in basic wage rates was more than is indicated by the WLB studies because many adjustments were made which were not approved by the WLB: WLB held that many were illegal; many were introduced under incentive and upgrading programs which were in fact concealed rises in basic wage rates. Furthermore, the rise of basic wage rates was much larger in 1940–1942 than in 1943–1944, the period in which the WLB operated with some effectiveness. Finally, our generalization here applies largely to manufacturing. In nonmanufacturing, the relative importance of rises in basic wage rates was somewhat greater but its absolute importance, despite the larger number involved, was less.

5. THE CASE FOR AND AGAINST HIGHER WAGE PAYMENTS

Many arguments are advanced in support of higher wage payments. Some contend that the worker is entitled to a stabilization of his wage rates in terms of the products he buys. (In other words, as

[1] *S.C.B.*, September, 1944, pp. 18–19.

[2] The WLB early in 1945 also estimated the rise at 20 per cent.

the cost of living rises the worker should obtain a corresponding compensation in the wage rates per hour or per week if the number of hours does not change.) Others comment on the increased productivity of labor—which in part is associated with improved efficiency of labor—and contend that labor should get its fair share of this increase of productivity. Then, if productivity rises they contend that wage rates per hour should rise. Upgrading, too, has been given as a reason for the payment of higher wages. If the average worker is doing a higher class job where more skill, more training, and more ability are required, he should have a higher rate of pay. In this manner, the increase in the average rate of pay per hour of work is explained away by the higher general average of skills used today than in the prewar period. Labor interests have also pointed out the fact that workers are entitled to time and a half for overtime because the entrepreneur gains in a reduction of overhead costs per unit of output as a result of overtime work. Since the entrepreneur gains in this sense and since overtime subjects the worker to inconvenience and additional fatigue, the worker claims that he is entitled to a higher wage rate when he works longer hours. Undoubtedly, as noted by the WLB, overtime accounts in part for the increase in the average hourly wage rate.

Many who support high-wage policies use other arguments. They emphasize the fact that, in our war economy, mobilization of economic resources has not been carried to the fullest possible extent. *Where government will not move labor from one industry to another, or from one job to another, the only possible method of obtaining the maximum mobility of labor resources in accordance with war needs is to allow the incentive of higher wage rates to operate fully.* Once wage rates are stabilized, they contend, the aircraft factories, for example, that need more workers find it increasingly difficult to win them away from other and less essential enterprises.

Finally, there are other arguments advanced in support of higher wage payments: (1) Incentives are required not only to move labor but also to increase the total supply. Our main objective, after all, is to increase output. The worker needs some inducement to increase output: the patriotic urge, the various banners bestowed by the government, and the competitive urge to outdo other plants in achieving war objectives will help. But many workers need the additional incentive of an increase in the wage rate or hourly earnings in order to produce more goods and work longer hours. In a period in which a rise of

output by three-quarters or more is required, it is not easy to refuse requests for higher wage rates. (2) Absenteeism is associated in no small part with the lack of interest of the worker merely in producing more goods. At the 1944 high wage rates and with the scarcity of consumer goods, he is frequently satisfied to work five days instead of six, or 40 hours instead of 48. In order to induce him to work longer hours or produce more goods, it may be necessary either to offer him a higher wage rate (part of which will be used to buy war bonds), or make available to him a larger supply of consumption goods. Many will not work harder merely to obtain a stake in future goods as their reward, *i.e.*, war bonds in payment for longer hours or more intensive production. In many instances it may, therefore, be helpful to make more civilian goods available to workers. If by releasing $5 billion worth of additional civilian goods workers were encouraged to produce $10 billion more of war goods, the net effect would be salutary.[1] In summary, incentives are a *sine qua non* for full participation by workers in the war effort.

Great Britain naturally had these same wartime problems and there was much debate concerning them. An official committee appointed to make a report on the stabilization of wages suggested that the cost of living and wage rates be stabilized. When the question arose as to which should be stabilized first, wage rates or the cost of living, labor interests insisted that it was necessary to begin by stabilizing the cost of living—*i.e.*, that the inflationary gap be eliminated before wage rates were stabilized.[2]

It is worthy of notice that all wage earners demand higher money wages despite the difficulty of spending and the limited supply of goods in wartime. The very presence of many free markets, irrespective of their lack of (or limited) goods, perhaps is the illusory factor. Especially in Great Britain during the war years has the number of free markets been much limited, and restrictions on consumption have been imposed irrespective of the level of wages. Yet these conditions did not reduce the natural desire of workers to maintain their high wages. It follows that the higher their wages, the larger their stake in the postwar public debt and, therefore, the larger their stake in the supplies of goods that will become available in the postwar period. It is certain, furthermore,

[1] *Cf.* House Hearings on *Price Control Bill* 1941, pp. 1554, 1629, 1846*ff.*; Senate Hearings on *Emergency Price Control Act* 1941, pp. 301*ff.*

[2] F. Burchardt, "The White Paper on Industrial and Labour Policy," *Institute of Statistics*, pp. 235–239, Oxford, Aug. 9, 1941.

that the higher wartime wages are, the more difficult it will be to reduce wages to the prewar level in the postwar period. Therefore, we see there are reasons for labor interests to want higher money wages even though they do not bring a corresponding improvement—or possibly any improvement—in the current standard of living. Higher wartime money wages will improve their standard in the postwar period and effect a better postwar bargaining position.

There can be little doubt but that even in the United States the payment of high wartime wages did not necessarily mean corresponding availability of consumption goods. For 1944 employee compensation was estimated at $116 billion, total national income at $160 billion, and consumption expenditures at $96 billion. If there were no controls and if supplies of goods were normally available, consumption, instead of being at $96 billion, might have risen to $120 billion. A large part of the deprivation falls upon the low-income groups and to that extent their increased wage payments do them little good today.

What can be said against the high-wage policy of the war period? First, the larger these income payments are, the greater the pressure on consumption markets. This is evident in the statistical analysis of earlier chapters.[1] Second, the larger this excess of income over supplies of goods available at current prices, the stronger the inflationary pressure and the stronger the case for taxation of the low-income groups. Such taxation brings great political difficulties, however, and even if a tax program is imposed, it is not a simple matter to impose it equitably. It will cause much grumbling by those who are subject to the heavy taxation.

Third, it is patently clear that the net effect of these large payments to all groups of income recipients has been that the government had less goods available for the war economy than it otherwise would have had. For example, in 1943 consumption was $20 billion in excess of the amount anticipated in 1942 for 1943—and this was clearly in excess of what was desirable from the viewpoint of the war economy. In other words, priorities, allocations, conservation, and limitation orders had only a limited success, and entrepreneurs under the pressure of these large supplies of purchasing power on the market have done everything possible to divert resources into consumption-goods industries. High wage payments contributed toward that pressure.

[1] *Cf.* Ch. XVII.

There will be tremendous pressure on consumption-goods markets in the postwar period, resulting from the fact that total war savings of individuals were in excess of $100 billion by 1944. By the end of the war, the total was estimated at $140 billion. These savings in the form of currency, deposits, and bonds may be dumped on commodity markets in large amounts, Thus labor will undoubtedly contribute toward any inflationary pressure.[1]

Fourth argument against wartime high-wage policy: The question of wage adjustments in the postwar period will offer serious problems to those who are responsible for the management of our economy. Although productivity is likely to continue to rise, wage rates may be too high in the immediate postwar period. Any price deflation will increase the danger of out-of-lineness of wages. The higher our wage rates, therefore, the more difficult it may become to adjust wages to the level of productivity and the greater may be the danger to the maintenance of high employment. This argument may be carried too far, however. To my mind, the greater danger in the early postwar period is the large reduction of wage payments and resulting curtailment of demand. It may be necessary to continue and even increase high basic wage rates to preclude excessive declines of demand.

Finally, the payment of high wages, even though consumption goods are not available, results in strong pressure on commodity markets, making enforcement of price control and rationing more difficult.

In summary, arguments for higher wage rates are the increase of productivity, the contribution of pecuniary rewards to an optimum allocation of labor as between essential and nonessential labor, the need of maximum incentives, and the urge to improve labor's postwar position. Against the high-wage policy are to be listed especially the increase of inflationary pressure and the excessive output of consumption goods.

6. WHAT MIGHT HAVE BEEN DONE?

We cannot visualize any wage policy which would not have involved a substantial amount of inflation. In a democratic society which is not completely mobilized for war we cannot hope for much more than a stabilization of *wage rates* in terms of the cost of living. Basic wage rates have probably not gone up so much as living costs, but average hourly earnings have risen more. Total wage payments have risen much more than 100 per cent.

[1] This problem is discussed more fully in Part IV.

Yet, *if we assume that the main objective of the war economy is to get the job done, i.e., to produce the necessary supplies of goods and to stimulate the movement of labor into the essential war industries as they are needed, it is difficult to envisage a policy which would not allow significant rises in the basic wage rates and in hourly money earnings greater than those in the cost of living. The largest rises in hourly rates are associated with the need for mobilizing man power for war purposes.* In war industries, and particularly in manufacturing war industries, rises of basic hourly rates and earnings were necessary in order to attract workers into these industries, and a general increase in hourly rates was required in order to increase the total supply available on the labor market.

One may, of course, introduce many "ifs." If the country had been prepared for compulsory allocation of economic resources, then industry would not have had to depend so much upon the offer of higher wage rates and hourly earnings in order to obtain the maximum allocation of labor resources. Again, if the government had introduced a vigorous tax and fiscal program and had not allowed the farm bloc to send up farm prices, then, also, it would have been easier to enforce a more conservative wage-rate policy. One is too apt to forget the political aspects of the problem. First, even by the end of the war we had not been in the war to the same extent as the British and, therefore, the pecuniary incentive played a larger part in attaining our output for military objectives. Second, we had not so great a control over the allocation of economic resources as the British and we were certainly far from the degree of control that the Germans were able to introduce. In this connection it is worth pointing out that even the British did not succeed in preventing a significant inflation of wage income. In the years 1938 to 1943 net national income for the British rose by 78 per cent. Wages and salaries rose by 51 per cent, and these plus military pay rose by 84 per cent.[1] In short, the increase of wages in the British economy was very large and in many respects as large as that in the United States economy.

7. IN CONCLUSION

What can be said concerning our wartime wage policy? We have had a considerable inflation in wage payments. Stabilization of basic rates would have reduced the degree of inflation; but that stabilization

[1] H.M. Stationery Office, *An Analysis of the Sources of War Finance . . .*, Cmd. 6520, pp. 18–19.

would have been only partly effective because most of the increase in wage payments was associated with the increased total man-hours of work and factors other than rises in basic wage rates that account for increases in hourly money earnings. In the absence of a stronger fiscal and farm-price policy and in the absence of Federal allocation of man power, it is difficult to understand how we could have done much better in the wage field. Inflation of wage payments is part of the result of the successful mobilization of economic resources and the redistribution of laborers in accordance with the needs of the war economy. At best, then, we can try to cope with the increased purchasing power made available to the low-income groups who consume a very large proportion of their income; and this has been achieved to some extent (1) through a moderately strong fiscal policy which, however, does not take adequate account of the large gains made by low-income groups who have a high propensity to consume, and (2) through effective price-control and rationing programs which, of course, are made much more difficult because the groups with a high propensity to consume have so much excess income. The reader must remember that labor and other low-income groups contributed greatly to the nation's war effort. In their view, their gains from this should be retained and they should not be deprived of goods in the postwar, although of necessity they had to be deprived of goods during the war.

Higher wage rates, then, had been necessary in order to assure the required movement of workers into war industries, to enlist their support for a longer working week, and to compensate them for higher productivity. Had they not been compensated, a larger degree of profit inflation would have resulted. Taxation and lower prices would reduce only partly the gains to business. In view of the large gains in weekly wages associated with upgrading, the rise of hours, and the increase in the number of workers per household, it is not easy to justify the demand of labor for a further rise of basic wage rates. It should be recalled that though the Little Steel formula allowed a rise of but 15 per cent as an offset against the increase in the cost of living, actually basic wage rates rose more than that. The following points may be made against the upward wartime revision of the Little Steel formula, except in the case of white-collar workers and others whose *total earnings* rose substantially less than the cost of living:

First, the increases discussed above assured labor an adequate standard of living in wartime. Second, any increase of wage rates would

improve the position of labor only to the extent that the cost of living did not rise in response to the increase of wages. Since, however, wages account for about one-half of total costs, a significant rise in the cost of living was bound to follow. Third, when compensation rose from $48 to $116 billion from 1939 to 1944 and the supply of consumption goods rose only from $62 to $96 billion, it was clear that the standard of living could not rise proportionately to the increase of payments.

These arguments may be used against the original Little Steel formula also: When total wages are up four or five times as much as the cost of living, any general use of this formula is justified only in *individual* cases on the grounds of justice and expediency.

Wage policy has to be justified, then, largely on political and military grounds. Labor insisted on an association of wage rates and the cost of living; and if the government had refused, the result would have been curtailed output and increased industrial strife. Labor, furthermore, insisted on a fair share of rising income in a period when all groups were determined to charge what the traffic would bear. If the goods were not available, they were prepared to wait until the postwar period. Each employed worker on the average has obtained command over more goods per hour of work; a fortiori per week of work; and even more so for the gains in terms of total pay rolls.

Finally, the rise of wage payments reflects also a willingness to pay high wages in order to attract workers into war industries and occupations. All these gains are wrongly included under upgrading. Actually the wages paid may be much higher than would be justified by any increase of required skills. Organized labor is in part responsible for these gains made by war workers. A comparison of the large rise in hourly earnings for factory labor and the smaller rise for factory salary recipients or nonfactory labor will clarify this point.

Chapter XXII

Wages and the War Labor Board

1. INTRODUCTION

The three preceding chapters explain that wage inflation is caused primarily by a rise in man-hours of work, upgrading, increase in overtime, rise in hourly earnings for piece workers, etc., and not primarily by a rise in basic wage rates. The higher average hourly earnings are, in no small part, the result of the upgrading of workers, the movement of workers into industries or occupations of higher productivity, promotions and reclassifications, and increase of overtime. It has also been made clear that the War Labor Board (WLB) could be held responsible for a relatively small part of the rise of wage payments.

This chapter discusses (1) the relevant legislation and executive orders which provided the WLB with its authority and (2) the movement of wage rates before and after the creation of that agency. The appendix attached to this chapter contains excerpts from some important WLB cases.

2. AUTHORITY OF THE WAR LABOR BOARD

On the basis of an order of Jan. 12, 1942, the WLB was entrusted with the responsibility, after existing procedures had been exhausted, of disposing of labor disputes which might interrupt work necessary to the effective prosecution of the war. On Apr. 27, 1942, the President ordered wage stabilization and the WLB was given the requisite authority over wage disputes arising in war industries. On July 16, 1942, the board announced details of its wage stabilization policy and its decision in the Little Steel case, which offered the guiding principles to be applied in an evaluation of claims for wage increases. The main part of this decision is given later in this chapter. Here it need be ob-

served that only 15 per cent, which was equal to the rise in the cost of living from January, 1941, to May, 1942, was to be the upper limit for increases of wage rates. In the International Harvester case, the board had already gone on record as saying, "all workers should receive wages sufficiently high to enable them to maintain a standard of living compatible with health and decency." It could not be hoped, however, that basic wage rates would continue to rise with the increase in the cost of living. In the Lever Brothers case of Sept. 2, 1942, the WLB specifically stated that a 15 per cent increase—which might be allowed under the Little Steel formula (L.S.F.)—had not been granted because such an increase would give laborers higher than prevailing wage rates for similar work. No small part of the difficulties in wage disputes at the present time (July, 1945), arises from the fact that the cost of living since the beginning of 1941 has risen substantially more than 15 per cent. In other words, there has been a significant increase since May, 1942, the end of the period covered under the L.S.F. Workers, therefore, consider this as unfair treatment in that they do not profit from an increase in wage rates to offset the increase in the cost of living since May, 1942. The pros and cons of this issue have already been discussed.[1]

Prior to October, 1942, the jurisdiction of the WLB was restricted to dispute cases: any employer could grant any voluntary wage increases he wished. After the middle of 1942, the Office of Price Administration (OPA), however, refused to recognize an increase of wage rates as a basis for price adjustment, unless the WLB had approved.

Executive Order 9250, issued on Oct. 3, 1942, reads as follows:

"The guiding policy of the Director and of all departments and agencies of the Government shall be to stabilize the cost of living in accordance with the act of October 2, 1942; and it shall be the duty and responsibility of the Director and of all the departments and agencies of the Government to cooperate in the execution of such administrative programs and in the development of such administrative programs as may be necessary to that end.

"No increase in wage rates, granted as a result of voluntary agreement, collective bargaining, conciliation, arbitration or otherwise and no decrease in wage rates shall be authorized unless notice of such increases or decreases shall have been filed with the National War Labor Board unless the War Labor Board has approved such increases or decreases.

"The National War Labor Board shall not approve any increase in wage

[1] See Ch. XXI.

rates prevailing on September 15, 1942, unless such increase is necessary to correct maladjustments, or inequalities, to eliminate substandard wages, to correct gross inequities, or to aid the effective prosecution of the war.

"Provided, however, that where the National War Labor Board or the Price Administrator shall have reason to believe that a proposed wage increase will require a change in the price ceiling of a commodity or service involved, such proposed increase if approved by the National War Labor Board shall become effective if also approved by the Director." [1]

From October 3 to the end of March, 1943, 98.6 per cent of approved cases of increase of wage rates originated in voluntary requests on the part of employers or the employers and trade unions. More than 99 per cent of these cases were accompanied by declarations that no price increase would be requested if the adjustment were approved. A price increase was requested in $\frac{8}{10}$ of 1 per cent of the cases, and in two-thirds of these it was denied. In other words, only $\frac{1}{4}$ of 1 per cent of all increases granted in this period affected prices.

The cases under consideration in this period came under the following categories: (1) Maladjustment (that is maladjustment in relation to the L.S.F.); (2) inequities and gross inequities—manifest injustices which include unusual and unreasonable differentiation in wage rates, and cases that are not normal to American industry; (3) substandard cases—very few of this type; and (4) cases based on the effective prosecution of the war. The WLB held that its jurisdiction did not cover cases involving promotional reclassification, rises associated with individual merit, or rises based on increased service or productivity associated with piece rate cases.

In this period, employers were anxious to retain their employees and, therefore, requested permission to pay higher wages; conversion, moreover, required changes in job classifications. Wage-stabilization programs were a factor and employers who had previously paid little were now anxious to establish higher wages in order to attract workers. Almost half of the cases involved gross inequities. In only 16 per cent of the cases received by the board had employees not obtained increases equal to those allowable under the L.S.F. Approximately 30 per cent of the cases were for wages of less than 50 cents per hour. Very few substandard cases were, however, dealt with as such; these generally came in under the category of inequities.

Now let us turn to a later period. Executive Order 9328 of Apr. 8, 1943—the "Hold-the-Line" Order—reads as follows:

"The National War Labor Board, the Commission of Internal Revenue, and other agencies exercising authority conferred by Executive Order No. 9250 or Executive Order No. 9299 and the regulations issued pursuant thereto over wage or salary increases are directed to authorize no further increase in wages or salaries except such as are clearly necessary to correct substandards of living, provided that nothing herein shall be construed to prevent

[1] The director is the head of the OES.

such agencies from making such wage or salary adjustments as may be deemed appropriate and may not have heretofore been made to compensate, in accordance with the Little Steel Formula as heretofore defined by the National War Labor Board, for the rise in the cost of living between January 1st, 1941, and May 1st, 1942. Nor shall anything herein be construed to prevent such agencies, subject to the general policies and directives of the Economic Stabilization Director, from authorizing reasonable adjustments of wages and salaries in cases of promotions, reclassifications, merit increases, incentive wages, or the like, provided that such adjustments do not increase the level of production costs appreciably or furnish the basis either to increase prices or to resist otherwise justifiable reductions of prices.

"The Chairman of the War Manpower Commission is authorized to forbid the employment by any employer of any new employee or the acceptance of employment by a new employee except as authorized in accordance with regulations which may be issued by the Chairman of the War Manpower Commission with the approval of the Economic Stabilization Director, for the purpose of preventing such employment at a wage or salary higher than that received by such new employee in his last employment unless the change of employment would aid in the effective prosecution of the war."

This order thus refused permission for wage increases that might have a significant effect on prices and also gave the War Manpower Commission (WMC) authority to reduce the transfer of workers resulting from the attempt by employers to bribe workers into jobs paying higher wages. In other words, employers were forbidden, except in certain cases, to pay higher wages, and if by subterfuge they should succeed in inducing workers to move into their plants, the WMC could take corrective measures. Finally, the most important cause for wage adjustments from October, 1942, to March, 1943 (*i.e.*, the correction of inequities or inequalities between plants or within plants), was not to be the occasion for further wage increases.

On May 12, 1943, the director of the Office of Economic Stabilization (OES) issued a policy directive under Section 5 of Executive Order 9328. It should be noted that the OES to some extent increased the powers of the WLB and through the issue of this policy directive (text follows) made it possible to allow adjustments which were noninflationary, in order more effectively to prosecute the war and correct inequities. The board was authorized to establish by occupational groups and labor-market areas, wage-rate brackets embracing all rates found to be sound and tested going rates. In general, wage rates were not to be adjusted above these brackets.

"1. In order to provide clear-cut guides and definite limits as a basis for correcting substandards of living, and as a basis for permitting the Board to make within the existing price structure and within existing levels of production costs, minimum and noninflationary adjustments which are deemed necessary to 'aid in the effective prosecution of the war or to correct gross inequities' within the meaning of Section 1 of the Act of October 2, 1942, the Board is authorized to establish as rapidly as possible, by occupational groups and labor market areas, the wage-rate brackets embracing all those various rates found to be sound and tested going rates. All the rates within these brackets are to be regarded as stabilized rates, not subject to change save as permitted by the Little Steel Formula. Except in rare and unusual cases in which the critical needs of war production require the setting of a wage at some point above the minimum of the going wage bracket, the minimum of the going rates within the brackets will be the point beyond which the adjustments mentioned above may not be made. The careful application of these wage-rate brackets to concrete cases within the informed judgement of the War Labor Board will strengthen and reinforce the stabilization line to be held. Maladjustments between wages and the cost of living will be considered by the Board only for the purpose of correcting substandard conditions of living, or determining adjustments within the 15 per cent limit of the Little Steel Formula. In connection with the approval of wage adjustments necessary to eliminate substandards of living or to give effect to the Little Steel Formula or in connection with the adoption of a longer work week, the Board may approve wage or salary adjustments for workers in immediately interrelated job classifications to the extent required to keep the minimum differentials between immediately interrelated job classifications necessary for the maintenance of productive efficiency.

"2. All wage adjustments made by the Board which may furnish the basis either to increase price ceilings or to resist otherwise justifiable reductions in price ceilings, or if no price ceilings are involved which may increase the production costs above the level prevailing in comparable plants or establishments, shall become effective only if also approved by the Economic Stabilization Director. The Board shall cooperate with the Office of Price Administration or such other agency as the Economic Stabilization Director may designate with a view to supplying the Economic Stabilization Director with the data necessary to judge the effect of any proposed wage adjustment or price ceilings and the levels of production costs." [1]

What was meant by exceptional cases is clarified in a later report of the WLB:

"An important limitation of the authority of the Regional Boards was contained in the requirement that in cases involving allegations of gross inequities, adjustments could be approved only up to the minimum of the appropriate brackets except in 'rare and unusual' cases meeting specified re-

[1] *Second Monthly Report of the National War Labor Board*, June 1, 1943, pp. 4 and 5.

quirements. These requirements include (*a*) that the establishment be covered by the War Manpower Commission's 'List of Essential Activities' or designation of 'locally needed activities' and (*b*) that the establishment be certified by the proper government agencies as 'having been in compliance with all the War Manpower Commission's regulations and policies with respect to recruitment, training, and utilization of labor and with respect to operation on a minimum wartime work week (as defined in Section 4 of WMC Regulation No. 3)'." [1]

As a result of the decisions taken in April and May, 1943, by the President and the OES, the province of the WLB in wage disputes was restricted to some extent. As a result, the board at that time considered a large proportion of its cases as maladjustment cases—*i.e.*, as falling under the L.S.F.—and substandard cases. In May, 1943, these two groups together constituted 56 per cent of all cases decided, whereas before April they had constituted only 18 per cent, and in April, 1943, only 9 per cent.[2]

It has been noted that the directive of May 12, 1943, was issued in order to supplement the Executive Order of Apr. 8, 1943. This directive, quoted at length above, announced the bracket principle. The fundamental issues raised are discussed well in a letter by W. H. Davis, chairman of the WLB to *The New York Times* of Apr. 9, 1944. It will be noted that the most numerous changes allowed at this stage of the war occurred in those cases which "permit an abnormally low wage rate to be increased without regard to the 15 per cent limitation but not above the minimum sound and tested rate."

Chairman Davis wrote as follows to *The New York Times:*

"Under the new policy of Executive Order 9328, somewhat relaxed by a directive of the Director of Economic Stabilization on May 12, 1943, the national wage-stabilization policy has been developed into four basic rules, each of which fixes a stabilizing limit within its own field and includes, within this limit, provisions to correct gross inequities. (1) General wage increases are forbidden, except that under the Little Steel formula they may be increased up to but not beyond a limit of 15 per cent above Jan. 1, 1941. (2) Wage rates insufficient to maintain a decent standard of living may, without regard to the 15 per cent limitation, be increased voluntarily by an employer up to 40 cents an hour without seeking approval of the War Labor Board, and up to 50 cents an hour with the approval of a Regional War Labor Board without going to the National Board. (3) Established wage differentials normal to American industry are stabilized by the bracket sys-

[1] *Fourth Monthly Report of the NWLB*, Aug. 2, 1943, p. 1.
[2] *Third Monthly Report of the NWLB*, July 1, 1943, p. 5.

tem, which permits an abnormally low wage rate to be increased without regard to the 15 per cent limitation up to but not above the minimum sound and tested rate for that occupation in the labor market area except in rare and unusual cases in which the critical needs of war production require the setting of the wage at some point above the minimum but not above the maximum of the bracket of sound and tested going rates for that occupation in the area. (4) Inequities among the wage rates within a particular plant may be corrected, but only within the limit that such corrections must not increase the level of production costs appreciably or furnish the basis for price relief."

It took time to determine brackets and hence relatively few wage adjustments were approved from May to August, 1943. With the introduction of the bracket principle, the major adjustments were allowed under inequities.

TABLE 115.—PERCENTAGE DISTRIBUTION OF CASES BY CHIEF TYPE OF ADJUSTMENT

Period	Maladjustments	Substandards	Inequities	Other
1. October, 1942 March, 1943....	16.1	1.9	53.5	28.5
2. In May, 1943.....	36.5	20.0	34.6	8.9
3. In December, 1943.....	6.2	4.1	79.1	10.6
4. 15 months, October, 1942 December, 1943.....	14.1	8.1	59.9	11.4

SOURCE: *Tenth Monthly Report of the NWLB*, Feb. 1, 1944, p. 16.

It will be noted in Table 115 that in the third period, cases under maladjustments (L.S.F.) had become much less important than in the first period; and cases under inequities were much *more* important in the third period than in the first period. Over the 15-month period cases under inequities accounted for 60 per cent of all cases, and 66.3 per cent if intraplant differential cases are included.[1] These cases are not, however, so important dollarwise as in numbers.

While on these statistical problems, it should be pointed out to the reader that the WLB was disposed to be more liberal toward low-paid than to high-paid workers. Yet it was not disposed to wipe out differentials. For the 15-month period under consideration the largest percentage rise (12.6) in average hourly earnings was approved in substandard cases, the next largest under intraplant differentials (10.4) and gross inequities (10.2), and the smallest under maladjustment

[1] Intraplant differentials are not included in the totals given in Table 115.

(L.S.F.) cases (7.5). Ranges for December, 1943, were 6.4 per cent for the L.S.F. and 14.6 per cent for substandard. In December, 1943, the percentage rises granted were 8.7 per cent to the relatively well-paid manufacturing groups and 12.1 per cent to the less well-paid groups under distribution, finance, insurance services, etc.[1]

A tendency to deny the full 15 per cent rise under the L.S.F. is to be noted. This issue is discussed below. In the Pacific Telephone and Telegraph case (No. 3047) the WLB denied the application of the L.S.F. to a corporation on the ground that it would interfere with established differentials and would favor high-paid workers.[2]

3. THE LITTLE STEEL FORMULA

The L.S.F. was announced soon after the introduction of a general stabilization program. It provided compensation for a rise in the cost of living from January, 1941, to May, 1942, of 15 per cent and also corrected some inequities in the steel industry.[3] The WLB was determined not to start another upward spiral of wages and prices. Labor members of the board, on the other hand, proposed that the full request for a rise of $1 a day be granted and that if a large part of the increase were paid in bonds the inflationary danger would be averted. Additional payments, moreover, would induce increased output, the labor members of the board held.

In general, the WLB has adhered to the L.S.F. A notable exception was in the coal case,[4] and later in the steel case. In other instances, it "has refrained from approving the full allowance possible under the Little Steel Formula where such action would have an unstabilizing effect on wages in an industry or in an area." [5]

The formula was generally applied to an establishment as a whole. General increases already granted which had not been based on a rise of

[1] All material in these two paragraphs from the *Tenth Monthly Report* . . . , February, 1944, pp. 10–17. More recent figures reveal the continued importance of cases labeled gross inequities; but the differential in favor of low-paid occupations seems less marked than in earlier months. *Twelfth Monthly Report* . . . , Apr. 1, 1944, pp. 8–9; *Thirteenth Monthly Report* . . . , May, 1944, pp. 12–13.

[2] *Eleventh Monthly Report* . . . , Mar. 1, 1944, pp. 1–2.

[3] See especially WLB, *Directives and Opinions of the National War Labor Board in the Little Steel Case*, July 16, 1942, and National WLB, *Application of the Little Steel Formula*, January, 1944. *Cf.* appendix to this chapter.

[4] In the United Mine Workers case, the coal miners were granted an increase of pay on the theory that their lunch hour would be cut from 30 to 15 minutes. The WLB maintained that basic wage rates had not been increased. Yet the net result of a provision of a 15-minute lunch hour will be a reduced productivity per man-hour of work. Wage inflation results both from a rise of pay per ton of coal mined, which results from the reduction of output per hour of work, and from the increase of the period for which overtime is paid. *Eighth Monthly Report* . . . , December, 1943.

[5] *Fifth Monthly Report* . . . , Sept. 3, 1943, p. 3.

productivity were to be offset against the 15 per cent rise allowed. Other increases—various bonuses, extra payment for night work, incentive pay, extra pay to offset reduced earnings resulting from dilution of skills, etc.—might be additional.

Under strong pressure from labor, the WLB in 1944–1945 undertook a study of the formula. (Since the use of this formula is required under an executive order, the WLB can merely recommend its revocation on the ground of gross inequity.) [1] Early in 1945, the WLB reported the results of this study to the President. The report was in support of the formula.

In the appendix to this chapter, the board's attitude on several other problems is presented: the extent to which wage incentives should be granted in order to hold or move workers; the degree to which the WLB should strive to wipe out wage differentials; the responsibility of the board for minimum standards of living.

In the latter part of 1943, the board began to emphasize the argument that the L.S.F. should be used only when it is a stabilizing influence. In some cases the board granted increases larger than those allowed under the formula and in some cases it did not grant the total amount allowed. Where the granting of the full amount would have had an anti-stabilizing effect, it was denied. The board's attitude toward the L.S.F. is well exemplified by its rulings on the New York Typographical Union and the Printers League Section of the New York Employing Printers Association:

"The wages in dispute are relatively high. Does that in itself make the Little Steel Formula inapplicable? The answer is no! The National War Labor Board has applied the 15% rule to claims for general wage increases irrespective of the level of the wages. The Little Steel Formula has, however, been modified in particular cases when the correction of substandards of living was involved. Irrespective of the level of wages involved in a case, moreover, the Board may disapprove a full 15% general increase if, in view of all the facts of the case, it is satisfied that such a general increase would unstabilize wage rates. Although the Little Steel Formula is the general rule for appraising claims for general wage increases, the Board has recognized that it would not be blindly applied irrespective of the effect upon the stabilizing program.

"It is clear . . . that the National War Labor Board has in particular cases refrained from approving the full allowance possible under the Little Steel Formula where such action would have an unstabilizing effect on wages in an industry or in an area. The infrequency with which such a limitation has been used indicates that there must be compelling reasons to support the use of the limitation. The limitations have been invoked, however, when the 'peace-time standards' of the employees involved in a case were relatively very high compared to other employees in related work and where further general increases would create unstabilizing inequalities

[1] *Thirteenth Monthly Report . . .*, May, 1944, p. 5.

rather than adjust inequalities. Under such circumstances, the Board has determined that wage stabilization requirements must be considered of first importance." [1]

In its recommendations to the President, the public members of the WLB proposed adherence to the L.S.F. Their policy had been (1) Fight inflation. (2) Allow (under L.S.F.) all groups to recover ground lost as a result of the rise in the cost of living from January, 1941, to October, 1942. In general, all were entitled to an over-all rise of 15 per cent in the basic wage rates. (3) Acceptance of a reduction in the *real* hourly rate associated with further rises in the cost of living. (4) Serious rises in the cost of living were another matter: the WLB might recommend modifications of wage policy should the government fail to obtain a measure of price stability.

In the view of the public members of the WLB, the rise in straight-time hourly earnings adjusted for interindustry movements had been 37 per cent; and that in the cost of living, 20 per cent. They could, therefore, not recommend the abandonment of the L.S.F. They were, however, impressed by the dangers of the postwar; they would have Congress set minimum wages in numerous key occupations and have labor and capital agree on wage principles that might help labor retain some of its wartime gains. In asking for greater freedom in granting "fringe" [2] wage increases, the WLB made clear the pressures to which it had been subjected.

In the writer's opinion, the public members of the WLB rightly recommended the retention of the L.S.F. Yet it is not clear that their argument could be fully sustained. For example, why should a rise in pay associated with the movement to higher paying industries be irrelevant in the association of wages and the cost of living, and a rise associated with intraplant movements be relevant? The former was included in hourly earnings, an irrelevant index, and the latter in straight-time hourly earnings, a relevant index. The public members would have been on safer ground if they had restricted their support of the L.S.F. to arguments that its retention was a bulwark against inflation and that any significant further rise in basic wage rates would start the spiral of inflation once more.

[1] *Fifth Monthly Report . . .*, September, 1943, p. 3.

[2] "Fringe" increases include rises in wages granted in the form of vacations, differentials for late shifts, reclassifications and job revaluations, payments for mealtime, going to and from work, and the like.

4. THE ATTACK ON THE LITTLE STEEL FORMULA [1]

By the fall of 1943, labor launched a full-scale attack against the L.S.F., which it considered an unfair attempt to freeze wages. In 1944, the pressure increased further. Labor's position was that, whereas the cost of living had risen by 45 per cent from January, 1941, to October, 1944, the basic wage rate had risen by only 20 per cent or even less, and that justice required an association of the basic wage rate with the cost of living. The rise in hourly earnings or even straight-time hourly earnings was, in the view of labor, not a relevant variable for comparison with the rise in the cost of living. Increases associated with upgrading in plants, incentive payments, shift differentials, and the like were considered necessary payments to elicit additional output. The rise of straight-time hourly earnings of 37 per cent should not, in labor's view, be interpreted as evidence of an adequate rise in wages. The proper comparison was a rise in basic wage rates of 20 per cent and the cost of living of 45 per cent. Finally, the labor representatives stressed the deflationary dangers inherent in tying the basic wage rates to the cost of living. In the transition, the rise in hourly earnings would be reduced to that in basic wage rates; and in view of the small rise in basic wage rates in comparison with that in the cost of living and productivity, labor would be subject to a large measure of exploitation.

5. STATISTICAL EVIDENCE ON THE RESULTS OF WAGE CONTROL

In this section a problem of limited significance is investigated, namely, the relative rise of hourly earnings and the cost of living.[2] That hourly earnings rose more than the cost of living, both before and during the period covered by the L.S.F., is of some importance. The responsibility rests only in part, of course, with the WLB. Hourly earnings rose in response to changes in basic rates, upgrading, increase of overtime, and evasions of government orders. Statistics show that the stabilization program was more successful in preventing the rise

[1] See especially *Report to the President on the Relationship of Wages to the Cost of Living and Changes which Have Occurred under the Economic Stabilization Policy* (mimeographed, Feb. 12, 1945); *Report to the President on the Relationship of Wages to Consumer Prices and the Cost of Living by CIO Members of the National War Labor Board* (mimeographed Mar. 7, 1945). *Letter of February* 27, 1945, *from William H. Davis, Chairman of WLB, to Judge Vinson, Director of Economic Stabilization, of February* 27, 1945 and accompanying documents; and *Directive of March* 8, 1945, *to the National War Labor Board on Wage Adjustments not Directly Involving Basic Wage Rates, by Fred S. Vinson.*

[2] *Cf.* Ch. XXI for a study of the relation of basic wage rates and the cost of living.

of the cost of living than in preventing the rise of the average hourly earnings. Statistics do not, however, reveal the extent to which dispensable rises in wage rates continued.

TABLE 116.—AVERAGE MONTHLY RISE OF COST OF LIVING AND OF HOURLY MONEY EARNINGS, 1941–1944

Periods	Monthly rise, cost of living, per cent	Monthly rise, hourly money earnings in all manufacturing, per cent
1. January, 1941–May, 1942.....	0.9	1.4
2. May, 1942–October, 1942.....	0.5	1.4
3. October, 1942–April, 1943.....	0.7	1.0
4. April, 1943–June, 1943.....	0.3	0.8
5. June, 1943–June, 1944.....	0.4	0.5
6. June, 1944–September, 1944.....	0.2	0.4

SOURCE: Based on data of the BLS and *S.C.B.*

In Table 116, the history of hourly earnings in factories and of the cost of living is presented concisely. The first four of the six periods are important for our investigation:

1. JANUARY, 1941, TO MAY, 1942. This is the period covered by the L.S.F. The cost of living rose more rapidly than in later periods, and hourly earnings also rose more rapidly than in other periods—except in period 2. The rise in wage rates for this period was large relative to that for the cost of living.

2. MAY TO OCTOBER, 1942. This is the early period of the General Maximum Price Regulation; it precedes the October, 1942, stabilization program. In this period the cost of living did not rise so rapidly as in period 1; but the rise of hourly earnings was maintained at the earlier rate, and therefore—relative to the movement of the cost of living—wages rose more rapidly than in period 1.

3. OCTOBER, 1942, TO APRIL, 1943. This is the period that covers the month of the October stabilization program up to the April, 1943, "hold-the-line" order. In this period the cost of living rose more per month than in period 2; and the hourly earnings rose more than the cost of living. There was, however, an improvement in the relative movement of earnings to the cost of living, as compared to period 2.

4. APRIL TO JUNE, 1943. This is the period immediately following the "hold-the-line" order. In this period, the marked improvement was in the cost of living whereas the rise in hourly earnings, although less than in period 3, was still rather disconcerting.[1]

5, 6. JUNE, 1943, TO JUNE, 1944; JUNE, 1944, TO SEPTEMBER, 1944. In the year ending June, 1944, the rise in hourly money earnings approximated the rise in the cost of living, but later in that year the rise in hourly money earnings doubled the rise in the cost of living.

In general, *hourly earnings* continued to rise more than the cost of living; but there was an improvement after October, 1942, in the relative movements of hourly earnings and wage rates and a marked improvement in the rate of rise of hourly earnings, particularly after the middle of 1943. By a "marked" improvement, I mean that the inflationary pressure associated with large rises (relative to the cost of living) was substantially reduced.

These results might be checked with those revealed by a later study of the BLS (Table 117). The latter (which, however, relates to urban factory wage rates) yields the same trend as my series in Table 116 but shows substantially smaller percentage rises. The relatively small increase in urban wage rates is explained, undoubtedly, by the correction of indices for hourly earnings, for the increase in overtime, and the shift to higher paying industries.

TABLE 117.—URBAN FACTORY WAGE RATES

	Per Cent
Rise per month:	
January, 1941–October, 1942	0.8
November, 1942–October, 1943	0.6
November, 1943–April, 1944	0.3

SOURCE: *Wartime Wage Movements and Urban Wage-rate Changes*, BLS Serial *R* 1684, October, 1944.

Chart 83 yields a result that coincides with the findings of the WLB. It will be noted that gross weekly earnings, gross average hourly earnings, and straight-time hourly earnings—all in manufacturing—rose approximately one-half as much in the 15 months following the introduction of the stabilization program as in the 15 months preceding. These important gains should be ascribed to some extent to the following reasons:

1. The cost of living rose by 12 per cent in the first period covered

[1] *Cf.* House Hearings on *Continuance of CCC*, p. 190.

by the chart (July, 1941, to September, 1942) and only 6 per cent in the second (October, 1942, to December, 1943).

2. Large rises were required in the earlier period in order to attract new members into the labor market. By September, 1942, the total numbers employed had reached a peak. (Manufacturing industries,

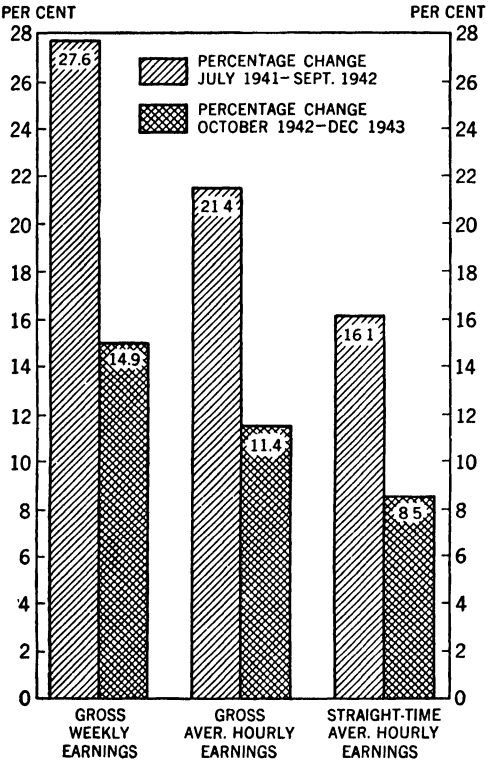

CHART 83.—Percentage change in earnings in manufacturing industries. (*Source: House Hearing on EPCA*, 1944.)

on the other hand, had to continue to grow at a rapid rate in 1943 and 1944—the differential in favor of munitions industries, in particular.)

So much for the statistical evidence on the results of wage control.

6. THE LIMITATIONS ON THE WAGE INCENTIVE

In a number of cases presented in an appendix to this chapter, it will be observed that the WLB has been rather cautious in its approval of rises in wage rates as an incentive to hold men in crucial

occupations or to move them into these occupations. It relied largely on the recommendations of other government agencies when it granted wage increases in order to improve the distribution of labor. In numerous cases it granted rises to correct obsolete wage structures when the prosecution of the war was vitally affected; but not before other agencies had first done their part.

But the WLB did not use its power of raising wage rates to move men into crucial occupations often enough. Serious labor bottlenecks in such industries as foundries handicapped the war effort until the end. When the restrictive executive orders of April–May, 1943, were issued, it was expected that a service law might be passed. Men might then have been moved—by law and not by incentive pay rises—into crucial occupations. The service law was not seriously considered then, however, and it failed to pass early in 1945 when a service law was once more under consideration. Under the conditions of 1944 and early 1945, it was not possible to relieve the labor bottlenecks in some essential war industries. At the most, the WLB "in rare and unusual cases" might grant wage increases up to the higher limit of the bracket for a particular occupation in a labor area. This was not enough, however, to win workers for occupations that were low paying and were not the easiest kind of work. What is more, the WLB labeled few cases as "rare and unusual." They supported their policy by the theory that in tight labor markets almost every employer or occupation could demand relief under this provision. Of approximately 140,000 wage-adjustment cases handled by the board up to March, 1944, only 85 were recognized as "rare and unusual." [1]

Common characteristics of "rare and unusual" cases were

"that (1) they concerned industries which produced goods or services vital to the war effort; (2) there was extensive collaboration between the WLB and other war agencies, especially WPB and WMC, to demonstrate the existence of a serious manpower problem which could not be resolved by non-wage measures; (3) there was convincing evidence that the wage structures of the firms involved were outmoded and unable to furnish the necessary supply of labor; (4) there was generally a concerted program involving several government war agencies which was designed to remedy the particular manpower problem, and it was apparent that a wage adjustment was an indispensable part of the combined plan."

[1] Discussion and excerpts based on *Thirteenth Monthly Report . . .*, June, 1944, and *Press Release.*

It was necessary to be certain that the plant was sufficiently important for the war effort and that the wage increase would remedy the difficulties.

In June, 1943, the WLB asked that in such applications it be certified that (1) the establishment was engaged in the WMC's list of essential activities or locally needed activities; (2) the establishment had complied with WMC's policies as to recruitment, training, hours, utilization of labor; and (3) there should be certification of these matters by proper agencies.

The WLB gives as an example of a rare and unusual case that of the Boeing Aircraft Company in Seattle. Since Pearl Harbor over 250,000 workers had been trained, but 220,000 had left, generally for higher paying jobs. Wages were high, but not high enough to compete with shipbuilding. Despite cutbacks in shipping contracts in the area, granting of the highest labor priority to this company, special selective service deferments, and inauguration of a West coast man-power program, it was agreed by interested agencies that a wage increase was still needed. The result was a top rate of $1.60 per hour for the Boeing plants which "is above the minimum of comparable brackets and can be justified only on the grounds that the Boeing production problem presents a rare and unusual emergency that calls for the fixing of a higher rate to solve the problem."

7. SOME WAGES NOT CONTROLLED BY THE WLB

Control over farm wages since the latter part of 1942 has rested with the War Food Administration (WFA); control over salaries of $5,000 and more, or salaries of $5,000 or less where workers are not represented by organizations, are under the Treasury Department; and control over railroad workers rests in large part with the Railway Labor Board. There are other groups, also, whose wages are out of WLB's jurisdiction.

Concerned over the loss of workers on the farms, the WFA was inclined to adopt a more liberal wage policy than that followed by the WLB. Wages were, of course, much lower on the farms than in industry [1] (see Table 118). This large difference is found despite a rise of farm wage rates of 117 per cent from July, 1940, to Oct. 1, 1943.

This relatively generous wage policy for farm labor by WFA was beginning to have a serious effect on other labor markets. Asparagus cutters and packers in California were making average earnings of $18 to $20 a day in

[1] W. T. Ham, "Stabilization of Farm Wages," *The Agricultural Situation*, January, 1944, pp. 18–21.

April, 1943. This was a signal for the introduction of a stabilization program, which was followed by similar programs for other types of agricultural labor.[1]

In the control of railroad wages, a bitter dispute arose between the OES and some members of Congress. The former rejected the proposed grant of a general increase in wages of 8 cents per hour which had been granted by a Railroad Emergency Board in 1943, on the grounds that this rise was inconsistent with the objectives of the stabilization program. Several members

TABLE 118.—WAGES, FARM AND INDUSTRY

(In dollars)

	Weekly	Daily	Hourly
Farm (Oct. 1, 1943)	17.16	3.51	0.348
Factory (Sept. 1, 1943)	44.39	7.40	0.993

SOURCE: *The Agricultural Situation*, January, 1944.

of Congress, on the other hand, protested and adhered to the position that the Railroad Labor Act, and not the Stabilization Act, covered wages in the railway industry.[2]

Finally, the control of salaries of workers under the Treasury seems not too effective. The Treasury, in a recent statement, admitted that its decisions covered approximately $1 billion of annual salaries; and increases of 14.6 per cent of the salaries involved had been allowed. This is not complete coverage by any means. It readily agreed that it had no control over rises associated with promotion.[3] There has undoubtedly been a large inflation in this area though not so large as in wages. How much is not known. From 1937 to 1942, the average salary of three highest paid officials in seven major aircraft companies, according to a report of the C.I.O., rose from $26,400 to $74,600.[4]

8. CONCLUSION

By the early part of 1942, it had become evident that unchecked wage increases would jeopardize any stabilization program. Higher wages meant higher costs and increased demand. Entrusted with the responsibility of price control, the OPA in particular was embarrassed by rising wage payments. The Executive, through a series of orders of April and October, 1942, and April and May, 1943, and Congress through its Stabilization Act of October, 1942, attempted to prevent

[1] *Ibid.*

[2] Senate Hearings on *Extension of EPCA* (1944), pp. 1176–1189.

[3] *Ibid.*, pp. 645–656.

[4] *Ibid.*, p. 742.

any untoward rise in wages or other costs from upsetting the stabilization program.[1]

Unfortunately, spheres of action to prevent wage increases were limited by political considerations. Farm prices, for example, had been allowed to rise in a spectacular manner until October, 1942, when the farm bloc was given a setback. Hourly earnings in industry had been allowed to rise substantially more than the cost of living, and the rise of wages associated with increase of employment and the working week, upgrading, promotions, and the like—the most important causes of wage increases—was inevitable. Current views on social justice, moreover, seem to require some association of wage rates and the cost of living.

So we see that, all in all, the area of WLB jurisdiction was narrowly restricted. It is not surprising, then, that, despite all the efforts of the board, average hourly earnings in industry continued to rise relative to the increase in the cost of living in 1942–1944. In view of the political issues involved and the importance of incentives for wage earners, it is doubtful if a great deal more could have been done to restrict wage advances, however much the anti-inflationists may have been opposed to the rise of wage payments. As the rise of man-hours of work leveled off, and (of secondary importance) as violations of the spirit of the Executive orders were reduced—such as the granting of disguised increases of wage rates through recourse to unmerited reclassifications and promotions—the gains in pay rolls tended to be reduced in importance.

An unfortunate aspect of wage control was the failure to implement it adequately with man-power control. Where the incentive of higher wages is not allowed to operate, compulsory movement to industries according to degrees of essentiality is required. Where wage differentials are very large, moreover, it is difficult to assure an adequate staffing of labor in the absence of compulsion. There was, therefore, an unfortunate hiatus: employers thus were denied the right to offer the reward of higher wages as a means of attracting labor to essential industries, and the government did not fully use its coercive powers. Serious shortages thus remained a cause of concern.

To reiterate several points:

1. The authority of the WLB was limited. Major inflation stemmed from the increase in man-hours, upgrading, promotions, rise of incentive

[1] Other relevant legislation: The Emergency Price Control Act, the War Disputes Act, and a rider to the Public Debt Act. (The last impaired the authority to reduce wages.)

pay, increased importance of overtime pay, movements to higher paying war industries, and the increase in the cost of living—over these the WLB's authority was nil or restricted.

2. Undoubtedly the WLB did have a sobering effect on wage inflation. One can be reasonably sure that had not a strong position been taken by it, an upward adjustment in basic wage rates of at least 30 per cent to offset rising prices would have been allowed; and this in turn would have revitalized the inflationary pressures. The actual rise in basic wage rates was not 30 but only 20 per cent.

3. Crude figures for basic wage rates and *physical* productivity—and no others are available—suggest that basic wage rates just about kept pace with rising cost of living and *average* productivity.

4. Since September, 1942, wages have not risen so much as before that period. After 1942, however, since the cost of living rose less and since the necessary influx of workers had been largely accomplished by then, the incentive of higher wages required to induce workers to come into the labor market was not so great. (This is not to be confused with incentive required to attract workers away from nonessential industries.)

5. The WLB tended to raise the pay of low-wage groups relatively to others.

6. In their decision early in 1945 to recommend the retention of the L.F.S., the public members of the WLB made a temporary contribution to the anti-inflation fight.

APPENDIX

SOME IMPORTANT CASES[1]

In general, the WLB did not sanction wage increases which were directed toward moving man power from one industry to another. According to the statement of the WLB quoted below, the effective allocation of workers to essential industries was the responsibility of the WMC and not of the board.

"The National War Labor Board will not approve wage increases for the purpose of influencing or directing the flow of manpower.

"When in a particular case management and labor, in cooperation with the War Manpower Commission and other government agencies, have taken concerted action to solve a manpower need, the Board will consider a request in that case to correct whatever inequalities or gross inequities may then need correction.

[1] NWLB, *Manual of Decisions.*

"It is obvious that if the Board should attempt on its own initiative to remedy manpower shortages by granting wage increases whenever an employer alleges that his workmen are leaving his plant for higher paying jobs, the effect would be to accelerate a spiral movement of inflationary wage increases. Such a policy would be inconsistent with the wage stabilization aims of the Executive Order of October 3, 1942, in that it would tend to encourage demands for wage increases equal to the highest paid in an industry or in a community.

"It should be recognized by all concerned that when parties to a wage agreement ask the National War Labor Board to approve a wage increase on the sole ground that the increase is necessary in order to keep men from going to another war plant, they ask the Board in fact to rule that the men should remain at that plant in preference to going to some other plant. It is the opinion of the War Labor Board that it should not determine a manpower policy in a given case either directly or indirectly through the medium of granting agreed upon wage increases, unless the parties in cooperation with the War Manpower Commission and other government agencies can show that it is of controlling importance that the employees remain at the plant involved. After all, the supply of the Nation's manpower is limited, and it is not for the War Labor Board to say whether the workmen should remain at a plant processing soy beans or should go to a magnesium plant, to a munitions plant, or to some other vital war plant. It should be recognized as a matter of principle that if men are expected or required by manpower authorities to remain on the job in a given plant, it would not be fair under such circumstances to require them to remain on low paying jobs if they can go nearby and get higher paying jobs." [1]

An interesting exception to this policy is the following:

"It was represented to the Board that the recommended wage increase would be a substantial aid in the campaign of holding, returning and recruiting miners, in which all other agencies of government have now done their part . . . they think that these miners whose special skill is now critically necessary to the war effort are entitled to the recommended amount of increase on the ground that if they are given less they would, under all the circumstances of the case, have been unjustly discriminated against. Under those circumstances our conclusion was that our responsibility to the nation would not permit us to reject the suggestion. We have felt that this experiment must be tried. We have also felt that in the concerted plan referred to, the experiment has been surrounded by all possible safeguards." [2]

Despite its failure in general to deal with the problem of lack of man power through wage adjustments in the years 1943–1944 and early 1945, the board occasionally approved adjustments with a view to encouraging movements of labor. As an illustration, I quote its statement on the canning industry in the *Third Monthly Report*.[3]

[1] Staley Manufacturing Company, Case WA-12.

[2] Thirteen Metal Mining Companies, Case 218, etc.

[3] *Third Monthly Report* . . . , July, 1943, p. 1.

"The May 11 directive was designed to meet a critical manpower situation in the packing and processing of seasonable and perishable foods. The Board was empowered to make adjustments in wage rates for hourly paid common labor to correct substandard rates and to aid in the effective prosecution of the war, provided that (1) the adjusted hourly rates do not exceed farm common labor rates in the labor market area plus the differential (not to exceed 8 cents) existing in the 1940 or 1941 processing season between farm and food processing common labor rates; and (2) the new rates are not higher than the minimum going rates for common labor in the labor market area. The directive further stipulated that piece rates or hourly rates for other than common labor may be adjusted to maintain previous differentials between the different occupational groups."

Similar action was taken in the case of lumber and fluorspar, where it became necessary to grant wage increases in order to encourage the movement of labor.

"During June the War Labor Board, in a decision affecting 30 Michigan and Wisconsin Lumber companies, called attention to its authority and its obligation to correct obsolete wage structures in an industry where the prosecution of the war was vitally affected. This was followed in July by another move to break a critical war production bottleneck in the same industry. Acting on the recommendation of the Lumber Policy Committee of the Federal Government, the Board authorized its fourth, sixth and eighth Regional Boards at Atlanta, Chicago and Dallas to fix minima of 50¢ to which workers in the lumber industry in these areas could be raised without Board approval. The Regional Boards were further requested to give priority to other applications involving rates above this minimum in the production and preparation of lumber.

"Action to eliminate the chaotic wage structure in the fluorspar industry was announced in July in a move which brought the average wage including overtime, of some 1,400 workers to about 67¢ with an average hourly increase of about 14¢. Although only seven producers in Illinois and Kentucky were parties to the proceedings, other companies in the area are to adopt the same wage scale. The adjustments in wage structure followed a detailed wage survey and the recommendations of a referee who pointed out the critical shortage of fluorspar and the substandard position of the fluorspar miners. The wage increases were approved by the Director of Economic Stabilization." [1]

The preamble of the Executive Order of Oct. 2 fixed Sept. 15, 1942, as the terminal point in the race between wages and prices:

". . . to control so far as possible the inflationary tendencies and the vast dislocations attendant thereon which threaten our military effort and our domestic economic structure, and for the more effective prosecution of the war. . . .

". . . preventing avoidable increases in the cost of living, cooperating in

[1] *Fifth Monthly Report* . . . , p. 5.

minimizing the unnecessary migration of labor from one business, industry, or region to another, and facilitating the prosecution of the war."

The attitude of the WLB on maladjustments can be seen from the following excerpts of the Little Steel cases:

"Because of its relation to that part of the war program which seeks to prevent the cost of living from spiraling upward, the requested wage increase of one dollar ($1.00) a day, or twelve and one-half cents (12½ cents) per hour, is the most important issue in these cases.

"We have allowed a wage increase of five and one-half cents (5.5 cents) per hour. Of this amount three and two-tenths cents (3.2 cents) measures a disadvantage in real wages that has been suffered by these steelworkers since January, 1941, in the race between wages and prices. It stabilizes the purchasing power of their hourly wage rates as of January, 1941. The Board acts on the assumption that prices and living costs will now be stabilized under the President's seven-point program. To the three and two-tenths cents (3.2 cents) stabilization adjustment we have added two and three-tenths cents (2.3 cents) because of equities arising out of the particular circumstances of the wage negotiations in this case. In so doing we have sought to avoid that kind of injustice that comes from rigidly applying a horizontal rule to all cases, without regard to their particular merits; and we have been satisfied to forego mathematical exactness where we could fairly reach a just and reasonable approximation.

. . . . . .

"In determining this controversy about wages, the National War Labor Board is governed by two clear directives. In the Price Control Act of January 30, 1942, the Congress directs the National War Labor Board and other agencies of Government dealing with wages 'within the limits of their authority and jurisdiction, to work toward a stabilization of prices, fair and equitable wages and cost of production.' In his message to Congress of April 27, 1942, the President has directed the Board to guide itself, in the stabilization or adjustment of wages, by the anti-inflation policies set forth in that message.

"The War Labor Board is particularly charged with responsibility for the third item of the seven-point program 'seeking to stabilize the remuneration received by individuals for their work.' As to that item the President said: 'I believe that stabilizing the cost of living will mean that wages in general can and should be kept at existing scales,' and at the same time he directed the Board to 'continue to give due consideration to inequalities and the elimination of substandards of living,' and added: 'I repeat that all of these processes, now in existence, will work equitably for the overwhelming proportion of all our workers if we can keep the cost of living down and stabilize their remuneration.'

"Since the announcement of the seven-point program, the Board has decided a number of cases in which it has allowed wage increases to adjust inequalities within the particular wage structure under consideration. In

some of these cases it has refused wage increases that would have led to a higher level of wages throughout an industry or area. And it has in certain cases given particular attention to the lower wage brackets which might fairly be regarded as inadequate to produce decent standards of living.

"The present case is the first one in which the Board has been confronted by a demand for a general wage increase affecting a widely extended and substantially equalized wage structure throughout an industry, and in which the lowest wages are above that level which the Board has thought of as too low to afford a decent living standard.

"The problem that now confronts the Board is, therefore, to decide what is a fair and equitable application to this wage dispute of the national policy which requires that wages in general should be kept at existing scales in order to stabilize the remuneration received by individuals for their work and keep the cost of living from spiraling upward.

. . . . . .

"With these principles in mind we have tried, in adjusting the wages in this case, to define a solid basis of stabilization, and at the same time to fairly evaluate and correct inequities that have already resulted from the past cycle in the upward movement of prices; and we have further taken into consideration certain inequities which arise out of the past history of this particular group of workers and the particular circumstances of the case.

. . . . . .

"For the period from January 1, 1941, to May, 1942, which followed a long period of relative stability, the cost of living increased by about 15 percent. If any group of workers averaged less than a 15-percent increase in hourly wage rates during, or immediately preceding or following this period, their established peacetime standards have been broken. If any group of workers averaged a 15-percent increase or more, their established peacetime standards have been preserved.

. . . . . .

"By May, 1942, a cycle of adjusting our domestic life to a wartime economy had, in a sense, been completed. Cost of living had increased by 15 percent. In a general way, a round of wage increases had been received by workers which actually acted as an offset to the increased cost of living. The big question before the Nation was whether or not there would be another round, or an unlimited succession of rounds, of wage increases in a vain effort to keep up with a steadily increasing cost of living.

"The National Economic Policy was devised in a large measure to end the inequity-producing race between prices and wages. A price-stabilization act was passed by Congress to halt general upward rises in prices. It was determined by the President in his April 27 message that such action would make it possible to call off the pursuit by wages.

. . . . . .

"The race between cost of living and wages which was terminated on April 27, 1942, clearly resulted in the loss of established standards for those

groups of workers whose average wage-rate adjustments from January 1, 1941, to May 1, 1942, totaled less than the 15 percent cost of living increase which occurred in this period." [1]

The WLB's policy on adjustments may be gathered from the following:

"Under the terms of the formula, any group of workers who seek a general wage increase before the Board . . . will not receive any wage increase at all if, between January 1, 1941, and May, 1942, they were the recipients of wage increases amounting to 15 percent above their January 1 wage levels.[2]

"Changes in the average hourly rate for a group of employees may occur because of such factors as promotions, merit increases, the hiring of relatively greater numbers of employees in the higher paid brackets and the progress of learners to the status of experienced operators. Such changes cannot properly be considered as wage increases. . . ." [3]

Traditional and historical differences have generally been maintained:

"Differences in rates are not necessarily inequalities in rates. On the contrary, the wages paid in American industry are normally characterized by all sorts of differentials, created for many different reasons. Under any sound program for stabilizing wages in this time of war, it must be presumed that well established differences in wages are not inequalities."

The WLB will not upset equilibrium in industry:

"The granting of a general wage increase in this case would amount in fact to creating a gross inequity when viewed from the standpoint of the wages paid in the industry as a whole. This would follow because the granting of a general wage increase would have an unstabilizing effect upon the wage structure of the industry in that it would tend to cause employees elsewhere in the industry to feel that their wages should be increased accordingly. Thus, another inflationary cycle of wage increases would be started. It is obvious that a halt of wage advances must be called at some point, and it is the opinion of the National War Labor Board that when the wages of the entire industry are taken into account, the conclusion is inescapable that the wages which now exist in the industry constitute a fair and equitable stabilization wage pattern for the time being." [4]

The *status quo* will be maintained as far as possible:

"Elimination of the differential would have an undesirable disrupting effect at this time on the general economy of the areas in which the plants in question are located . . . produce repercussions and negative effects on industrial expansion programs, competition for labor and the continued operation of some industrial concerns. It is obvious that such effects should be avoided during the war period because they are not in the best interest of aiding the prosecution of our war program.[5]

[1] *Directive Orders and Opinions of the National War Labor Board in the Little Steel Case*, July 16, 1942, pp. 6–9, 14–15, 17, 18.

[2] General Cable Co., Case 247. This period has, of course, been extended to correspond to the date on which a given wage question comes before the board.

[3] Chrysler Corporation, Case 240.

[4] Ford Motor Co., Case 234.

[5] Aluminum Company of America, Case 66.

"There is little merit, indeed, to the proposition to readjust the differential now, primarily in preparation for post-war competition, at the cost of increasing 80% of the industry's employees who work in the South beyond that point which is now necessary to stabilize wages in that area. Such an approach would be in utter disregard of the responsibility of the Board to stabilize wage rates in conformance with the national stabilization program." [1]

Female labor performing the same work and as productive as male labor will receive equal pay:

"The quantity and quality of production must also be considered. Female employees assigned to an operation which has been or which is performed by men should receive the same pay when they produce the same quality and quantity of output. . . .

"The Board has already, in the case involving Norma-Hoffman Bearings Corporation and the United Electrical, Radio and Machine Workers of America, CIO, and more recently in the case of the Browne and Sharpe Manufacturing Company and the International Association of Machinists, AFL, taken cognizance of the fact that it is often impossible or inadvisable for female employees to undertake heavy physical labor which has been established as a part of certain jobs when performed by men. In such cases, the employment of women workers may entail extra supervision, extra set-up men, or extra carry-off men. . . ."

The board's views on the maintenance of reasonable standards of living will be found in the International Harvester Company case (X-1067):

"Second, the real wage levels which have been previously arrived at through the channels of collective bargaining and which do not impede maximum production of war materials shall be reasonably protected. This does not mean that labor can expect to receive throughout the war upward changes in its wage structure which will enable it to keep pace with upward changes in the cost of living. On the other hand, every attempt should be made to protect the real wages of labor to the point that they do not drop below a standard of living sufficient to maintain health and decency. . . ."

The wage problems of the transit industry present unique features which were summarized as follows:

"The character and control of the industry are such that wage rates, earnings, and employment are less responsive to business cycle and seasonal fluctuations than in manufacturing and in the more competitive service trades. Fares and other factors affecting the companies' financial status are under the regulation of public agencies and the work load depends on changes in the number and distribution of passengers entirely beyond the companies' control. The companies are not free therefore to exercise the same discretion in modifying prices, volume of production or wages that unregulated industry normally exercises. When the number of passengers carried declines in a depression, routes and services must be maintained although the revenue per vehicle may be drastically reduced. The companies

[1] Eleven South Cotton Mills, Cases 72, 116, 121, 133, 134, 137, 138, 151, 153, 170, and 313.

must therefore give careful attention to balancing profits, and consequently labor costs, over a period of time. The maintenance of services in a depression and in slack seasons gives comparative stability of employment and earnings for workers at such times, while in a boom period the anticipation of financial problems in the future results in a reluctance on the part of the companies to increase wages in line with their increased revenues or in relation to wage increases in other industries.

"Ability to pay has always been a prominent factor in the determination of wage rates in this industry, a factor emphasized by the customary resort to arbitration when no agreement could be reached. In the years immediately preceding the war, ability to pay had been affected adversely by a number of changes requiring large capital expenditures, such as the change over from rail lines to buses, the adoption of new types of vehicles and increasing competition from private automobile transportation. That condition has been radically altered by the war, and it does not seem equitable to the workers to be told that while ability to pay must weigh heavily in holding down their wage rates when ability to pay is low, it cannot now be used to increase wage rates when ability to pay is comparatively high.

"The devices used by other industries to improve the earnings, if not the wage rates, of their employees in non-inflationary ways are not as readily available for the Local Transit Industry. Incentive systems are not customary in this industry. While the number of passengers carried per vehicle has increased rapidly in the past few years, this added 'production' has not been automatically compensated by anything comparable to piece rates. While maintenance workers must use greater skill and ingenuity to service old equipment without adequate replacement parts, they receive no increase in earnings proportional to increased demands on their skill and energy. Overtime practice in this industry does not follow the Wage and Hour Law principle, overtime normally being paid only after the completion of regular runs, the factor of spread between beginning and ending of the day's work for those who operate vehicles at the peak load hours providing an additional complication.

. . . . . .

"The National War Labor Board must have a satisfactory basis for judgment as to whether the wage structure is an adequate one in any particular company in which one or both parties seek a change in that structure. It must have an appropriate anchor for its wage policy with respect to the transit industry as well as with respect to other industries. The Board has such an anchor for its wage policy in most industries in the use of brackets of sound and tested rates for occupations in a labor market area. When satisfied that gross inequities or wage structure obsolescence have been demonstrated in cases where correction would not be accomplished by applying the maladjustment or substandard principles, correction has nevertheless been permitted up to the minimum of the brackets of sound and tested rates for the same occupations in the labor market area.

. . . . . .

"The establishment of such a permissible stabilized rate does not, however, justify an automatic increase to any company whose rate is less than this. A mathematical formula does not automatically lift from the petitioner the burden of demonstrating that a gross inequity exists. The Company in its petition demonstrated that the conditions formerly justifying or explaining the differential between its rates and those in Washington, D. C., and Philadelphia had substantially changed. The changes in the nature of the labor market and the general wage level in Baltimore as well as a change in the company's ability to pay were prominent among the factors mentioned. Since 1940 operating revenues and revenue passenger carriers have increased four times as much as the transportation staff." [1]

[1] Opinion in the Capital Transit Company Case, No. 13–264, *Thirteenth Monthly Report* . . . , pp. 1–3.

Chapter XXIII

Farm Prices and Inflation

1. AGRICULTURE AND INFLATION [1]

The best summary of the wartime position of agriculture is given in Table 119, reproduced from a report by the director of War Mobilization and Reconversion.

TABLE 119.—WARTIME AGRICULTURE: 1940–1944

	Per Cent Change
Total output	+21
Food output	+23
Acreage in crops	+5
Farm population	−16
Farm employment	−5
Use of commercial fertilizer	+45
Tractors on farms	+25
Crop yield per acre	+10
Output per worker	+28
Net realized income, farm operators	+170
Wage rates	+150
Mortgage debt	−14
Land prices	+36

SOURCE: *First Report by the Director of War Mobilization and Reconversion.*

A rise in total agricultural output of 21 per cent was, moreover, in addition to a rise of one-tenth in 1940 over the 1935–1939 level. Production per worker in 1944 was up 28 per cent from 1940 and 45 per cent from 1935–1939. That total agricultural output rose as much as it did is surprising in view of the exodus of rural population. The largest losses were suffered by farm areas (see Chart 84). Farm population had fallen from 24.2 per cent of the total population in 1935–1939

[1] I have relied especially on *First Report by the Director of War Mobilization and Reconversion*, Jan. 1, 1945, pp. 26–31; OWI *Release*, Nov. 12, 1944, NB-2861; *F.R.B.*, December, 1944, pp. 1147–1155; House Hearings on *Extension of EPCA* (1944), pp. 333–335, 344; BAE, *U.S. Agricultural Statistics*, 1943; *The Agricultural Situation; The Demand and Price Situation; The Farm Income Situation;* WFA *Food Program for* 1944.

to an estimated 20.5 per cent in 1943. Farm employment fell 5 per cent between 1940 and 1944; and the proportion of women and very young

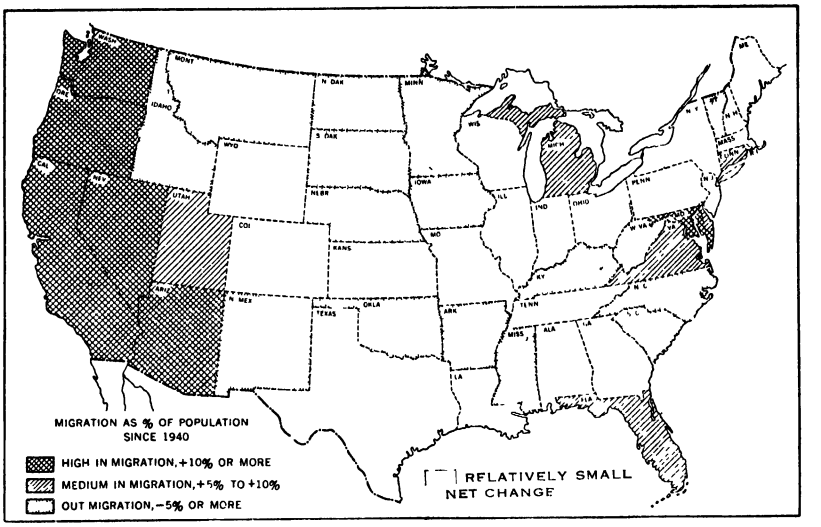

CHART 84.—Migration since 1940. (*Source: First Report by the Director of War Mobilization and Reconversion.*)

and older workers increased substantially. Chart 85 indicates one reason for the rise of agricultural output. Farm mechanization was increased, although serious reductions in output of machinery had confronted the farmer in 1942. Remedial measures were taken in 1943. Purchases of

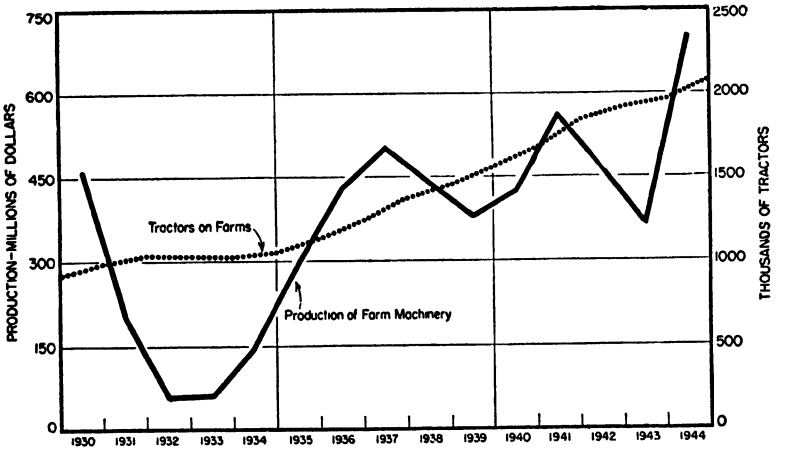

CHART 85.—Uptrend in farm mechanization. (*Source: First Report by the Director of War Mobilization and Reconversion.*)

farm machinery during the years 1940 to 1943 are presented in Table 120. Purchases were reduced in 1942 and 1943.

TABLE 120.—PURCHASES OF FARM MACHINERY, 1940–1943

	Million Dollars
1940	956
1941	1,281
1942	718
1943	577

SOURCE: OWI *Release*, Nov. 21, 1944.

In contributing 33 *per cent more physical output in* 1944 *than in* 1935–1939, *the farmers made an important contribution toward the fight against inflation.* The wartime peaks in agriculture are well summarized in Chart 86.

In 1935–1939, our exports accounted for 3 per cent of our food production. In 1944, the Army required 9 per cent and lend-lease and other exports, 14 per cent. Yet per capita civilian consumption was up by 7 per cent.[1] *Had a large rise of output not been forthcoming, either we would not have had so much available for military purposes or our price-control and rationing program would probably have broken down.*

From the output standpoint, then, the farmers made a notable contribution to the fight against inflation. The rise of farm prices is, however, another matter. As we shall see, the rise of farm prices was large relative to output, and the ratio of price rise to output rise of agricultural products was large relative to the same ratio for manufactured products. From 1940 to 1944 prices received by farmers were up by 82 per cent above the 1935–1939 level and in 1944 were 15 per cent above parity. Realized net income of proprietors was up 168 per cent, from $4.4 billion in 1940 to $11.8 billion in 1944. Prices paid and costs other than wages rose only half as much as prices received. Farm wages were, however, up by 150 per cent from 1940 to 1944. All production expenses amounted to $5.7 billion in 1940 and $10.2 billion in 1943. Farm per capita incomes seem to have risen 50 per cent more from 1935–1939 to 1943 than nonfarm per capita incomes for the same period.

[1] Our per capita civilian consumption of fats, proteins, carbohydrates, and calories was up 4, 7, 2, and 3 per cent, respectively, in 1942 over 1939. See U.S. Tariff Commisssion, *United States Consumption of Food in Terms of Fats, Proteins, Carbohydrates, and Calories*, 1939–1943, p. 9, 1944. For a comparison of the relative gains and losses for 12 different classes of foods by British, American, and Canadian consumers, see WFA, *Food Consumption Levels in the United States, Canada, and United Kingdom*, 1944, pp. 6–7.

As we shall see, the rise of farm prices made an important contribution to inflation. The effects were especially important in the prices of food and textiles and were also felt in a resulting pressure in the area of all wages. Since the net farm income of all farm people was only about 10 per cent of total national income, however, the

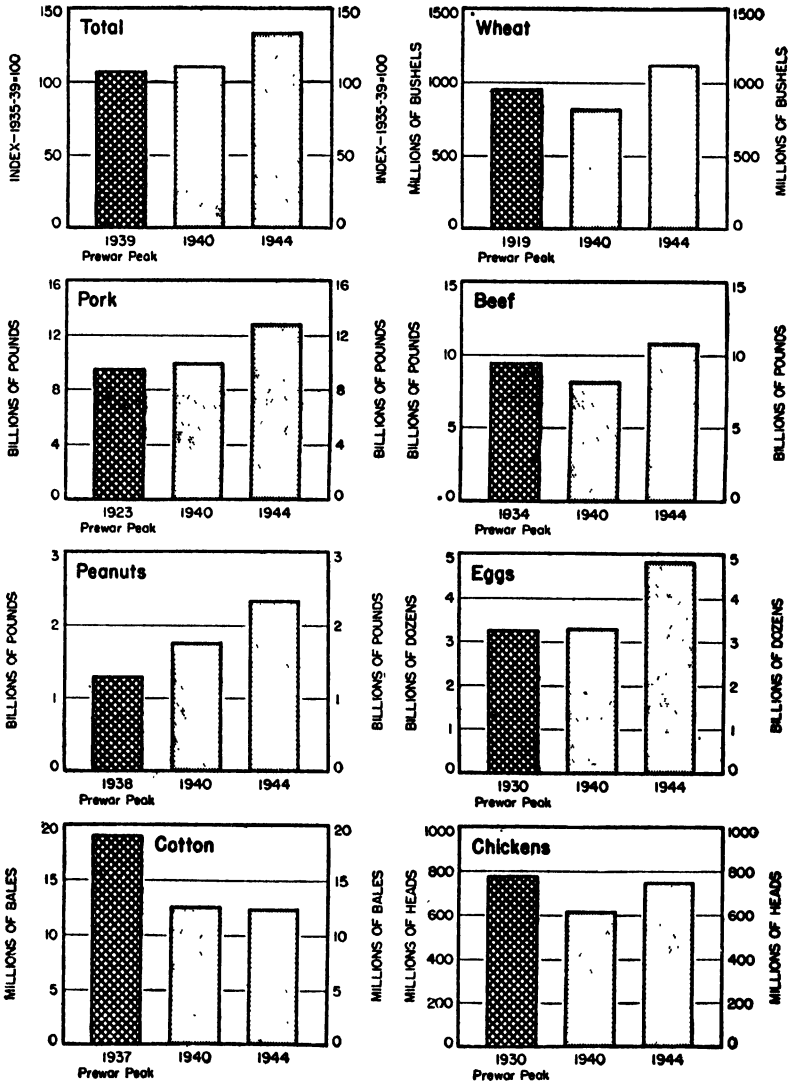

CHART 86.—Wartime peaks in agriculture. (*Source: First Report by the Director of War Mobilization and Reconversion.*)

pressure on prices of increased expenditures by farm groups may not be considered to have been of first-rate importance.

There is, however, another side to this increase of farm income. Total equities of farmers were $53.8 billion on Jan. 1, 1940; and $82.8 billion on Jan. 1, 1944. The rise was no less than 54 per cent. Their liquid resources—cash, bonds, etc.—were $12 billion in January, 1944, as compared with $4 billion in January, 1940. Rising prices,

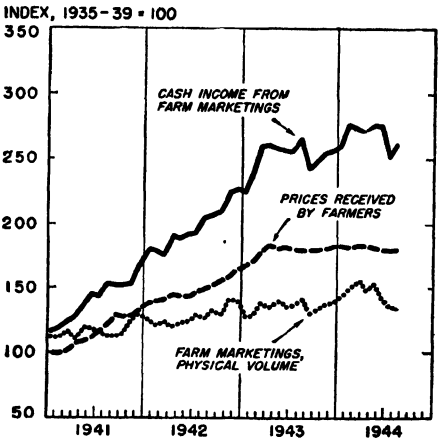

CHART 87.—*Farm marketings, adjusted for seasonal variation, and prices received by farmers. (Source: U. S. Department of Agriculture.)*

incomes, and cash were reflected in a reduction of mortgages from $6.6 to $5.6 billion; but they also must have contributed greatly to a rise of real-estate values of 36 per cent. Serious inflationary dangers are to be found here.[1]

The reader's attention is directed to the following conclusions:

1. Farm income (net) to proprietors was up 168 per cent. This is explained more by a rise of prices than by an expansion of output (*cf.* Charts 87 and 88). From 1939 to the early part of 1943, manufacturing production rose about 5 times as much as farm output. In contrast, unit prices in agriculture were up almost three times as much as in manufacturing.[2] From 1939 to 1944 the estimated rises were as follows: manufacturing output, +150 per cent; prices, +25 per

[1] See especially OWI *Release*, Nov. 12, 1944; and *First Report by the Director of War Mobilization and Reconversion.*

[2] F. C. Mills, *Prices in a War Economy*, p. 23.

cent; farm output, +33 per cent; prices +92 per cent.[1] Production expenses (*total*) rose by more than three-quarters from 1939 to 1943, and the prices paid by farmers by about one-quarter by 1943, and more than one-third in 1944. The increase in output and especially the price rise were adequate to provide farmers with large rises of incomes

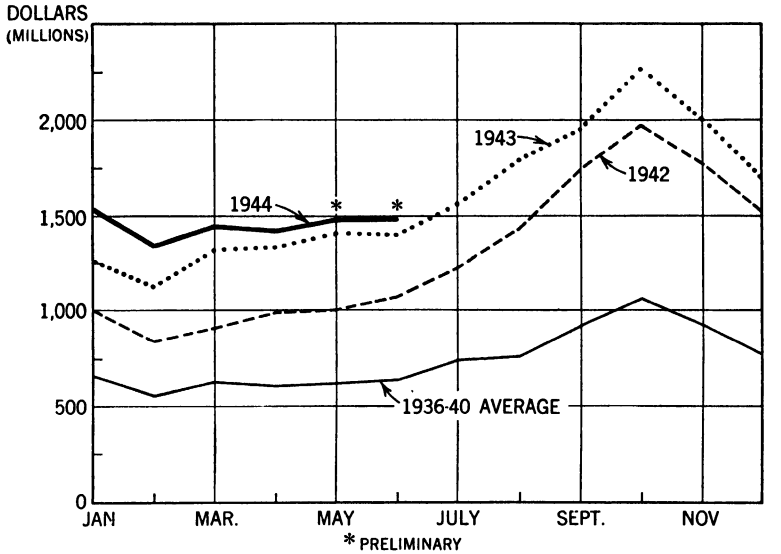

CHART 88.—Cash income from farm marketings. (*Source: U. S. Department of Agriculture.*)

despite the rising costs (*cf.* Chart 89 on ratio of prices received and paid).

2. Farmers not only improved their terms of trade; they also increased their per capita income much more rapidly than the nonfarm population improved their income status. Whereas from 1939 to 1943 the per capita rise of income for nonfarm population was less than 100 per cent, it was almost 200 per cent for the farm population.

3. Various kinds of manufacturing and farm incomes must be distinguished in this discussion, as well as the base year, or period, used. One estimate yields the following rises from 1935–1939 to 1943: (1) Cash income from manufacturing = 1⅔; (2) gross income = 1⅕; (3) realized net income of farm operators = 1⅔; (4) net income from farming of all farm people = 1⅔. (*Cf.* Chart 89.) [2]

[1] Based on material in *F.R.B.*, October, 1944, and December, 1944, and House Hearings on *Extension of EPCA*, p. 334.

[2] See preceding note.

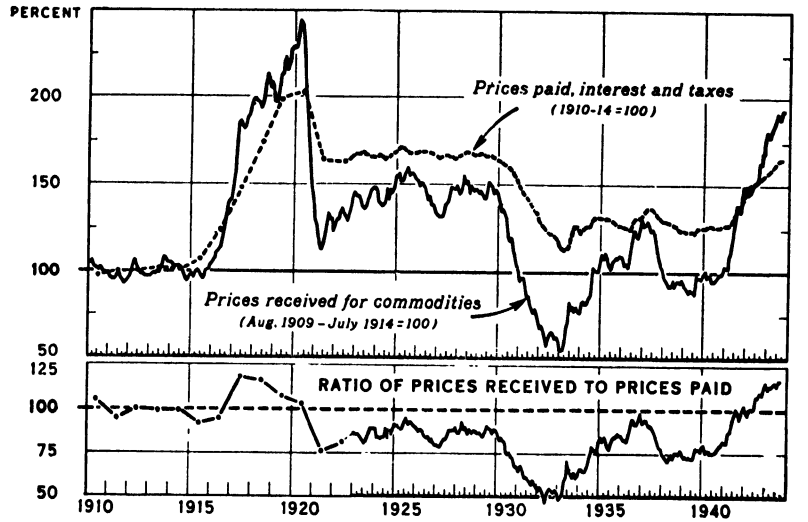

CHART 89.—Prices received and paid by farmers, 1910-1943. (*Source: U. S. Department of Agriculture.*)

2. FARM PRICES AND THE COST OF LIVING

With the rise of farm prices the cost of living then tends to rise. In periods of rising prices, the price paid by the consumer to the retailer for agricultural products does not generally increase so much as the price paid to the farmer for these products. This is suggested by Table 121. (Also see Chart 90 which reveals a much larger percentage rise

TABLE 121.—FIFTY-EIGHT FOODS—FARM AND RETAIL VALUE AND PERCENTAGE OF PRICE GOING TO FARMER, 1939-1942

	Farm value	Retail	Farm value as percentage of retail value
1939	126	311	41
1942	209	398	53

SOURCE: *Agricultural Statistics*, 1943.

in prices paid to farmers than in retail prices of 58 foods.) A rise in value at the farm of almost two-thirds is accompanied by an increase of less than one-third at retail. From 1935–1939 to 1944, all prices received by farmers were up 81 per cent; food prices to consumers were

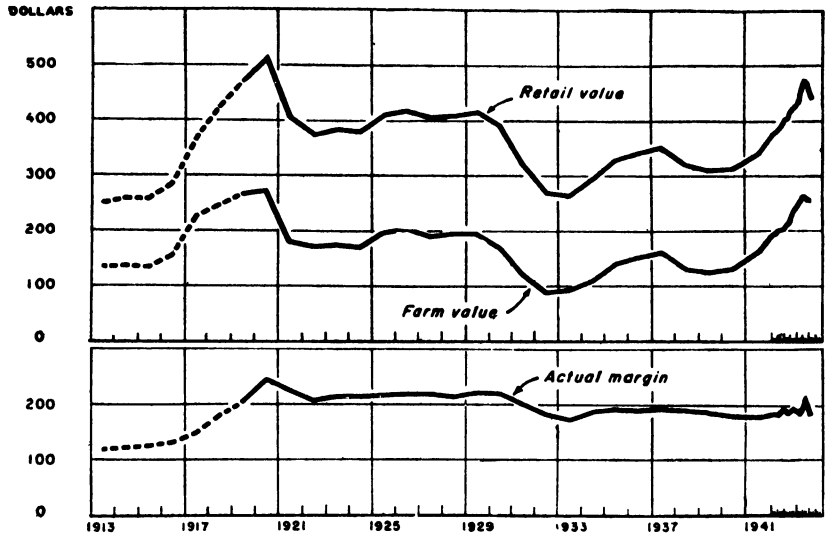

CHART 90.—Farm and retail values of 58 foods, 1913–1943. (*Source: U. S. Department of Agriculture.*)

up about 50 per cent. Farmers were able to increase their share of the consumers' dollars. In part this was the result of price ceilings imposed on processors and middlemen and of only limited control over prices at the farm. There can be little doubt that the large rise of prices at the farm was one of the more important factors contributing to price inflation. That the largest rises were in food and clothing (Table 122) is not without significance, most food and clothing being processed from farm products.

TABLE 122.—RISE OF PRICES, JANUARY, 1941–DECEMBER, 1943

Cost of living	27.6
Food	44.2
Clothing	41.1

SOURCE: *Report of the Technical Committee Appointed by the Chairman of the President's Committee on the Cost of Living*, pp. II-38.

Anti-inflationists have been especially concerned lest a rise in farm prices start the inflation ball rolling—lest a rise in farm prices result in a significant rise in food prices which in turn would bring pressure for higher wages. And once wages rise, the prices of products that farmers buy rise and then the farmer asks for another increase of prices. Higher wage costs, moreover, are taken as an excuse for higher prices by man-

ufacturers, with additional effects on prices of commodities that farmers buy. In short, any stabilization program requires that prices of all important commodities and services be stabilized, and if in any particular area action is not taken, the results in other areas will be disastrous. In a period of rising prices each group tries to protect itself and to do at least as well as any other group.

3. SOME OTHER ASPECTS OF THE FARM-PRICE CONTROVERSY

In an earlier chapter we commented on the large relative gains made by farmers.[1] Net income of farm proprietors rose much more than total income, or total wages and salaries, or corporate income (after business taxes), or other property income. Furthermore, farmers' taxes rose less than those of other groups.

1939–1943	Per Cent
Rise of wages and salaries, exclusive of government	111
Rise of net income of farm proprietors	186

Many are, however, critical of comparisons of net income of farm proprietors and income of labor. It is pointed out, for example, that the rise of *manufacturing* pay rolls has been greater than the rise of incomes for farmers. But this is not a fair choice for comparison. At least half of the gain in manufacturing is associated with a rise in man-hours. Hours in manufacturing (1939 = 100) were 204.6 in the first half of 1943 and 100.6 in agriculture in the same period.[2] Employment in manufacturing was 10.5 millions in 1939 and 16.2 in 1943; the respective figures in agriculture were 10.7 and 10.3 millions.[3]

Why, furthermore, compare all farm income with income of manufacturing labor? Why not compare all farm income with all labor, both wages and salaries, and both manufacturing and nonmanufacturing? Even this last gives

[1] *Cf.* J. D. Black, *Parity, Parity, Parity*, 1942, and J. D. Black and C. A. Gibbons, "The War and American Agriculture," *R.E.S.*, February, 1944. In the former, Prof. Black traces the evolution of the parity concept and comments on the gains made by the farmers in this war. In the latter the authors thoroughly survey the relative gains made by the farmers in relation to gains of other groups. I find little that I would disagree with in these references; in both of them the reader will find valuable material. The authors conclude that this is no time to seek further corrections of long-standing inequities. My main criticism of the latter reference is a tendency to pay too much attention to *manufacturing* wages rather than to *all* wages and salaries.

[2] *Man-hours in Agriculture, Mining, Manufacturing, and Construction*, 1939–1943, BLS, prelim., 1944, p. 3.

[3] House Hearings, Special Committee on *Postwar Economic Policy and Planning*, H. Res. 408 (1944), p. 247.

an exaggerated impression of the gains to workers since a significant part of the total reflects a large rise in employment. The inappropriateness of a comparison of manufacturing wages and net income of farm proprietors is also suggested by Tables 123 and 124, where the relative gains of wages in manufacturing and in other occupations are revealed.

TABLE 123.—TOTAL RISE OF WAGES AND SALARIES TO CIVILIANS, 1939-1943

	Per Cent
All nonagriculture, inclusive of government	131
Manufacturing	210

SOURCE: *S.C.B.*, April, 1944.

TABLE 124.—PERCENTAGE RISE, AVERAGE SALARY-WAGE PER EMPLOYEE, 1939-1943

	Per Cent
Manufacturing	74
Trade	31
Service	44
Finance	18

SOURCE: *S.C.B.*, April, 1944.

Farmers cannot, then, in view of the gains made in their relative position, fairly argue for further rises in prices. Any success of labor groups in raising their wage rates may, however, strengthen the position of farm leaders in an attempt to raise prices through government action.

All of this does not mean that the farmers' over-all gains since 1939 tell the full story. As Prof. Black has shown, though the wartime gains are large in relation to 1935–1939, the farmers' position was unsatisfactory in the latter period in relation to their position in the late twenties. Charts 91 and 92 reveal that farm incomes were at a relatively low level in the thirties as compared with industrial wages and with nonagricultural income in the same period. It is also clear that farm *wages* are lower than nonfarm wages, even though gains in farm wages have been large as compared to gains in nonfarm wages. Farm wages are still far below the wage scales in the cities. But there had always been a margin between farm wages and nonfarm wages. During World War II the margin between the two has been made smaller. Farm labor has been treated generously in this war: controls of farm wages have been less vigorous than those of city wages. Large concessions had to be made because of the large losses to the military and to high-paying jobs in industry. Increases in farm pay up to $2,400 were allowed unless a specific wage or salary ceiling applying to the

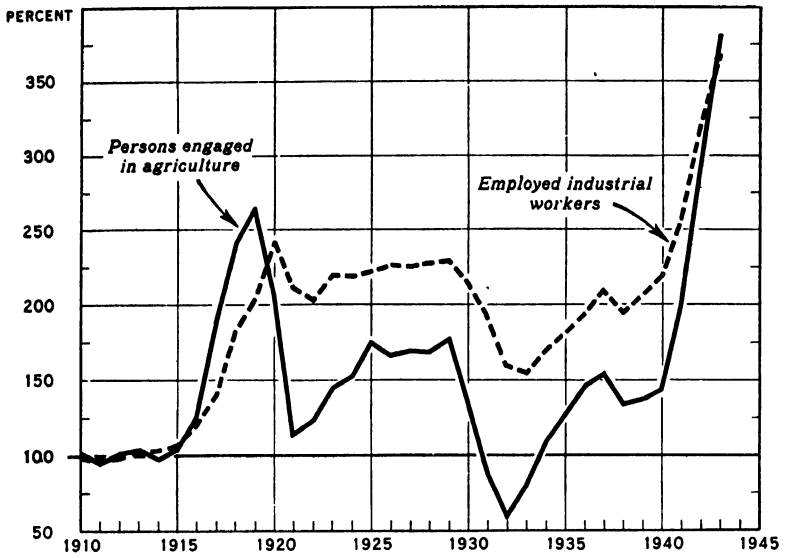

CHART 91.—Average income of agricultural and industrial workers, 1910–1943; index numbers, 1910–1914 = 100, 1943 estimated. (*Source: U. S. Department of Agriculture.*)

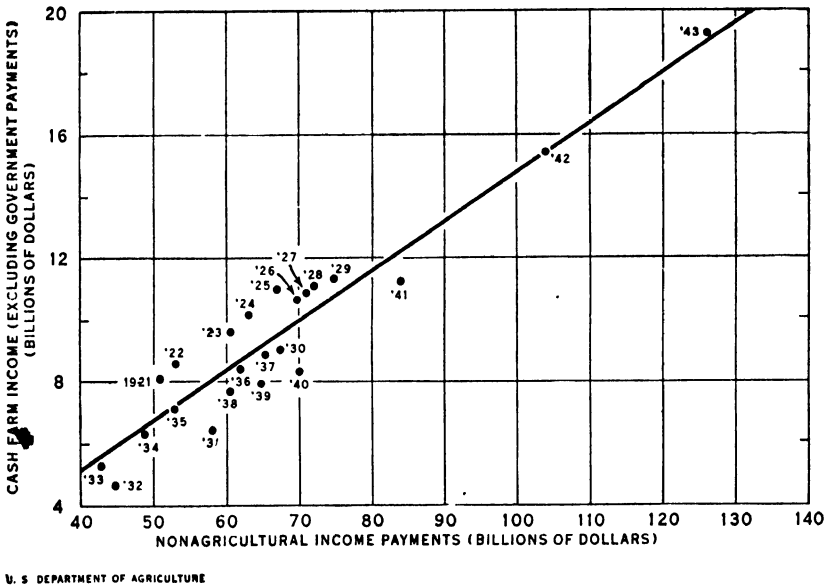

CHART 92.—Cash farm income in relation to nonagricultural income payments, United States, 1921–1943. (*Source: U. S. Department of Agriculture.*)

worker's job had been put into effect by the War Food Administration.[1] Finally, gains for farmers as a whole were not shared equally by all types of farm or in all regions (see Chart 93).

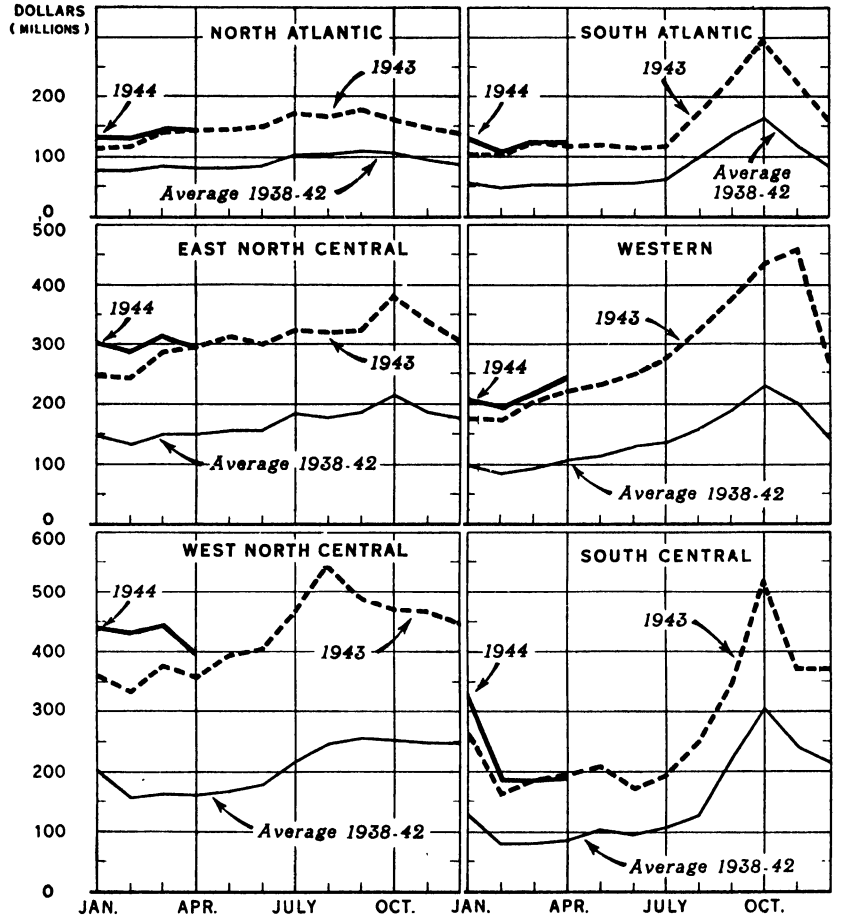

CHART 93.—Cash income from farm marketings, by regions, 1943–1944 compared with 1938–1942 average. (*Source: U. S. Department of Agriculture.*)

4. CONCLUSIONS

1. Farm prices are up three to four times as much as those of manufactured products. Output of farm products has, however, increased only about one-fifth as much as in manufacturing. *For each percentage*

[1] U.S. Department of Agriculture, Food Information Series 84, *Questions and Answers about Farm Wage Stabilization*, February, 1944.

rise of prices, manufacturing output has increased approximately fifteen times as much as farm output.

2. This marked relative rise in farm prices has made the control of prices more difficult; and it has been an important cause of the substantial upward movement in the cost of living.

3. There is little justification for further price concessions to farmers. On any reasonable basis of comparison, their wartime gains have outdistanced those of other groups. Labor gains in particular are more largely associated with an increase in man-hours and rises of productivity than with increases in unit prices.

4. Farm pressures were relatively well under control in the years 1943 and 1944. A break-through on the labor front may end the stalemate. Officials anticipate that farm incomes and possibly prices will decline in 1945.

5. In addition to gains pricewise and incomewise during the war, the farmer can look forward to support in the postwar period. The government's support program in 1945 promises to involve the Treasury in expenditures of $2 billion.[1]

This chapter ends with President Roosevelt's veto of the Bankhead bill. His veto message high-lighted many of the inflationary aspects of farm prices.

APPENDIX

THE PRESIDENT'S VETO OF THE BANKHEAD BILL (APRIL, 1943)

"I am returning *S.* 660, generally known as the Bankhead bill, unsigned. It is a bill to exclude in the determination of parity price any deduction for any subsidy payment, parity payment, incentive payment or other payments made with respect to any agricultural commodity.

"I am compelled to this action by the deep conviction that this measure is inflationary in character. It breaks down the barriers we have erected and which we must maintain in order to avoid all the disasters of inflation. It is wholly inconsistent with our stabilization program and, therefore dangerous alike to our constructive farm policy and to our whole war effort.

"In my message of September 7, 1942, I advised the Congress that 'our entire effort to hold the cost of living at its present level is now being sapped and undermined by further increases in farm prices and in wages and by an ever-continuing pressure on prices resulting from the rising purchasing power

[1] See especially, WFA, *Food Program for* 1944, pp. 23–25, 83–91; also, *Reconversion: A Report to the President by the Director of War Mobilization*, p. 14, 1944.

of our people.' I requested the Congress 'to pass legislation under which the President would be specifically authorized to stabilize the cost of living, including the price of all farm commodities.'

"I further stated: 'The purpose should be to hold farm prices at parity, or at levels of a recent date, whichever is higher. . . . And in determining whether a commodity has reached parity, we should include all the benefits received by the farmer from his government under the A.A.A. program, allocable to the particular commodity. For it is unfair to give the farmer a parity price and in addition give him far more than parity.'

. . . . . .

"Under the original Emergency Price Control Act the Administrator was forbidden to establish maximum prices which would reflect less than 110 percent of parity to producers. Under the Stabilization Act of October 2, 1942, the Congress authorized the Administrator to establish prices which will reflect to producers of agricultural commodities the parity price for such commodity or the highest price received by such producers for such commodity between January 1, 1942, and September 15, 1942, whichever is the higher. 'Parity,' one would assume, bears the same meaning in both acts.

. . . . . .

"Let us consider the merits of the proposal.

"The Act of October 2, 1942, directs the President to issue a general order stabilizing prices, wages and salaries, which affect the cost of living; and, except as otherwise provided in this Act, this stabilization shall be on the basis of the levels which existed on September 15, 1942. It is impossible to control the cost of living unless all of its vital elements are stabilized.

"The time has come when all of us—farmers, workers, managers and investors—must realize that we cannot improve our living standards in a period of total war. On the contrary, we must all cut our standards of living for the duration. We must adopt simple wartime standards. If we do, none of us need want for the real necessities of life. We can all have enough if we do not try to get too much. We can only make sure that the present balance does not change materially for the worse; and that those on the lower rungs of the economic ladder are not ground down below the margin of existence. Further we cannot go during the war. After the war our objective will be not only to restore, but to raise our standards of living.

. . . . . .

"But it must be recognized that parity prices are only means to get parity income for the farmers. That income goal has been attained for the cooperating producers of all basic crops. This bill would go beyond the goal of parity income and give to these producers an unwarranted bonus at the expense of the consumer.

"A few crops have not reached parity price in the open market, but farm prices generally are above parity. Between August, 1939, and January, 1943, the prices that farmers received for the crops they sold, rose nearly

107 percent, while the prices that farmers paid for the things they bought increased only 26 percent.

"Farm prices which were 30 percent below parity at the beginning of the war in August, 1939, rose to 15 percent above parity in January, 1943. Farm prices, which at the beginning of World War I were only one percent below parity, soared 111 percent between 1914 and 1919, but the prices the farmers paid also soared 96 percent, so that the farmers never got more than 107 percent of parity for their crops during the last war contrasted with the 115 percent of parity they are now receiving.

"Thus the farmer, far from being worse off than he was in the last war, is substantially better off. But he will not remain better off if we set loose an inflationary tornado.

"The American farmer, I am convinced, does not want inflation. He knows that deflation inevitably follows inflation. The farmer wants neither; he prefers stabilization. He recalls all too bitterly the deflation in the value of his land, the debts, the anxieties, the foreclosures, the evictions and the heartaches which followed in the wake of the inflation after the last World War.

"Parity price is only part of the picture. Other factors have contributed to bring about a striking increase in farm income. Between 1939 and 1942 farm production increased 20 percent, and during this period unit costs rose only one-fourth as much as unit prices. As a result farm income in terms of purchasing power is higher than in 1919, higher than 1929, higher than it has ever been in our history. Stabilization will protect that purchasing power. Inflation will destroy it.

"Farm income has risen faster than nonfarm income, though both have risen substantially. Since 1939, the average income of the farmer has risen approximately 45 percent more than the average income of the nonfarm population. This is particularly significant in view of the very substantial increases which have occurred in the income and purchasing power of the nonfarm groups during the same period. The dollar income, the purchasing power, and the parity income of the farmer are all far higher than they were at their peak during the last war. Let us protect the farmer's present favorable position rather than to commence tampering with it.

. . . . . .

"It is true that farmers generally are encountering increasing difficulty in securing necessary farm labor, farm equipment and fertilizer. Higher prices cannot, when steel is scarce, create new machinery; higher prices cannot, when manpower is short, create additional workers. In fact, higher prices for crops like wheat and corn might actually divert labor and machinery away from the production of other essential crops, such as soybeans, flax, grain sorghum, beans and potatoes.

. . . . . .

"There has been an increase in the cost of living since May, 1942. This increase is due mainly to our failure to bring food costs under control. But

the War Labor Board is resolutely adhering to the Little Steel formula which compensates labor, in its wage rates, for the increase in the cost of living which occurred between January 1, 1941, and May 1, 1942.

. . . . . .

"It will become impossible to hold this line if the cost of living is still further increased—not from imperative war needs, but by the action of the Congress in departing from its declared policy to stabilize all prices and wages.

. . . . . .

"Under the Bankhead bill the price of sugar could rise a cent and a half a pound, the price of bread might up a cent a loaf and the price of flour proportionately. The price of corn could rise almost 10 percent, which might not necessitate, but would certainly call forth, a demand for higher prices for hogs, and livestock, poultry, eggs, milk, and other dairy products. That demand would be particularly insistent in the case of poultry, eggs, milk, and other dairy products where customary feed cost ratios would be substantially increased.

"The Bankhead bill would certainly deprive the government of the power to prevent these price increases—increases which might swell the cost of living more than 5 percent, add more than a billion dollars to the consumers' food budget, and several hundred million dollars to the cost of feeding the armed forces and of supplying our allies.

"If by this bill you force an increase in the cost of the basic foodstuffs, and as a result the National War Labor Board increases wages, no one can tell where increases will stop or what those increased wages will ultimately cost the farmers and all people of the Nation. If the price of food goes up, if wages rise, it will necessarily result in increasing the cost of our armaments, ships and planes. We should have to borrow even greater sums to meet the increased cost of the war, and after the war an excessive burden of debt would have to be borne by all the people, including those now in uniform."

Part IV

DEMOBILIZATION, RECONVERSION, AND THE POSTWAR

INTRODUCTION

I. PERIODS

The discussion in Part IV covers five periods. They will hereafter be referred to as periods 1, 2, 3, 4, and 5.

Period 1 covers the time prior to Germany's collapse. Demobilization was well under way by 1944. Even by the autumn of 1944, more than one million soldiers had been demobilized, close to $30 billion of contracts had been terminated, and the disposal of surplus property had begun.

Period 2 for our discussion dates from VE-day (Germany's defeat) until VJ-day (Japan's defeat).

Period 3 covers the period from VJ-day to the time when reconversion will have been substantially consummated. In this brief period of a year or less after the defeat of Japan, reconversion will largely have been completed.

Period 4, the catching-up period, to use a term coined by Prof. J. M. Clark, may run from 1946 to 1948 or 1946 to 1949. This is the period when delayed expansion and maintenance and purchase of consumers' goods wanted but not available during the war will take place.

These first four periods together may be considered the transitional period. I shall discuss them compositely, referring to them by number only when the discussion does not relate to all of them.

Period 5 is the long pull. This does not mean that the effects of the war will have disappeared by then. It may well be generations before the peacetime economy is freed from the disturbances and maladjustments brought on by the war. Yet we may assume that by 1948 or 1949 our attention will be concentrated on the long-run problems.

In this part of the volume emphasis is given to the problems of demobilization and reconversion and also to long-term problems.

The focal point of our discussion is the price problem. Obviously, since prices reflect the net changes of supply and demand, a discussion of the future of prices must be based on a fairly comprehensive examination of our economy.

II. OUR FUTURE ECONOMIC SOCIETY

The assumption made here is that we wish to preserve a system of private enterprise under which the profit motive is the activating force and price movements largely determine the flow of labor, capital, and raw materials. We prefer that system, among other reasons, because in our opinion it is likely to bring the highest possible standard of living to our people and because the alternative system spells regimentation, loss of liberties, and an omnipresent and overbearing bureaucracy.

Our opinion of greater advantages in the system of private enterprise may, however, be wrong. We should not consider our system of private enterprise best, irrespective of the results produced. We need to favor it with the best possible milieu: a friendly but not ingratiating government; the discouragement of monopoly and trade barriers; cooperation between capital and labor; a tax system that discourages enterprise a minimum and yet is not unjust. If, under these conditions, the engine still sputters badly or even breaks down, then we must consider alternatives. Private enterprise is a means to an end: maximum output, fair distribution, and a free society. If, under that system, the country has to tolerate 10 million or more unemployed for long periods of time, then the country may well prefer some infringements on its liberties to a reduced standard of living, maldistribution, and collapse of morale that result from long and large spells of unemployment.

Space does not permit here a discussion of our economic objectives. Clearly a high level of employment and a continued rise of productivity are among the more important. Most would also seek a large measure of stability, both for itself and because of its relation to output. And stability, although it does not require an unchanging price level, is incompatible with large price movements. We must strive to exclude inflationary price movements which ultimately are followed by collapse, and also deflationary price movements which discourage business enterprise and account for much unemployment. In our modern economic society the inflationary pressures are likely to be strong if high levels of employment are attained; while under unsatisfactory

employment conditions, powerful deflationary forces prevail. Against these our system must be on guard.

III. THE INFLATIONARY HERITAGE LEFT BY WAR

A. MONETARY INFLATION. *Monetary* inflation during World War II was serious. By the war's end, the expansion was estimated to be about 165 per cent; and by the end of 1944, demand deposits adjusted and currency outside banks were 150 per cent in excess of the amount outstanding at the end of 1939.[1] These rises were perhaps five times that in the cost of living. Whereas our *money* inflation was very large, our *price* inflation was very modest. The large additions to monetary stocks are a threat to price stability after VJ-day. They represent large savings of cash into which savings embodied in other forms may be converted; and if large savings are dumped on the market, the inflation will be expressed in a rise of activity of the increased supplies of cash. The seriousness of the threat will depend on several factors. If, for example, liquidity preference is on the increase, *i.e.*, if the public prefers to hold more cash as against noncash assets, then to that extent the threat is reduced. Again, the measure of the pressure is related to the volume of output. If we succeed in establishing a normal level of output twice as large as that of prewar and if output continues to grow, it will grow up to our increased supplies of money. This, as we shall see, does not completely remove the danger. If, on the other hand, output settles at a much lower level, then the inflationary threat again would not be serious. At a low level of activity the public will tend to hold on to its cash.

These are, however, largely considerations relating to period 5 (the long pull). In the earlier periods, the large supplies of cash may cause trouble. They may be dishoarded prior to the renewal of adequate flows of civilian capital and consumption goods and after the removal of essential controls. In this case, there would be inflationary pressures in the earlier periods. In period 4 (catching up) the excess supplies of money should surely continue to be watched. Expanding output absorbs part of the excess; but the inflationary potential of each remaining excess unit increases. A small excess of money, in short, is much more dangerous at a full-employment level of output than a large excess at a low level.

[1] *F.R.B.*, March, 1945, p. 243.

B. SAVINGS. Large savings in war are embodied in cash or other assets. From 1940 to the end of 1944, individuals had saved about $120 billion. From 1940 to the middle of 1944, they had put $36 billion of their savings in securities, $43 billion in cash, and $22 billion in insurance, housing, and liquidation of debt.[1] In addition, corporations saved $21 billion during the years 1940–1944.

In war the inflationary process has been sales of securities by the Treasury to banks with roughly parallel creations of cash. Government expenditures of the additional cash thus manufactured were the source of increased incomes and hence of larger savings. The banks (inclusive of Federal Reserve banks) roughly accounted for one-half of the securities purchased, and purchases by commercial banks were equal approximately to their expansion of deposits. That nonbanking investors purchased about one-half of the Federal securities sold and added to their monetary hoards reduced the inflationary pressures. Government financing, then, provides the public with additional income and money; but their increased willingness to buy securities and hold on to cash reduces the need for additional financing through expansion of bank deposits. Savings rose from less than 10 per cent of income payments in 1940 to 25 per cent in 1944. Individual savings were at the rate of $40 billion in 1944 against but $9 billion in 1940. (The 1944 figures should be reduced slightly to cover increased tax liabilities.)

Public policy in war was directed toward providing enough money to assure low rates of interest. As is evident from the history of rates on government securities, this policy was very successful. Should the public attempt to disgorge its vast holdings of securities, the government would have no alternative but to induce the banks to purchase them; and it would be to the latter's interest not to allow a rise in the rate of interest, which would mean a fall in the price of their most important assets. Any attempts to liquidate by nonbanking investors would add further to the already large supplies of deposits available.

By the end of 1945, savings should attain about $175 billion ($150 for individuals and $25 for corporations). This assumes that incomes will not fall greatly in the last quarter of 1945. Any dissaving will be done largely through the disposal of securities, cash, and deposits held.

C. RISE OF INCOMES. The rise of money incomes has roughly matched that of monetary supplies. This increase in incomes is associated pri-

[1] Figures in this and the next paragraph are taken from *S.C.B.*, April, 1944, p. 14; September, 1944, pp. 4, 7–8; February, 1945, p. 5. All items are not included.

marily with an expansion of output and secondarily with a rise in prices and basic wage rates. In the rise of incomes of farmers, the major factor was an increase of prices; in the case of labor, the major factors were an expansion of man-hours, upgrading, movements into higher paying industries, rewards for higher output per man-hour, and the like. A rise in basic wage rates was important but not of primary importance. An important contribution to the rise of wages and salaries was the expansion of the Federal pay roll, inclusive of military. Prior to payment of taxes, business profits rose much more than output; but after taxation the increases of profits and output were approximately equal.

Current farm and urban rates are not a threat to price stability so long as a downward spiral is not started and so long as labor productivity does not decline. A cumulative decline may, in fact, contribute toward a reduction in productivity. Basic wage rates, even when allowance is made for disguised rises through spurious upgrading, have not exceeded the rise in prices and productivity. In other words, basic wage rates were not too high relative to their level in 1939. Their future equilibrium position will depend on various factors to be considered below and in particular upon the future movements of productivity and prices. In many respects the least inflationary aspect of the war has been in the rise of business income. Stable dividend policies and failure to maintain plant and equipment for nonwar purposes contributed greatly to a moderation in the demand for the factors of production. But this failure to distribute income and to spend in war will be a threat under any inflationary conditions in the postwar when business will, therefore, be more likely to contribute toward spending. One reservation to the conclusion that the rise of business profits did not contribute greatly to inflation may be made: Business seemed disposed under unusual war conditions to pass direct taxes on to buyers and thus contributed toward higher prices. Does this not explain the rise of net corporate profits (after taxes) by more than 100 per cent despite an increase of corporate income and excess-profit taxes from $1+ billion in 1939 to $15 billion for 1944?

In short, the high level of wartime incomes contributes to postwar inflationary pressures insofar as these incomes generated a large accumulation of savings in wartime and insofar as they reflect payments for products, services, etc., that are high relative to the productivities involved. High farm prices or high basic wage rates are not a deterrent

to maintenance of a high level of output so long as demand is sufficiently high to pay these prices or wages. Once a cumulative decline starts, then currently high farm prices or basic wage rates may be deterrents to the stoppage of the decline or its reversal. Any further tendency to raise farm prices or basic wage rates not justified by underlying productivity and/or demand conditions may further interfere with the smooth functioning of our postwar economy.

Even more important, let us beware of wage cutting in the postwar. In the long run (and even in the immediate future, with a successful reconversion) basic wage rates should continue to rise. Total wage payments will almost certainly decline in the transition period, however, and bring deflationary pressures. This is all the more a reason for not allowing basic wage rates to decline below a level determined by productivity; and there are reasons for a rise if output is maintained at a high level.

D. SUPPLIES. That wartime prices did not rise more is explained in no small part by the unexpectedly large expansion of output. This was made possible by a reduction of 9 million in the unemployed, accession of 9 million to the labor market, a small rise in productivity in nonwar industries, and a large rise in war industries, an increase in working hours, the more intensive use of available plant and equipment, the construction of $20 billion of new plant and equipment, the innumerable measures for conserving materials, and control of exports and imports. A rise of gross national product (GNP) of over 120 per cent from 1939 to 1944, or 75 to 85 per cent in 1939 dollars, was indeed a remarkable achievement, especially since 11 million had been added to the military. Indeed, these 11 million contributed importantly to national income, as was evident in a rise of salaries and wages in government from 1939 to 1943 from $6 billion to $22 billion. (Military payments were running at the rate of $18 billion in the third quarter of 1944.[1]) The contribution to national income of these 11 million is not, however, so great as it would have been in private industry. Monetary expansion related to rising war demands, let us observe, made it possible to put to work idle resources and man power and to enlist the aid of those not as yet members of the labor market.

Many are, however, disposed to exaggerate the significance for price stability of the rise of supplies. They assume that the larger

[1] *S.C.B.*, November, 1944, p. 1.

supplies are, the lower prices are. This is an oversimplification of the problem. Efforts were directed toward increasing war output until war output rose to almost one-half of GNP. Prices of war output *tend* to decline both because more is made available and because as output expands, costs per unit decline. It is another matter in the markets for civilian goods. Incomes respond to rises in total output; but nonwar output does not rise greatly or may even decline. The situation would be more serious still had not the economy increased the current flow of civilian goods and services at the expense of new capital and at the expense of maintenance of capital in nonwar areas.

As a result of the war in no small part, capacity was at an unprecedented level, as was the supply of labor, fortunately skilled labor; and productivity should continue to rise. Our output potential is enormous: there is no reason why pressure on prices should not be downward from the supply angle. In the immediate future, the availability of $10 billion to $15 billion of government supplies and much plant will add to that pressure on prices. An immediate problem is the synchronization of demand with the expansion of output in nonwar industries. This is largely a problem of proper timing of demobilization of controls, of movements of labor occupationally and geographically, speedy settlement of contracts, removal of government equipment, etc.

E. CONTROLS. Controls are another issue of transcendent importance. Our wartime controls contributed to an increase of total supplies, to diversion of resources into essential industries, and to reduction of nonessential demand. Though in general their origins (other than price control) are not associated with the objective of price stability, there can be little doubt but that prices would have been much higher if conservation and limitation orders, priorities, programing, rationing, simplification, and standardization orders, import and export control, and other controls had not been introduced.

It proved impractical to sponsor a fiscal program which would remove substantially all inflationary pressures. It was, therefore, necessary to sterilize excess purchasing power. Unavailability of supplies, in part the result of government policies, tended to sterilize part of the excess purchasing power. Insofar as excesses still remained, the government's policy has been to prevent prices from rising to equilibrium levels. The weapon used for this purpose was price control.

Beginning in the summer of 1944, the pressure to remove controls gained in intensity. Surfeited with controls, civilians grew impatient

for their removal. Once supply and demand are reasonably in equilibrium and likely to stay there, the case for removals is very strong. The danger here is, however, that they may be removed too soon.[1] Many contend that the flow of materials, man power, and components to reconversion industries is impeded as long as controls continue. In other words, remove controls and reconversion will not be hampered. Others, however, point out that as long as there remains disequilibrium resulting from war, a premature removal of control will bring maldistribution, hoarding, favored treatment for large concerns with special access to supplies, and price inflation. The issue is then: At what point do controls do more harm through interference with movement of factors than they do good through a controlled use of scarce factors?

[1] The then Director of War Mobilization Byrnes reflected this impatience with controls in his report to the President, of Sept. 7, 1944. *Reconversion: A Report to the President*, p. 12. When World War II ended, the pendulum seemed to swing again toward rapid removal of controls. Only intervention by President Truman in August, 1945, slowed down a hasty and dangerous demobilization of controls.

Chapter XXIV

Money and Savings

This chapter takes up the problem of monetary expansion where we left off in Chapter XIII. The expansion of money and the rise of prices; the significance of the increased liquidity; the future of deposits, the rate of interest and prices; the degree of monetary control, actual and required—these are the main issues to be considered.

1. EXPANSION IN WAR

On June 30, 1939, the total of demand deposits adjusted and currency outside banks was $33.4 billion; on Dec. 31, 1944, the total was $90.4 billion. The rise was 171 per cent. And in the 3 years after Pearl Harbor the rise was 86 per cent.[1] These are indeed large increases and suggest inflationary dangers to many. Prof. Whittlesey made an interesting comparison of the rise of circulating medium for different periods (Table 125).

TABLE 125.—RISE OF CIRCULATING MEDIUM, ANNUAL AVERAGE

	Per Cent
1892–1942	6
June, 1914–June, 1919	13
1919–1929	2
June, 1939–end of 1942 *	23

SOURCE: C. R. Whittlesey, *The Effect of War on Currency and Deposits*, NBER.

* The rise of demand deposits adjusted and currency in circulation was 27 per cent in 1943 and 19 per cent in 1944, *F.R.B.*, March, 1945.

This expansion of money was not matched by a corresponding increase of prices, for the cost of living rose roughly by one-quarter and the wholesale price index by one-third. *Over a period of five years, then, the expansion in money was about five to six times as great as that in the cost of living and four to five times as great as that in wholesale prices. In contrast,*

[1] *F.R.B.*, October, 1944, pp. 981, 999.

the rise of wholesale prices at the end of World War I was 75 *per cent as compared with a monetary expansion of* 50 *per cent.*[1]

Why, then, has the rise of prices been so moderate in this war? Clearly, a relative factor has been velocity: it has tended to decline as money expanded.[2] Table 126 reveals a downward movement in the

TABLE 126.—ANNUAL RATE OF TURNOVER OF DEMAND DEPOSITS IN 100 LEADING CITIES OTHER THAN NEW YORK

1941	19.4
1942	18.4
1943	17.4
1944	17.3

SOURCE: *F.R.B.*, September, 1944; February, 1945.

rate of circulation of money. Velocity in turn has tended downward in part because savings have been large. Imposition of controls, inability to buy goods, rise of incomes, and responses to government appeals account for the large rise of savings.

Another relevant factor, helping to explain the moderate rate of price rise, was the expansion of output. New money was used to put unemployed resources to work. Against the rise of money is to be put the increased demand not only to hold but also to carry on an increased volume of transactions.

2. THE EXPANSION OF LIQUID ASSETS

Perhaps the best available summary of liquid assets is given in Table 127.[3]

It was estimated that liquid assets in the three years ending Dec. 31, 1944, *had actually risen from* $83 *billion to* $190 *billion or more than* 125 *per cent.* The largest percentage gains were in U.S. Government securities (three to four times) and currency (about one and one-half times). Demand deposits were up by about two-thirds and time deposits by almost 40 per cent. Of the total holdings at the end of 1944, currency and demand deposits accounted for almost two-fifths, U.S. Government securities more than two-fifths, and time deposits about one-fifth.

According to Chart 94, by the end of 1944 individuals held $125 billion of liquid assets, or nearly two-thirds of the total for individuals

[1] C. R. Whittlesey, *The Effect of War on Currency and Deposits*, NBER, p. 35.

[2] *Cf.* Ch. XIII.

[3] The discussion in the next few paragraphs is based on *F.R.B.*, October, 1944, pp. 953–961.

TABLE 127.—ESTIMATED HOLDINGS OF PRINCIPAL LIQUID ASSETS BY INDIVIDUALS AND CORPORATIONS

(In billions of dollars)

	Dec. 31, 1944 (probable)	Dec. 31, 1941	Increase during three years
Currency	23.7	9.5	14.2
Demand deposits	49.4	29.6	19.8
Time deposits	37.3	26.9	10.4
U.S. Government securities	79.5	17.4	62.1
Total liquid assets	189.9	83.4	106.5

SOURCE: *F.R.B.*, October, 1944.

NOTE: Figures exclude currency, demand and time deposits, and U.S. Government securities held by banks, insurance companies, savings and loan associations, all governmental bodies, educational and charitable institutions, other nonprofit associations, and foreigners. The figures for the second half of 1944 were projected on the basis of changes during the first half of the year. Revised figures for December 31, 1944, do not greatly differ from the above—the total is $193.6 billion. *F.R.B.*, June, 1945, p. 533.

and corporations (exclusive of banks, insurance companies, etc.). Corporations accounted for about one-quarter and unincorporated businesses about one-tenth. The rise for individuals accounted for nearly two-thirds of the rise since 1941. Individuals accounted for about two-fifths of the demand deposits, the bulk of time deposits and currency, and about three-fifths of the government securities held by individuals and corporations.[1]

In 1940 and 1941, corporate business added only $5 billion to their liquid assets. From 1941 to 1944, however, when capital formation was discouraged or impossible, they increased their liquid assets by $30 billion, or 170 per cent.

Individuals accounted for $65 billion of the rise in liquid assets. Apparently those in the $2,000 to $5,000 incomes accounted for most of the rise. The Federal Reserve Board estimates that out of $65 billion of savings, individuals with incomes above $5,000 could hardly account for more than $20 billion. In an earlier survey, the Department of Commerce contended that those with incomes of $10,000 or over could account for only a small part of the rise of savings in the years 1941-1943. Their net income after taxes in 1941 was but $4.75 billion.

[1] *Cf. F.R.B.*, February, 1945, p. 105. Of $59.6 billion of demand deposits outstanding on July 31, 1944, *domestic business* held more than 60 per cent, personal deposits accounted for more than 30 per cent, and "all other" the remainder. Respective percentage rises since Dec. 31, 1941, were 50, 86, and 38.

In the 3-year period, the department estimated that their additions of government securities and cash were only $10 billion of an estimated $50 billion of savings.[1]

Still another survey breaks down *all* savings of *individuals*. From the end of 1939 to June, 1944, savings in the form of cash, deposits, and securities aggregated $100 billion, and $120 billion by the end of

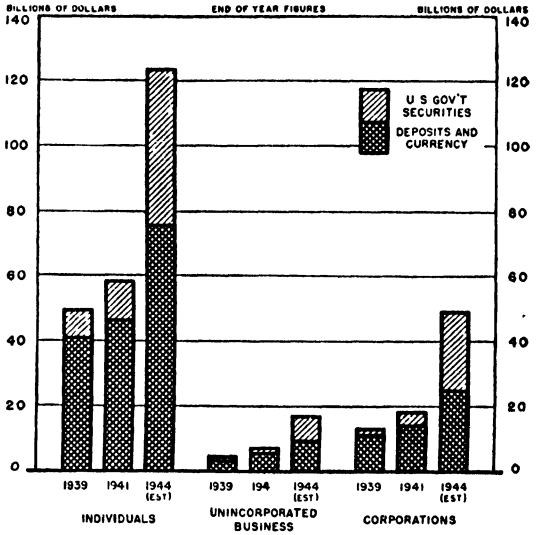

CHART 94.—Liquid asset holdings by type of holder. (*Source: Federal Reserve Board.*)

1944. Currency, deposits, and United States War Savings bonds accounted for $72 billion, or more than 70 per cent of these savings to the middle of 1944. Included in the $72 billion was a rise of $43 billion in currency and bank deposits. Of the $43 billion (exclusive of $2 billion to savings and loan associations) about one-quarter took the form of increases in savings and time deposits, one-third increases in currency holdings, and slightly more than two-fifths in additions to demand and time deposits. Individuals also invested $22 billion in insurance, housing, repayment of debt, etc.[2] (Chart 95 presents the problem succinctly.) When the war ended, wartime savings of individuals were (estimated) $150 billion.

[1] S. M. Livingston, "Wartime Savings and Postwar Markets," *S.C.B.*, September, 1943, p. 64.

[2] *S.C.B.*, September, 1944, pp. 7–8.

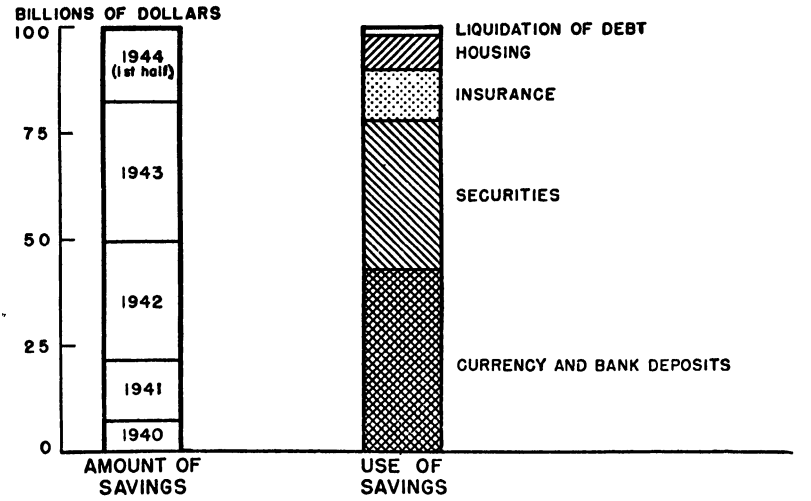

CHART 95.—Savings of individuals. (*Source: Survey of Current Business, September,* 1944.)

3. THE SIGNIFICANCE OF THE RISE OF MONEY AND SAVINGS

These large amounts of cash and savings raise many difficult problems for the future. One aspect, the relation to pent-up demand, will be considered later. Here we discuss a few other relevant problems.

At the outset, we should note that for the next 5 *or* 10 *years at any rate, and probably longer, there is not a strong possibility that the total supply of money will be substantially reduced. The expansion is associated with the absorption of securities by the banks;* [1] *and a contraction of monetary supplies would be related to the redemption of bonds by the government or net purchases by the public from the banks.* Clearly in periods 1 and 2, that is until VJ-day, public debt had continued to increase, and it is not probable that in the difficult periods of adjustment (3 and 4) the public debt will be substantially reduced. At best we may hope for stability. Only beginning around 1948 (period 5) is there any expectation of a period of debt repayment; and then only if a high level of employment is attained and maintained. *It is a safe conclusion, then, that the debt will not be reduced in the next* 5 *years and probably not substantially in the next* 15 *years.*

There are other ways of reducing deposits. The public may buy securities from the banks. This is not a likely development, as bonds not owned by financial institutions are largely held by low- and middle-

[1] From June 30, 1940, to June 30, 1944, the rise in U.S. Government securities held by banks was $56 billion; of deposits, $55 billion. *F.R.B.*, October, 1944, p. 982.

income groups and by business; and relatively early in the next 10 years the public is likely to sell bonds at a more rapid rate than the government can absorb. They will use part of the proceeds to buy consumption goods and part to develop capital resources. Sales by the public are likely to exceed net purchases by the Treasury as well as the amounts purchased by the public out of cash or deposits. That is to say, there will be a net inward movement to the banks—in the next 10 years at any rate.

Banks will have to support the bond market and in view of their very large holdings it will be to their interest to do so.

It is clear, then, that deposits are likely to grow rather than contract. Other considerations do not greatly weaken this conclusion. It is possible, for example, that a great deflation may confront the country in period 5. Contraction of bank assets would then involve this country in a liquidation of bank deposits. It should be noted, however, that on June 30, 1944, loans and investments of all banks came to $108 billion. Of this total, loans were but $25 billion. By June 30, 1945, the total might well be at least $125 billion and loans only about one-fifth. In short, the amount of probable contraction of commercial assets is distinctly limited; furthermore, any substantial contraction will undoubtedly call forth a further sale of government securities to the banks on the part of the Treasury. That is, the government will take remedial action.

Nor are other factors likely to bring a reduction of deposits. Large hoards of currency notes may be brought into the banks. The result would be, of course, a rise of deposits. Gold is much more likely to flow in than out. In the last few years foreign countries have added several billion dollars of gold to their hoards—the accumulation of blocked sterling balances is of the order of $14 billion; and the scarcity of dollars is likely to result in further inward movements of gold. Foreign countries, it has been estimated, will hold $18 billion of foreign exchange reserves (mainly in gold) at the end of the war.[1] An important deterrent to further inflows of gold may be any loans made to foreign countries under the Bretton Woods or similar programs, or withdrawal of large dollar balances held here by foreigners. We should not, however, count too heavily on a net reduction of reserves and deposits resulting from our international balance of payments. In fact, gold or dollars put at the disposal of foreign countries are likely to

[1] E. M. Bernstein, "Monetary Stabilization: The United Nations Program" in *Economic Reconstruction* (edited by Seymour E. Harris), McGraw-Hill, 1945.

be used to purchase American goods or services. In other words, the dollars (deposits) would largely be returned to us.

Any marked tendency for prices to rise will increase the pressure to expand deposits. *As commodity prices rise, the public will tend to desert the bond market.* Business enterprise then becomes more disposed to expand and therefore to convert bonds into cash; and holders of fixed interest-bearing assets are tempted to convert into other assets. Business will be disposed to convert securities into cash and nonliquid assets, following any marked expansion of money incomes even at relatively stable prices. (Such expansion is generally, however, accompanied by rising prices.)

Some economists might contend that if the rate of interest were allowed to rise, then the excessive disposition to sell securities and buy goods would be corrected. We do not agree. First, a rise of the rate of interest, with its accompanying fall in prices of outstanding securities, might accelerate sales of securities and thus provide potential spenders with additional cash. Second, a rise in the rate of interest for one important reason would not seriously discourage spending on consumption or capital goods in the early years of reconversion and demobilization. Deficiencies are large, and demand intense. Any reduction of spending would be associated rather with the loss of confidence associated with rising interest rates and a fall in the price of government securities. It would be better to maintain monetary supplies and thus keep the rate of interest from rising and—if pressures on prices are great—to maintain some controls at least until we are back to a normally functioning economy.[1]

In summary, an analysis of the future banking and monetary situation suggests that in the next 5 *years, and probably in the next* 15 *years, deposits will remain at a high level, and even in periods* 3–5, *deposits may well continue to grow.*

4. LIQUIDITY A THREAT?

Extreme liquidity brought on by the war was, of course, a threat to monetary stability. *As noted in the Introduction, however, much depends on the increased requirements of a rising volume of business and any long-run changes in the relative preference for cash and noncash assets.* At an income of $150 to $175 billion in the next generation, a volume of deposits

[1] *Cf.* E. V. Morgan, "The Future of Interest Rates," *E.J.*, December, 1944, pp. 346–351.

and cash of $100 billion may not be excessive. At an income of $75 to $100 billion, it may be excessive, though it may also be a means of raising incomes to higher levels. If income is stabilized at a low plateau, then these large amounts of cash may speed up recovery or movement to a higher plateau; but there is always the danger of excessive acceleration.

The second issue here is that of a changing attitude toward the relative desirability, on the one hand, of holding cash and, on the other, of holding noncash assets. Table 128 indicates that since 1939 the relative holdings of cash have tended to rise: the ratio of cash (inclusive of deposits) to income is on the increase. One should not too glibly assume that this tendency will continue into the future. In war, unavailability of supplies, the rapid growth of income, the slow change in consumption patterns—all of these accounted for the relatively large cash holdings in relation to income. Under a free economy and with consumption markets functioning normally, the public may well be disposed to hoard less cash. Large cash balances relative to incomes may then be reflected in large inflationary pressures, *i.e.*, in a tendency to get rid of cash quickly.

Another relevant consideration is the rate of interest. If the rate of interest continues at a low level, then the disposition to hold large amounts of cash may continue. The alternative of investment may not offer an adequate incentive. If, on the other hand, the low rates of interest are partly responsible for a high level of investment, then they may be an occasion for a rise of spending and a reduced liquidity preference.

This liquidity of the public raises serious problems of monetary control. If it persists, the control of the banking system over the money market is threatened. The public can dispose of funds excessively and at an alarming rate without appeals to the banking system. Availability of large amounts of cash and public securities convertible into cash will result in less appeals to the banks. That means, supplies of cash available today will involve less credits from the banks tomorrow. What is needed tomorrow is available today. Excessive liquidity today is a threat to control then only insofar as the banks tomorrow would not have made the added cash available.

Table 128 summarizes the relation of cash and income payments. From 1942 to 1944, the ratio of income to money tends downward. Similarly for 1946; but these figures for 1946 are guesses based on the

assumption of a continued high level of war outlays and a reduction in the rate of monetary expansion.

TABLE 128.—RELATIONSHIP OF INCOME PAYMENTS TO TOTAL MONEY

(In billions of dollars)

Date	Money in circulation, June 30 (1)	Demand deposits, adjusted, June 30 (2)	Total money, (1) + (2) (3)	Income payments (4)	Ratio (4) to (3) (5)
1939	7.0	27.3	34.3	70.8	2.06
1942	12.4	41.9	54.3	115.5	2.13
1943	17.4	56.0	73.4	141.9	1.93
1944	22.3	60.1	82.4	155.0	1.88
1946 *	30.0	65.0	95.0	170.0	1.79

SOURCE: Board of Governors of the Federal Reserve System, and Department of Commerce.
* Estimated by the writer. The end of the war in 1945 rather made for overestimates.

5. FUTURE OF MONETARY CONTROLS

The rapid expansion of money in circulation and deposits has put a great strain on the reserves of member banks. As was noted, the policy of the Reserve banks has been directed toward providing an adequate supply of money to absorb issues of government securities at low rates of interest. Above all, the rate of interest must not rise. As securities continue to be issued or as the public sells them to the banks, the Reserve banks will be responsible for the provision of additional reserves.

For the 5 years ending Dec. 31, 1944, the net changes in the monetary and banking situation may be summarized as in Table 129*a*.

TABLE 129*a*.—RISE OF DEPOSITS, CURRENCY, AND FEDERAL RESERVE CREDIT, DECEMBER, 1939–DECEMBER, 1944

	Billion Dollars
Total deposits, adjusted	70
Demand deposits, adjusted	37
Currency outside banks	17
Federal Reserve credit	17

SOURCE: *F.R.B.*, March, 1945.

It will be noted that the expansion of Federal Reserve credit barely provided the cash required to pay for additional currency notes issued.

The additional cash required by the banks as reserves against the growing volume of deposits had been provided through a reduction of reserve requirements and out of excess reserves. (See Chart 57, Chapter XIII.) The latter were less than $1 billion by February, 1945. In fact, an additional $1.4 billion of Federal Reserve credit in the third quarter of 1944 offset a further rise of money in circulation of $1.2 billion. Any further substantial expansion of money in circulation or deposits will require additional Federal Reserve credit.

Deposits will rise as the government continues to sell securities to the banks. According to Dr. Goldenweiser,[1] the government in the 4 years ending June 30, 1944, spent $223 billion and added $17 billion to its cash balance. Taxes provided $87 billion, borrowings from individuals and nonbanking institutions $89 billion, and borrowings from banks $64 billion.[2] These purchases of securities by banks accounted for the expansion of deposits.

What of the future of monetary expansion? First let us examine the rise of deposits and money in circulation from 1941 to 1945 (see Table 129*b*).

TABLE 129*b*.—RISE OF DEPOSITS AND MONEY IN CIRCULATION

(In billions of dollars)

Year ending June 30	Total deposits, adjusted	Demand deposits, adjusted	Currency outside banks
1941	5.7	5.4	1.5
1942	5.1	4.6	2.7
1943	23.3	14.2	4.9
1944	20.9	4.0	5.1
1945	21.8	9.4	4.2

SOURCE: Computed from *F.R.B.*, October, 1944. In the 10 months ending April, 1945, the rise for these three variables was (in billion dollars) 11.2, 13.7, and 3.6. *F.R.B.*, June, 1945, Aug., 1945.

For the fiscal year 1944–1945, taxes provided $43 billion and loans $50 billion. Approximately $22 billion of government indebtedness were purchased by banks. (The last two figures are estimates based on experience for the major part of the year.)[3]

Clearly the rate of expansion was less in 1944 than in 1943; and even the absolute rise was less in 1944 for deposits, though not for money

[1] *F.R.B.*, September, 1944, p. 871.

[2] Federal Reserve banks are apparently included here. These figures do not check exactly with figures used earlier in this chapter. The explanation is undoubtedly that my figures are based on material made available later. *Cf.* Chs. XIII, XVI.

[3] *Tr. Bull.*, June, 1945, p. 47, and *Budget*, 1946, p. XXX.

outside of the banks.[1] As government spending declines with the end of hostilities, both the government's deficit borrowings and sales of securities to banks will decline.

Yet, despite the reduced demand, the Federal Reserve System will have to continue to support the money market. Whereas the reserves of Federal Reserve banks against notes and deposits were 68.9 per cent in August, 1943, they were only 53.2 per cent in August, 1944. By 1945 Federal Reserve banks were asking for special legislation to reduce reserve requirements. Relief might have been had either on the basis of existing legislation: issue of greenbacks, issue of silver at $1.29 an ounce, issue of Federal Reserve bank notes, temporary reduction of reserve requirements; or by the means of new legislation which might cut reserve requirements. Actually, early in 1945 Congress reduced reserve requirements of Reserve banks.[2]

Perhaps an even more difficult problem for the future is the extreme liquidity of banks. *They can easily obtain additional cash by allowing government securities to run off, i.e.*, to fail to replace maturing issues. In this manner they can make themselves largely independent of the Federal Reserve banks. *Unless new measures are introduced—further extension of qualitative controls, increase of reserve requirements, ceilings on credit expansion—the future of central bank control is black indeed.* The Reserve banks are not now in a position to control commercial banks against unwise extension of credit, and the latter in turn have little control over the amount of spending by the public.[3]

6. CONCLUSION

A brief summary of this chapter follows:

1. The large rise of money and savings in the war may be a threat to monetary stability in the future and therefore an inflationary threat for the future.

2. Allowance, however, should be made for the increased requirements of deposits and cash to carry on a higher volume of transactions and also for any increasing tendency by the public to prefer cash to noncash assets.

[1] Deposits and money in circulation were up 27 per cent in 1943 and 19 per cent in 1944.

[2] See the able discussion by Roland Robinson, *F.R.B.*, March, 1945, pp. 215–221. He considers the various alternatives and also points out that large demands for currency notes have especially absorbed excess reserves of the reserve banks.

[3] *Cf.* the excellent discussion by H. S. Ellis, "Central and Commercial Banking in Postwar Finance," in *Economic Reconstruction* (edited by Seymour E. Harris).

3. That the savings are owned largely by those with small or moderate incomes, and that individuals account for two-thirds of liquid assets and the largest part of the increase, suggest that the pressures on markets may be significant. (We return to this in Chapter XXV.)

4. An examination of (1) the future distribution of public securities as between the public and the banks, of (2) the movement of gold, foreign exchange, and currency notes, as well as (3) government spending and the public borrowing from the banks, confirms the conclusion that a large reduction of deposits is not likely in the next 5 to 15 years. On the contrary, deposits are likely to continue to grow for several years.

5. Extreme liquidity of the public impairs authority of the banking system. Similarly, extreme liquidity of the banks threatens control of the Reserve banks. Drastic correctives may be required.

6. Continued expansion of monetary supplies requires remedial action to provide Reserve banks with additional reserves or to reduce their reserve requirements.

7. These are the inflationary aspects of the problem. We shall come back to the more important (more important especially because of the war's end) deflationary aspects of the problem in later chapters.

Chapter XXV

Savings and Postwar Demand for Consumption

1. INTRODUCTION

In Chapter XXIV it was noted that wartime savings were very large and that two-thirds of the liquid assets are owned by individuals. These conditions make many apprehensive of the inflationary effects of the disbursements of these savings. Others look forward to the favorable effects on total demand of these large accumulations of savings and particularly of liquid assets. (In the next chapter we turn our attention to the demand for capital goods.) In the discussion in this chapter we distinguish (1) the transitional effects—when the accumulation of savings may be of great significance—and (2) the longer-run pattern of demand for consumption goods.

Immediately after World War I, deferred demand did not apparently play a very significant part. Consumption had not been discouraged in the same manner and to the same degree as in the second war. For example, automobile output increased significantly during the previous war. There was, however, a backlog of demand for housing which played an important part in the twenties. Prof. Samuelson has shown that in that immediate postwar period (1919–1920) the percentage of savings to income actually rose. There is apparently very little evidence of "deferred demand" during that period.[1]

It is most improbable that the pent-up demand for consumer goods and capital after World War II will be as negligible as after World War I. It will play a very large role for several years after the war; but even then the influence of pent-up demand will be overshadowed by other considerations. Current estimates restrict the effects to a period of from 18 months to 4 or 5 years after the war. The Department of

[1] NRPB, *After the War*, 1918–1920 (June, 1943), pp. 15–21.

Commerce has suggested, however, that the net effect for many years is likely to be a high ratio of spending to *current* income.

2. TRANSITIONAL ASPECTS

By the end of 1944, liquid assets in possession of individuals were about $125 billion, and by the end of the war about $140 billion or more. These large gains are made by individuals, *i.e.*, potential consumers, because as the government spends in excess of tax receipts, the gross savings of the public rise *pari passu*. And as heavy taxation of business prevents a large proportion of the additional liquid assets from going to business and to high-income groups, these savings remain largely at the disposal of those with annual incomes of $10,000 or less.

Inflationary pressures threaten because the liquid assets belong to low-income groups who are disposed to spend. *What is more, the assets are not destroyed once they are spent. The savings may be spent again and again.* Under current tax patterns they will come back largely to the groups that are spending. A rise of spending will, however, contribute to higher amounts of government income and if, with the rise of tax receipts, the Treasury should repay debt, then to that extent the process of spending savings will be stopped. We noted in the preceding chapter, however, that large repayments of debt are not likely to be made in the immediate period after the war.

There can be little doubt but that the accumulation of $140 billion to $150 billion of liquid assets by the end of the war may be a threat to monetary stability. Yet it is not at all clear that over-all inflationary results need necessarily follow. In fact, many reasons can be adduced against this outcome.

Whether inflation results or not will depend on the race between spending and reconversion. Spending in turn will depend on current output, current incomes, and current amounts of unemployment. If, after cessation of hostilities, a large amount of unemployment develops, the public will not be disposed to spend large amounts of its excess war savings. Uncertainty is probably the most important single factor accounting for the rise of savings and, as long as it prevails, the public will hold on to its savings.

Furthermore, if savings are spent because large amounts of unployment appear, then these additional disbursements are not likely to be highly inflationary.

Similar generalizations hold for periods 4 and 5. In these periods, especially in period 4 (catching-up), however, the flow of civilian goods will once more be nearly normal and, therefore, any release of savings will be offset to a considerable extent by additional flow of consumer goods. The threat of savings is also related to controls. In period 3, at any rate, many controls in areas of scarcity will probably continue. These will tend to hold down prices of essential goods in the most essential areas at any rate. War Production Board (WPB) regulations will tend to make available adequate supplies of the most essential commodities for civilians. Many demands will not, however, be protected so well as in period 2, with the result that, in general, controls will not contribute so much to the moderation of price rises as in the earlier period.[1]

Much will depend on government action in other fields: the rate at which contractors who may produce civilian goods are repaid; the rate at which contractors are released from war contracts; the rate of removal of government property from plants; the speed with which price ceilings are adjusted to new conditions—all of these will influence the flow of consumer goods.

Even if incomes are maintained at a high level in periods 3 and 4, it does not follow that the public will spend their savings rapidly. As our experience in the war years attests, the response of higher spending to higher incomes is slow. Many are disposed to wait until better products are forthcoming. They may, furthermore, wait if prices are high or if new products are not forthcoming in adequate quantities. Dr. Livingston has argued that consumers may well be content to spend at rates consistent with their new high-income levels only because they have large savings available. In other words, the effects on spending of these large savings may be felt for many years.[2]

In summary, the large holdings of liquid assets may bring about a serious inflation in periods 3 *and* 4. *This is not a likely outcome, however, although inflationary pressures may be felt in individual markets and particularly in those which require a long period of gestation before large supplies begin to flow again.* Even by period 3, strong deflationary pressures may begin to be felt which will be an offset to the threat of accumulated savings and may, in fact, discourage the spending of these savings. It is interesting to take note in this connection that, according to one survey, potential

[1] *Cf.* Part VII of my *Price and Related Controls*, and Ch. XXX of this volume.

[2] S. M. Livingston, "Wartime Savings and Postwar Markets," *S.C.B.*, September, 1943.

buyers in the postwar will not be relying heavily on past savings.[1] How much prices will actually rise in response to dissaving will depend in no small part upon the success of the reconversion; and this in turn will depend in no small part on government policies: controls, financial attitudes toward producers, etc.

The gist of the matter is the level of employment in periods 3 and 4. *If the government cuts its expenditures by* \$50 *billion in period* 3, *and private enterprise expands only by* \$20 *billion, it is unlikely that a general inflation will follow. Further savings will be made rather than large amounts of dissavings.* Much will also depend on the controls used. If, however, the slack is fully taken up in period 3 as well as in periods 4 and 5, then in the absence of very strong controls, inflation may become serious. *But the inflation should be associated with full employment and absence of controls.* There is undoubtedly a point—let us assume a postwar income of \$130 billion and 5 million unemployed—at which neither inflation nor deflation would threaten: spendings would be out of past and present income.

3. GUESSES ON POSTWAR PATTERNS OF CONSUMPTION

Another approach to the problem of demand in the postwar period is to assume full employment and a corresponding income. For example, the Department of Commerce assumes full employment in the year 1946 and a rise in the gross national product (GNP) from \$97 billion in 1940 to \$165 billion in 1946 *at* 1942 *prices*. At this higher national income it then estimates the consumption of various kinds of goods on the basis of past relationships. Expenditures, it is found, for services will rise by 51 per cent; for perishable goods by 58 per cent; for semidurable goods by 73 per cent; for durable goods by 104 per cent; for producers' goods by 102 per cent; for government public construction by 45 per cent; for private construction, residential, by 201 per cent; and for other private construction by 205 per cent. The rise for all consumption goods and services (exclusive of residential construction) was anticipated at 64 per cent and, inclusive of residential construction, at 68 per cent.[2] Consumption in 1946 is anticipated at 1942 prices, which are 15 per cent above 1940 prices. Real consumption is then up about 45 per cent.

Early in 1943 Dr. Bissell published calculations of a study along similar lines.[3] He estimated full-employment, or at least a high-level-of-employment,

[1] WPB, *The Immediate Market for Appliances*, September, 1944, p. 26. The public is expected to pay for appliances to the extent of 18 per cent out of savings and 76 per cent out of income. The remaining 6 per cent are not accounted for. The flaw appears to be, however, that 32 per cent of the 76 per cent will be financed on the installment plan. (They will not use up past savings; but they will borrow and presumably repay soon.)

[2] U.S. Department of Commerce, S. M. Livingston, *Markets after the War*, pp. 27–28, 1943.

[3] *Postwar Economic Problems* (edited by Seymour E. Harris), pp. 94, 98*ff*.

income in the postwar period at a GNP of $132 billion. At the high national income resulting from this high GNP, he estimated how much private gross capital formation there would be. He assumed a high consumption level, which is more or less given by that level of GNP, and then made certain estimates of how much capital formation would be required in particular areas of investment. For expenditures on equipment, he used the usual historical relationship between expenditures on equipment and GNP. In other areas he estimated a backlog and on the basis of that and of estimates of current replacement, etc., he discovered, for example, how much would be spent on residential construction and nonresidential construction. The net result of his calculations was that there would be adequate demand for private construction and private capital formation in other areas to make up the difference between GNP and what would be spent by consumers (inclusive of normal government expenditures). In this, as in most studies of this kind (*e.g.*, the Department of Commerce study mentioned above) the assumption was made that a high level of income or a high level of consumption had been attained and, given such high levels, conclusions were drawn concerning the amount of capital formation.

In a more recent study, Dr. Mosak investigated the situation in a normal postwar year: 1950 is the year under consideration. Assuming that there will be 7 millions more employed in civilian occupations than in the immediate predefense period, that the hours of work will be reduced to the 1939 level, and that productivity will be unchanged, he concluded that full employment will yield a GNP of $200 billion and income payments of $152 billion.

"The projection of consumer expenditures at each given level of the gross national product is derived in three major steps: First, the level and composition of the national income before taxes is projected corresponding to each volume of gross national product. Next, we estimate the level of disposable income in the hands of individuals corresponding to each level of the national income, under specified assumptions as to corporate and personal taxes. Finally, we project the aggregate volume of consumer expenditure corresponding to each level of disposable income.

TABLE 130.—DISPOSABLE INCOME AND CONSUMERS' EXPENDITURES, 1950

(In billions of dollars)

	Disposable income	Consumer expenditures
Under 1944 tax rates	129.8	112.8
Under 1941 tax rates	140.8	121.7
Under 1940 tax rates	144.6	124.7

SOURCE: J. L. Mosak, "Forecasting Postwar Demand," in *Economic Reconstruction* (edited by Seymour E. Harris).

"It is assumed that the volume of consumer expenditures in the postwar period will bear a stable relationship to the aggregate of disposable income."

This approach admittedly neglected such factors as changes in prices and income distribution. Dr. Mosak was inclined, however, to minimize their effects on the ratio of total consumer spending to disposable income.

At a GNP of $200 billion, he estimated income payments at $152.4 billion. Estimates of disposable income and consumer expenditures are shown in Table 130.

4. AN ANALYSIS OF FORECASTS OF CONSUMER DEMAND [1]

It is well to compare the results obtained by two studies of future demand. The Department of Commerce study, for example, yields the results shown in Tables 131 and 132. Table 131 clearly shows a large expansion of consumer expenditures relative to the rise of GNP —the percentage of the rise of (2) to (1) is 77.

TABLE 131.—RISE OF GROSS NATIONAL PRODUCTS AND CONSUMERS' EXPENDITURES, 1940–1946 (ANTICIPATED)

	Billion Dollars
1. GNP	63
2. Consumers' expenditures (inclusive of residential construction)	49

SOURCE: U.S. Department of Commerce, *Markets after the War.*

TABLE 132.—RISE OF CONSUMERS' EXPENDITURES AS PERCENTAGE OF RISE OF GROSS NATIONAL PRODUCT, 1940–1946

I. In *Markets after the War*	77
II. Compare:	
a. 1939–1941 (actual)	41
b. 1939–1944 (1944, estimated)	31

SOURCE: U.S. Department of Commerce, *Markets after the War; S.C.B.*, April, September, 1944. (Based on materials, pp. 27–28.)

The comparison in Table 132 suggests that the Department of Commerce projection yields an excessive rise of consumption. Even in 1939–1941, a period in which restrictions and unavailability of supplies were relatively unimportant, the rise of consumers' expenditures was but 41 per cent of that in GNP. In real terms, however, the expansion in 1939–1941 was 34 per cent; the anticipated increase from 1940 to 1946, 46 per cent.

[1] This section is based on the following: J. L. Mosak: "Forecasting Postwar Demand," in *Economic Reconstruction;* Department of Commerce: (1) *Markets after the War,* 1943; (2) *A Hypothetical Projection of Expenditures for Commodity Groups Based on Past Relationships to Gross National Product,* May, 1943; (3) *Market Prospects after the War,* February, 1944.

Another interesting comparison is the consumption estimate of the Department of Commerce with that of Dr. Mosak. At a GNP of $165 billion, he estimated consumption at $97 billion at 1944 personal income tax rates and $107 billion at 1940 personal income tax rates. The Department of Commerce estimate, it will be recalled, was $121 billion.[1]

These differences are of vital importance. *At a full-employment income ($200 billion), the Mosak study estimates required government expenditures and private capital formation at $75 billion to $87 billion; the Department of Commerce study (based on a GNP of $165 billion) at $51 billion.* (The latter is inclusive of residential construction.) At $165 billion GNP the differences are smaller: the Mosak study puts the required volume of government expenditures and private capital at $58 to $68 billion.

Variations in result spring partly from the dissimilar methods of attack. The Department of Commerce study is built on scatter diagram charts of expenditures on each of 77 groups of goods and services comprising the GNP. The relationship of each group to GNP over the period 1929–1941 is projected into the future. In this manner the government arrives at an approximation of how a much larger GNP in a postwar year might be broken down. It is generally possible to derive algebraically the equation of the line drawn through the dots. The equation for housing expenditures, for example, is $y = 4.068 + 0.047x$. Housing expenditures (y) in the postwar year will be $4.068 billion + $47 million for each billion-dollar rise of GNP.

In contrast the Mosak study is based not on the relationship of *each* of the 77 groups to GNP but rather on that of GNP and *total* consumer expenditures. This unknown is obtained through a projection of the relationship of these two variables in the years 1929–1940.

Mosak's approach has one important advantage over that of the Commerce Department. *A concentration on the ratio of expenditures on each of 77 groups to GNP disregards the dependence of variations in expenditures of any one item upon variations in others. The Commerce analysis, in fact, assumes that the expansion of expenditures on item 1 does not influence that on items 2–77.* This is an unrealistic assumption. An emphasis on the over-all relationship takes into account the interdependence of expenditures for the various components.

Forecasts of future consumption demand in peace are at best of very limited significance. Our peacetime experience is restricted to a GNP of $99 billion (in 1929)

[1] Figures here are interpolations from a series in Dr. Mosak's article.

or less. In the thirties the range was from $55 billion to $89 billion. Since our peacetime experience has been limited to much lower figures, an estimate of consumption at a GNP of $160 to $200 billion does not have much meaning. Consumption will be related to the distribution of income at the higher level; to price movements, both general and *relative* at a given price level; to the rate of taxation; to the supply of savings available from the war period; to the kind of social-security program in operation; to the period during which this high income is sustained and the expectations concerning future income; and to many other factors. It follows that even Dr. Mosak's attack can be accepted only as the roughest kind of indication of the amount of consumption at a GNP of $200 billion. To his credit, it may be said that he at least takes into account the effects of varying tax programs.

These are the larger issues involved in projecting postwar consumption. For the immediate postwar it will also be difficult to assess the effects of a release of surplus commodities, the appearance of new products, the delays caused by reconversion, and the like. When one examines the Commerce Department study more minutely, it is not easy to envisage the tremendous changes in both consumption and production that are required. As the study disclosed, gluts will develop soon in many of the markets. The figures in Table 133 are of interest.

TABLE 133.—CONSUMPTION EXPENDITURES
(In millions of dollars)

	1940	1946
Food	20,929	33,917
Passenger cars	2,382	5,718
Residential construction	2,323	7,000

SOURCE: *Markets after the War.*

Both Dr. Livingston and Dr. Mosak realize many of the necessary reservations in their studies. Unfortunately, many who use these studies and the results are not equally circumspect. From Dr. Livingston's study, many are inclined to draw overoptimistic conclusions concerning the future of private demand and private enterprise; from Dr. Mosak's study, there is the danger of acceptance by many of a definitive figure for the estimate of the gap to be filled by private investments and public expenditures, which Dr. Mosak, at best, put forth as an informed guess.

5. CONCLUSION

The wartime accumulation of savings and cash is much larger than the estimated backlogs of demand. These accumulations may then contribute toward the support of demand for a relatively long period: the $130 billion of personal war savings or the $140 billion or more of liquid assets that were in the possession of individuals when the war ended may mean the public's maintenance of expenditures at a high level in relation to the high incomes that are attainable in the postwar. Deferred demand is not, however, a decisive factor though it may make a substantial contribution for several years. The amounts involved are discussed briefly in a note at the end of this chapter.

In general, however, even in periods 3 and 4, the inflationary pressures are not likely to be so great as is frequently assumed. After VJ-day, some substantial deflationary forces were unloosed. The general direction of price movements would be determined by any reduction of active purchasing power associated with reduction of government spending as well as with any disbursements of past hoards; and the amount of the latter will be greatly influenced by the former. The rate at which the flow of consumption goods is renewed and the timing of demobilization of controls will also be decisive. On balance inflationary forces should prevail in the first few years, once reconversion is largely achieved.

In the longer run (period 5), the rise of consumption in itself is not likely to be adequate to sustain a high level of national income. Clearly the Department of Commerce projections give an altogether too optimistic suggestion of consumption at high income levels. One has but to compare the rise of consumption in 1939-1944 with the gain in GNP and especially the relative rises of these two variables in 1939–1941. Any inferences drawn from the independent behavior of the trend of 77 series of commodities and services are of very limited significance; especially so since our peacetime experience is limited to a GNP of $100 billion. For the same reason, a projection based on the *general* relation of GNP and consumer expenditures is of limited significance. Above all we are impressed by the probably high average of savings at a GNP of $200 billion. Unless large expenditures for capital are to be found, or the public is content with much less work and income, or means are discovered for raising the marginal propensity to consume, we are likely to be disappointed in the volume of expenditures.

In later chapters we consider the relevance of total income, employment, wages, and the like for this range of problems.

A Note on Deferred Demand

We have had surveys of deferred demand by numerous agencies. Here we especially consider two: one by the Chamber of Commerce and another by the Office of Civilian Requirements (OCR) of the WPB.

The former estimated current (September, 1943) buying intentions (see Table 134). According to that survey, if the war had ended at that time, 64 per cent of families would have been prepared to make purchases of one or more major articles within 6 months.

Table 134.—Buyers' Intentions, by Types of Expenditures

	Number, thousands	Value, million dollars
Automobiles	3,675	3,307
Appliances	....	1,216
Home furnishings	....	711
Buy or build new homes	1,540	7,185
Home and farm improvement	....	7,500
Total	.....	19,919

Source: U S Chamber of Commerce, *Third Progress Report of a Consumer Survey to Measure Postwar Buying Intent* (through September, 1943).

This is a fairly generous estimate of buying intentions. Not all of it is, however, deferred demand. A significant part may be accepted as current purchases. Now (1945), however, the amounts of intended purchases are larger since available stocks of consumer durable goods have been more nearly used up and since savings are substantially higher than in 1943.

As for the second survey under consideration here: According to one OCR survey, if labor and materials were available, 3.7 millions might buy or build a home. Of these 3.7 millions, only 800,000 saw no reason for waiting. The correct figure will then fall somewhere between 800,000 and 3.7 millions, varying with business conditions and prospects. This survey, then, as of April, 1944, puts the maximum figure of demand, as at the time of the survey, at three to four times the maximum number of houses built in any one year before the war. It should be noted, however, that this demand may in part result in a change of ownership rather than in new building.[1]

[1] WPB, OCR (1) *The Immediate Markets for Appliances, Third Survey of Consumer Requirements*, Apr. 17-24, 1944, pp. 1-9; (2) *The Market for Houses When Materials and Manpower Are Available, Third Survey . . .*, Apr. 17-22, 1944, pp. 1-10.

Let us see how the Commerce survey and the OCR survey compare in the appliance field (see Table 135).

TABLE 135.—NUMBER OF APPLIANCES CONSUMERS INTEND TO BUY
(000 omitted)

	Chamber of Commerce	OCR	
		Maximum number	Buy as first purchase, no reason for waiting
Mechanical refrigerators..	2,625	3,800	1,400
Washing machines.....	2,100	4,300	1,900
Stoves.....	1,645	3,200	1,000
Radios.....	2,555	2,700	700
Vacuum cleaners.....	1,400	2,400	600
Sewing machines.....	840	2,300	500
Electric stoves.....	1,505	4,000	2,000

SOURCE: U.S. Chamber of Commerce, *Third Progress Report of a Consumer Survey to Measure Postwar Buying Intent*, and WPB, OCR, *The Immediate Markets for Appliances . . .*, 1944.

It will be noted that the OCR maximum estimates (as of April, 1944) are much higher than those of the Chamber of Commerce (as of September, 1943). The OCR points out, however, that these large demands may not be realized. When, for example, consideration is paid to the effects of the availability (in Table 135) of item (1) on purchases of item (2), it is not clear that the maximum levels will be reached. The OCR maximum figures, by the way, are 120 per cent in excess of peak-year purchases for washing machines, 228 per cent for sewing machines, 46 per cent for mechanical refrigerators, and 50 per cent for vacuum cleaners. Radio demand is but one-third of peak-year purchases.

Another official survey puts the demand for housing as follows:

"With building materials and labor available, the existence of a normal housing demand, and adequate mortgage funds assured, the indications are that within the first year after removal of wartime restrictions some 350,000 to 400,000 new privately financed dwelling units, with an average value of $5,000, will be built at a total cost of around $2,000,000,000. As a result of the large amount of repair work deferred during the emergency, it has been estimated that the volume of home modernization and repairs will total about $3,000,000,000 during the first post-war years." [1]

These figures, it will be noted, seem less encouraging than those of the two surveys examined above. They relate, however, to the *first* postwar year only. Yet the general expectation has been that the rate of new building would be more than $2 billion for residential construction. The total of new residential construction and repairs of $5 billion, however, compares with

[1] *Tenth Annual Report of the FHA*, Dec. 31, 1943, pp. 13-14.

$2.3 billion in 1940. Or compare $2 billion of new residential construction in the first postwar year with an average of $2 billion in the 3½ years January, 1937, to June, 1940, or $2.5 billion in the 3½ years ending December, 1943.[1] (Chart 96 presents housing, past and prospective, by *units*.)

There has been much discussion as to whether the industry will be able to carry a heavy load of construction in the early postwar years. An official study concludes that within one year after VJ-day the plant capacity will be $11 billion at 1940 costs. (This compares with an output of $11.5 billion in 1942, $5.9 billion in 1943, and a possible low of $3 billion in 1944.) Construction equipment will be adequate for a $12 billion annual program.

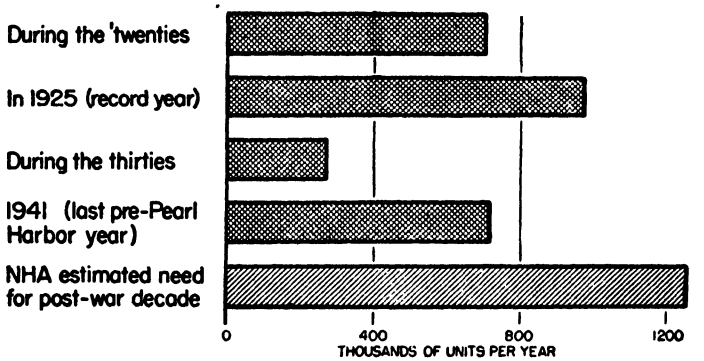

CHART 96.– Housing, past, present, and prospective. (*Source: First Report by Director of War Mobilization and Reconversion.*)

These potentials will be reached, however, only if adequate releases of plant and materials from war uses are made expeditiously. The productive capacity for all types of building materials is around $15 billion (annual rate); for plumbing fixtures it is but $12 billion; the estimate for lumber is substantially less than $15 billion. Reconversion awaits release of metals and building up of working inventories—which will require from 6 months to a year.[2] (The broad variations of construction activity—totals and by subgroups—are given in Chart 97.)

We may conclude that postwar demand for consumers' durable goods (inclusive of residential construction) will be substantial. Even the optimistic estimates of the Chamber of Commerce, however, amount to less than $20 billion; and we should not assume that this demand will be exhausted in less than two years. In the first postwar years, purchases based on current income may, then, come to $10 billion annually; and this assumes that necessary adjustments of production and distribution will be effected. If the total backlog to be spent over several years is but $20 billion, this means that there is little deferred demand. What the demand actually will be will

[1] *S.C.B.*, October, 1944, p. 16.

[2] "Postwar Capacity and Characteristics of the Construction Industry," *BLS Bull.* 779, 1944, especially pp. 1–12.

depend on postwar income and prospects; and estimates based on consumers' intentions in 1943 or 1944 may be misleading as to actual purchases in 194*x*. Sales of consumers' durables and residential construction were $10.6 billion in 1940. In a full-employment postwar year (1946), the Department of Commerce puts the total at $23.9 billion.[1] Actual expenditures on durable consumers' goods inclusive of residential construction will undoubtedly fall between $10 and $24 billion in the early postwar years, the actual amount

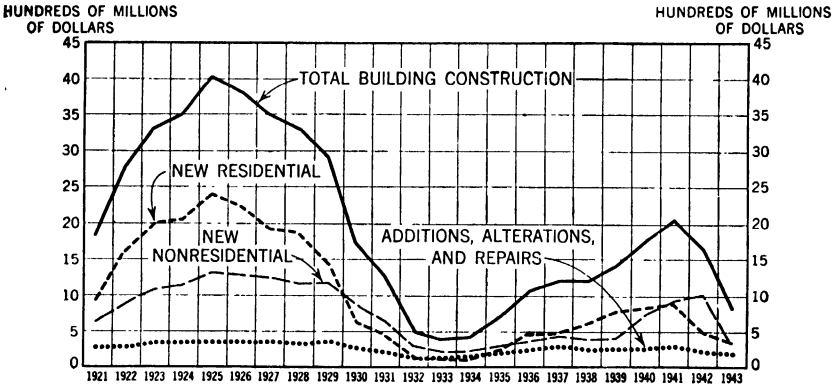

CHART 97.—Value of building construction. (*Source: Bureau of Labor Statistics.*)

depending on the success of our reconversion. A likely figure by 1946–1948 is between 14 and 20 billion dollars. These figures include backlog and normal purchases out of income.

We conclude, then, that deferred demand is not large; that in comparison with an annual reduction of $75 *billion in government spending, total demand for consumers' durables is rather small. Nevertheless, if the release of pent-up purchasing power is not to bring a rise of prices in the early periods of reconversion and demobilization, materials and equipment should be released as soon as possible.* It would also be well that the production and sales of consumers' and other durable goods be consummated in periods of declining government spending and not be superimposed on economies already strained by war demands.

[1] *Markets after the War*, pp. 27–28.

Chapter XXVI

Expenditures by Business Enterprise

1. LONG-RUN CONSIDERATIONS

In Chapter XXV it was noted that a large part of the responsibility for maintaining an adequate level of expenditures must rest with business enterprise. Even the projections for 1946 in *Markets after the War* call for large expenditures of capital (Table 136).

TABLE 136.—CAPITAL AND GOVERNMENT EXPENDITURES
(In billions of dollars)

	1940	1946
1. Producers' goods	7.4	14.9
2. Private construction	4.5	13.7
3. Total, inclusive of public construction and other services of all governments	23.7	51.1

SOURCE: *Markets after the War.*

This total for 1946 is to be compared with estimated requirements by Dr. Mosak for government expenditures and private capital formation in 1950, of $71 billion to $85 billion, depending on the burden of taxation: the heavier taxes are, the larger the required volume of private capital formation and government expenditures.[1] It follows, also, that the less private capital formation is, the larger the volume of government expenditures.

On both estimates the required volume of capital expenditures is large. Gross capital formation for the *entire* decade of the thirties was but $60 billion; there was virtually no net capital formation. Even on the estimates of the Department of Commerce, the annual required

[1] J. L. Mosak in *Economic Reconstruction* (Seymour E. Harris, editor), p. 91.

figure is several times the figure for the thirties. That, because of improvements in technology, a dollar of capital tends to become more effective does not help matters. We shall return to this issue—the long-run one—when we discuss public investment and public debt.

In this chapter we are especially concerned with the transitional issues—and especially capital formation in the periods 3 and 4. *The important question is: Will industry be in a position to reconvert and expand during this period? If not, the expected and required volume of employment will not be forthcoming, and deflationary forces will be strengthened. A related question is the magnitude of the need for capital.*

2. SHORT-RUN CONSIDERATIONS

A. EXPENDITURES IN EARLIER PERIODS. In the war period, capital expenditures were on an unprecedented scale. Compare, for example, the expenditures in the 3½ years preceding the beginning of our war effort and the first 3½ years of the war program (see Table 137 and Chart 98).

TABLE 137.—EXPENDITURES FOR CONSTRUCTION, MACHINERY, AND EQUIPMENT

(In billions of dollars)

	January, 1937–June, 1940	July, 1940–December, 1943
Total	39.6	86.5
Construction	20.1	36.5
Machinery and equipment	19.5	50.0

SOURCE: *S.C.B.*, October, 1944.

Total expenditures were at more than double the prewar rate. Public outlays accounted for about three-fifths of the total in the war period, as compared to less than one-fifth in the 3½ years before July, 1940. (Chart 99 gives the amounts of private and public construction expenditures, 1939–1944.) The largest gains were in fields closely related to war. Thus in industrial construction the rise was from $1.1 billion to $8.5 billion, the main expansion being in war industries; and in military and naval construction, a rise from $300 million to $9.6 billion.[1] In machinery and equipment the largest rises were in manufacturing machinery, $4.6 billion to $12.0 billion (more than

[1] *S.C.B.*, October, 1944, p. 16.

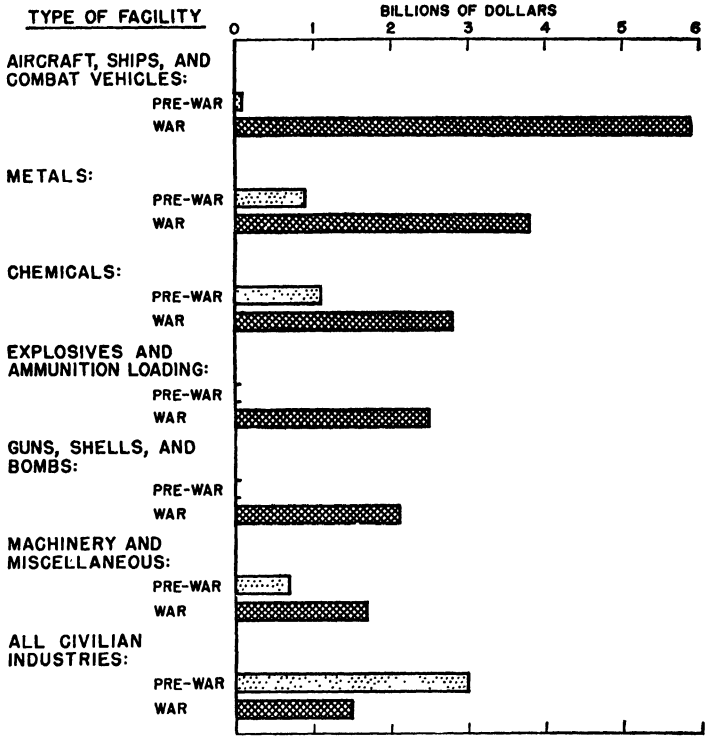

CHART 98.—Expenditures for manufacturing facilities, by type, prewar and war periods. (*Source: U. S. Department of Commerce.*)

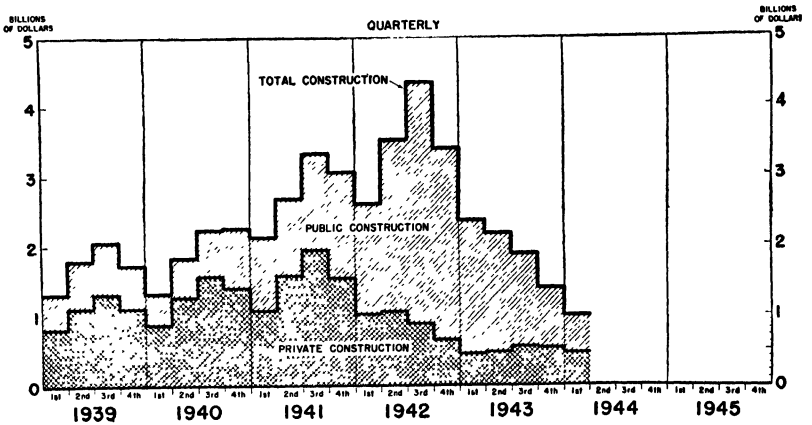

CHART 99.—Construction expenditures in the United States. (*Source: U. S. Department of Labor.*)

one-half in the latter period was public); business vehicles, $4.2 billion to $9.1 billion (two-thirds public); ships and boats, from $600 million to $9.6 billion; and aircraft, from $400 million to $2.4 billion (the last two together more than 90 per cent public); other machinery and equipment, from $5.4 billion to $11.2 billion (more than one-third public). For all war plants and machinery the rise was from

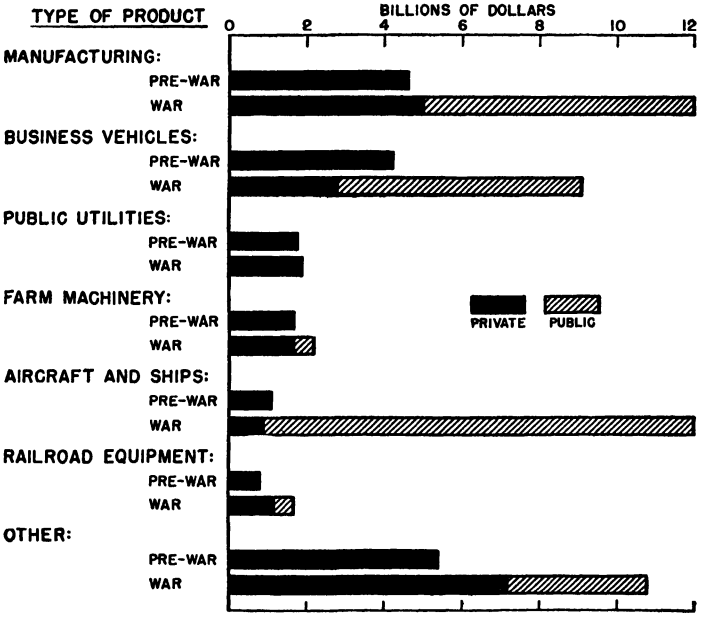

CHART 100.—Expenditures for producers' equipment, by type of product, prewar and war periods. (*Sources: U. S. Department of Commerce and War Production Board.*)

$2.8 to $18.8 billion for war industries, and a decline in civilian industries from $3 billion to $1.8 billion. (Charts 100 and 101 break down expenditures for producers' equipment and new construction activity.)

In general this much may be said. *Expansion was large in the war period. But the largest part of public expenditures will not be available for peacetime purposes.* Munition plants, shipbuilding, aircraft plants, and the like will be largely unsuited for peacetime use. *It may be assumed that the* $6.8 *billion of private expenditures for manufacturing plant and machinery in the war period will be available for later use; and possibly one-third of the* $13.7 *billion of public expenditures.* (The total in metals, machinery and electrical equipment, chemicals, petroleum, etc., and synthetic

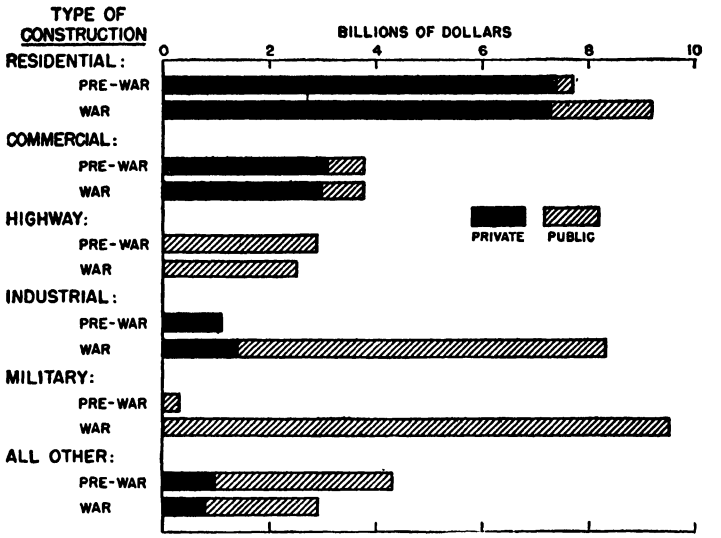

CHART 101.—New construction activity by type, prewar and war periods. (*Sources: U. S. Department of Commerce, War Production Board, and U. S. Department of Labor.*)

rubber is $4 billion—part of this is excess capacity, however. (See Chart 102 for an indication of excess capacity in some areas.)

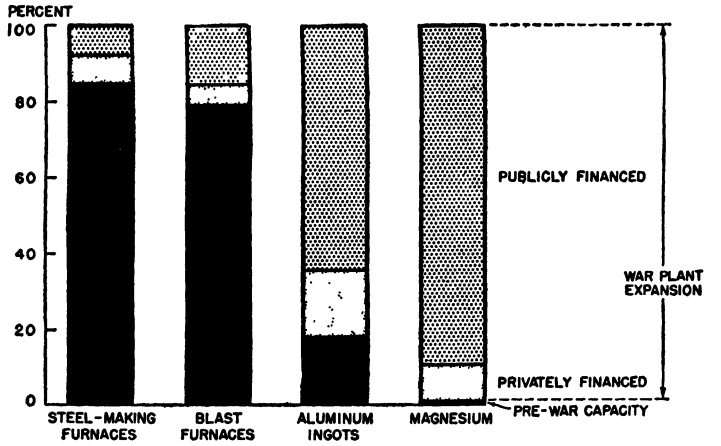

CHART 102.—Percentage distribution of expected postwar plant capacity for selected metal industries. (*Sources: U. S. Department of Commerce and War Production Board.*)

The rate of wartime expansion, inclusive of private expenditures and one-third of public expenditures, was larger than in the 3½ years preceding June 30, 1940. *Yet it was not large enough to provide a*

full-employment economy. Some peacetime industries have been starved for capital. Many plants have been placed in areas where they cannot be sustained. They may require replacements unless the government wishes to subsidize them.[1]

Although there is clearly a backlog in some areas, the over-all backlog does not seem to be large. Compare the items in Table 138, for example.[2]

TABLE 138.—CAPITAL FORMATION —VARIOUS ITEMS

	Billion Dollars
1. All gross capital formation in thirties, average	6
2. Annual average construction, machinery and equipment, June, 1940–December, 1943	24.7
3. Private construction, 3½ years ending June 30, 1940	12.5
4. Private construction, June 30, 1940–Dec. 31, 1943	12.7
Expenditures on manufacturing plants and machinery:	
5. 3½ years ending June 30, 1940	5.7
6. 3½ years ending December, 1943	20.5
7. 3½ years ending December, 1943, private plus public reconvertible (after war)	11.2

SOURCE: Based on *S.C.B.*, October, 1944, exclusive of (1). Item (7) is estimated.

Though private capital formation was below normal from 1942 to the end of the war, there may well have been excesses in special areas. Excesses, however, may have been whittled down during the latter part of the war. Deficiencies will be found in special areas and if full employment incomes are maintained there will undoubtedly be an over-all deficiency.

There will be a large postwar demand for plant and equipment, insofar as income much in excess of prewar levels is maintained and insofar as the economy requires additional capital in excess of the large supplies left over as a result of the war. *But this full-employment economy may be achieved only if the outlays on new capital are large; and large outlays will be made only if the deficiencies are substantial.*

Undermaintenance, moreover, has not been so great as is commonly assumed. The Department of Commerce estimates the amount in-

[1] *Cf.* A. D. H. Kaplan, *The Liquidation of War Production*, Ch. 4. Dr. Kaplan, using a somewhat different classification of industries, put public investments in war industrial facilities at $15.7 billion and private investments at $6.2 billion. He estimated that about one-third of the former can be used for peacetime purposes.

Cf. also Pursuant to S. Res. 190, *A Graphic Guide to Decentralization and Some Simple Facts on Reconversion*, Oct. 7, 1944, pp. 1–7.

[2] Total construction in 1944 was estimated at $3.9 billion, or a decline of 50 per cent from 1943 and 70 per cent from 1942. *S.C.B.*, December, 1944, p. 10. For the fiscal year 1944–1945, the estimate of public construction was $2.2 billion. This compares with the $12.7 billion peak in 1942–1943. *Budget*, 1946, p. vii.

volved at $2 billion.[1] According to the Treasury Department, it is very difficult to measure. Varying results are obtained, for example, according as the norm is in relation to prewar expenditures on maintenance or to a ratio of maintenance to sales expenditures. The Treasury emphasizes the difficulties in a discussion concerning an anonymous corporation: "For example, Corporation (3) in the building materials industry exhibits overmaintenance by Criterion I of 720 per cent of normal maintenance, undermaintenance of 44 per cent under Criterion II, and overmaintenance of 156 per cent under Criterion III. . . ." [2]

B. AVAILABLE FUNDS. Clearly, irrespective of need, business will not reconvert and, a fortiori, will not expand unless liquid funds are available.

It will be recalled that out of $190 billion of liquid assets at the end of 1944, corporations held about one-quarter and unincorporated business about one-tenth. Business had *added* an estimated $40 billion of liquid assets in the 3 years ending Dec. 31, 1944.[3]

According to an estimate of the Department of Commerce, business enterprise had spent $43.5 billion on capital in the years 1940–1943. Approximately one-quarter was obtained out of current profits and three-quarters out of depreciation and depletion funds and other charges against current earnings. Expenditures on producers' goods were $33.5 billion in 1940–1941 and only $10 billion in 1942–1943. In the former period, business obtained $16.5 billion from outside sources; in the latter period it accumulated $16.7 billion of unused savings.[4]

In a later estimate, the Department of Commerce put the funds made available to corporations for the two years 1942 and 1943 at $30 billion.[5] (This means, after making required outlays, other than capital.) They used $5 billion for capital purposes and $2 billion for reduction of debt, thus adding $23 billion in cash and government securities.

Table 139 indicates how the $30 billion was obtained.

TABLE 139.—CORPORATIONS: SOURCES OF AVAILABLE FUNDS, 1942–1943

	Billion Dollars
Undivided profits	8
Depreciation, depletion, other reserves	12
Net liquidation of receivables	2
Rise of tax accounts	8
Total	30

SOURCE: *S.C.B.*, February, 1944.

[1] *S.C.B.*, February, 1944, p. 11.

[2] Treasury Department, *Postwar Expenses Related to Wartime Incomes*, Part IV, September, 1943, p. 21.

[3] *F.R.B.*, October, 1944, pp. 957–958. *Cf.* Ch. XXIV.

[4] *Markets after the War*, p. 18.

[5] *S.C.B.*, February, 1944, p. 9.

An estimate for *the transition year* is that $47 billion to $58 billion will be available. In addition to $30 billion (Table 139) *and* funds available in 1941, $5 billion to $6 billion are added out of current depreciation funds, and $9 billion to $14 billion for goods delivered to the government before Jan. 1, 1944, and net claims on uncompleted contracts. The maximum charges against these accumulations of business are put at $36 billion (Table 140).

TABLE 140.—MAXIMUM CHARGES AGAINST BUSINESS ACCUMULATIONS

	Billion Dollars
Retirement of wartime tax accruals	8
Reconversion	4
Replenishment of civilian goods inventory	8
Equipment purchases	11
Deferred maintenances	2
Reextension of consumer credit	3
Total	36

SOURCE: S. M Livingston and E. T Weiler, "Can Business Finance the Transition?," *S.C.B.*, February, 1944, p. 11.

On the basis of these figures, the Department of Commerce concludes that if termination of contracts is well handled, business will have enough liquid funds to handle reconversion and also to expand substantially.

In a later study, Dr. Livingston, one of the authors of the above study, makes some estimates for the years 1942–1946. For the year 1945, he expects additional funds received (estimated at $17 billion) approximately to equal funds used. The $17 billion will be obtained equally (1) from depreciation, depletion, etc., charges and (2) from retained earnings plus sums received on liquidated war contracts. Expenditures will be about one-half on construction, equipment, etc., and the remainder on inventories, reduction of tax accruals, and increase of loans to consumers.

For the years 1941–1946, business will have accumulated gross $60 billion to $71 billion, $49 billion of which will have been accumulated in the years 1942–1944. Dr. Livingston estimates that but $50 billion will be required to restore prewar plant, receivables, and inventories and to reduce tax accruals. The $50 billion are apportioned as indicated in Table 141.

TABLE 141.—POSTWAR REQUIREMENTS

	Billion Dollars
War tax accruals	8
"Reconversion"	4
Civilian goods	8
Deferred plus current replacement	25
Deferred maintenance	2
Consumer loans	3
Total	50

SOURCE: S. M. Livingston, "Postwar Financing of Business Enterprise," in *Economic Reconstruction* (edited by Seymour E. Harris), McGraw-Hill, 1945, p. 313.

Of the $49 billion accumulated in 1942–1944, only $7 billion net will be used up in 1946–1947—the $49 billion being accounted for as follows: Corporate profits retained = $14.3 billion; other profits retained = $10.1 billion; depreciation, depletion, etc. = $19.5 billion; other business reserves, etc. = $5.1 billion.[1]

Dr. Livingston, we see, is also optimistic concerning the adequacy of funds available.

In a survey of 1,007 registered corporations (all kinds exclusive of banks and insurance companies), the Securities and Exchange Commission (SEC) revealed the changes indicated in Table 142.

TABLE 142.—CURRENT ASSETS AND LIABILITIES OF 1,007 REGISTERED CORPORATIONS, RISE 1939–1943

	Million Dollars
Current assets	16,306 (from 16.3 to 32.6 billion)
Current liabilities	11,181 (from 5.2 to 16.4 billion)
Net working capital	5,128 (from 11.1 to 16.2 billion)

SOURCE: SEC, *Data Supplemental to Statistical Series Release 739* (1944), Table I.

The largest gains in current assets were in cash ($3 billion), U.S. Government securities ($6.4 billion), receivables from U.S. Government ($3.3 billion), and inventories ($3.5 billion). The more important increases in current liabilities were advances and prepayments, U.S. Government ($1.4 billion), other accounts payable, etc. ($2.0 billion), taxes accrued ($6.6 billion).

It is interesting to compare this study of 1,007 corporations with one of 259 large corporations made by the Federal Reserve Board. The assets of the latter rose by $15.1 billion in the 3 years ending Dec. 31, 1943. Their net property rose $4.5 billion; cash and marketable securities $5.3 billion; receivables $3.1 billion; and inventories $2.2 billion.

These corporations obtained roughly half of the total increase in assets from the following: government loans and advances, $1.3 billion; tax liabilities, $3.1 billion; other current liabilities, $3.2 billion. The remainder was obtained to the extent of two-thirds out of reserves and one-third out of profits retained.[2]

C. TAXES.[3] Business taxes are very heavy in wartime. Corporations, for example, are required to pay in corporation and excess-profits taxes about

[1] S. M. Livingston, "Postwar Financing of Business Enterprise," in *Economic Reconstruction* (edited by Seymour E. Harris), McGraw-Hill, 1945, pp. 301*ff.*

[2] *F.R.B.*, July, 1944, p. 636.

[3] On these issues see especially U.S. Treasury Department, *Postwar Expenses Related to Wartime Incomes*, 1943; E. C. Brown and J. K. Butters, *Business Reserves in Present Law*, NPA, November, 1943; J. K. Butters, *War Profits Taxation and Special Wartime Reserves*, January, 1944, Harvard Business Research Study 30; J. K. Butters and J. Lintner, *Effects of Taxes on Growing Enterprises:* 1. *The Lockheed Aircraft Corporation*, 1944; 2. *The Polaroid Corporation*, 1944. Also, House Hearings on *Revenue Revision of* 1943, pp. 128–168.

three-fifths of their income prior to taxes (Chart 103). Two difficult problems are raised. The first is in relation to valuation reserves, *i.e.*, reserves that are legitimately deductible from wartime income to obtain taxable income. In wartime business is, for example, forced to postpone maintenance. Deductions are allowed for income tax purposes only insofar as the money is spent. If expenditures are postponed, then the deductions must be made in the future. To this extent, war incomes are overstated. If tax rates are lower in the postwar, then the taxpayers will be paying excessive taxes over the war and postwar. This follows because taxes will be paid at high rates

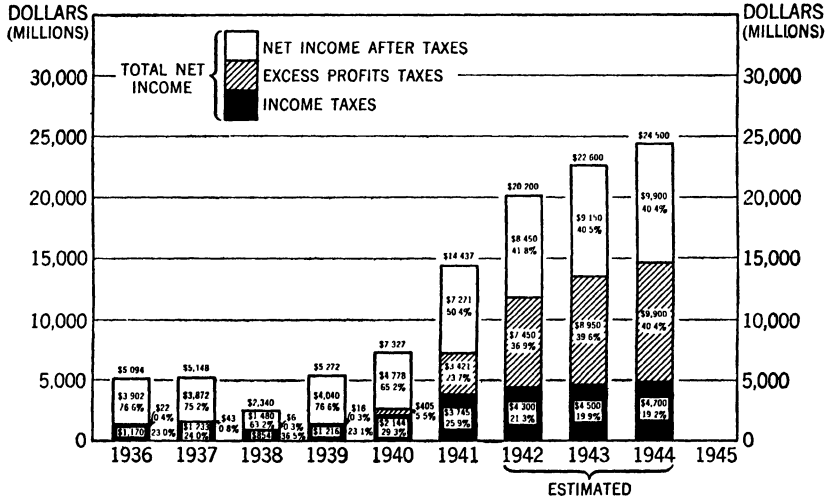

CHART 103.—Corporate taxes and net income after taxes, all corporations, 1936–1944. (*Source: U. S. Treasury.*)

in periods of war and undermaintenance, and taxes will be paid at lower rates in periods of large expenditures on maintenance. Some relief may be had, however, under the carry-back provisions, if losses are incurred and excess-profits credits are not fully used.[1] Similar problems arise under other payments associated with the war: dismissal wages, extra maintenance resulting from war, obsolescence of inventories resulting from wartime developments, etc.

In general, these items should be a charge against wartime income. Yet, since the amount involved is uncertain, there is no alternative but to postpone the deductions.

[1] The carry-back provisions allow taxpayers, in estimating excess-profits liabilities, to deduct losses currently made from income in the two preceding years and also to add any unused excess-profits credit to the base in the two preceding years. In this manner, the liability under the excess-profits tax is reduced. Section 722 of the Internal Revenue Code allows corporations to apply for special treatment where the general provisions do not assure fair treatment. A concern, for example, going through an experimental period in the base period and therefore having a low base-period profit, may be entitled to special considerations.

Valuation reserves raise serious problems for business. Yet, as we shall see, the large profits made in the war period will probably be adequate to finance the additional expenditures which, although undertaken after the war, are properly chargeable to wartime income.

Surplus reserves are another matter. These are reserves that are not properly deductible from wartime incomes. They are not associated with reconversion proper, *i.e.*, reconverting plant to its prewar condition. Large sums will be required, for example, to develop new products, expand employment, improve plants as a result of technological improvements in war, etc. Many would have deductions made from taxable income to cover allocations to surplus reserves. *These are expenditures that are properly chargeable not to income but to capital expansion. The government quite properly takes the position that what is asked of the Treasury is the financing of new capital out of wartime tax abatement.*

In general, the tax burden on business does not seem to have been excessive. Corporate incomes after taxation in 1942–1944 were more than 100 per cent in excess of prewar levels. It is dubious that postwar expenditures properly chargeable to war incomes will be as much as one-half of the excess of war incomes—in (say) 4 years of war of $28 billion (estimated)—over peacetime incomes. Undoubtedly they will be considerably less. Against these expenditures, moreover, business may obtain several billion dollars under the carry-back provisions and Section 722 of the Internal Revenue Code and under the 10 per cent refund provision under the excess-profits taxes; and, in addition, allowances under current tax assessments. It would be well if the taxpayer were protected through (1) a guarantee that the carry-back provisions would not be repealed, (2) a rapid and anticipatory payment of legitimate claims, and (3) fair administration of Section 722.[1] The last, to be sure, may become largely inoperative because of excessive demands by taxpayers. It is, finally, unfortunate that the refunds are not based on need for reconversion and expansion. Concerns making large excess profits are, for example, entitled to a 10 per cent refund: this further improves their competitive position. This drawback is, however, one price that is paid for a highly progressive tax. The carry-back provisions, on the other hand, do not become operative unless profits become less than normal. In this manner, high war profits may, to some extent, be averaged with lower postwar profits.

3. THE ADEQUACY OF BUSINESS FUNDS

Business accumulated vast liquid resources during the war. In large part, these funds were required in order to offset a larger volume of transactions; in part they reflected the accumulation of idle cash which, under war conditions, found only restricted employment in new equipment, in maintenance, in replacement, and in the purchase

[1] *Cf.* Second report of Director of War Mobilization and Reconversion on *War Production and VE-day*, p. 36, Apr. 1, 1945.

of war inventories.[1] The accumulation of cash would have been even greater had not business repaid debts to the banks. Whereas war industries increased their bank loans from $1.25 billion at the end of 1941 to $3.5 billion at the end of 1943, nonwar loans declined from $8 billion to $4.3 billion.[2]

The capacity of business to reconvert and expand depends not only on the extent of profits obtained in war but also on its liquidity. Dr. Livingston's estimates are of great interest in this connection: the satisfactory position in 1943–1944 has been fairly well demonstrated. Even more interesting is his estimate for the years 1942–1946. He puts liquid assets at $60 billion to $72 billion; the maximum funds required for reconversion at $50 billion. The remainder would be available for expansion. For the 3 years 1942 to 1944, retained profits account for $24 billion and reserves for $25 billion. Of these $49 billion only $7 billion were consumed. Of the $50 billion to be used up, $25 billion are to be expended for new equipment and replacement, $6 billion for reconversion and maintenance, $8 billion for additions to inventories of civilian goods, and $8 billion to reduce tax accounts. (These are the larger items.)

These are generous estimates of the amounts required to reconvert. Let us compare them with the $60 billion of plant and equipment available in the prewar, for example. Undoubtedly, $40 billion of *new* capital could easily do the tasks now required of the $60 billion of prewar plant. And let us not forget that the equivalent of perhaps one-quarter additional of the prewar plant was likely available at the war's end as a result of wartime expansion. Our prewar plant plus additional investments of $40 billion in the years (say) 1940–1947 should give us a plant capable of yielding a national income twice the prewar level. Much of our plant, we should recall, was underutilized in the prewar period. And we should recall that an *investment of* $20 *billion* in plant and equipment made it possible to *increase our national income from* $70 *billion to* $160 *billion. We need not, therefore, on grounds either of adequacy or liquidity, have any serious doubt concerning the capacity of industry to reconvert. The* $65 *billion of liquid assets available to business should do the job.*

[1] Dr. Lutz in a study for the NBER shows that the cash balances of corporations rose roughly as much as the total means of payments; that for large manufacturing corporations, average cash balances *declined* relative to payments, but rose for small and medium corporations (manufacturing). See F. Lutz, *Corporate Cash Balances*, 1914–43.

[2] *F.R.B.*, July, 1944, p. 637.

This is, however, an oversimplification of the problem. What holds for all industry does not necessarily hold for particular groups or all corporations. It will be observed from Chart 104 that some industries are more heavily indebted to banks and have larger relative current liabilities than others. The condition of aircraft, shipbuilding, and machinery industries, for example, is especially vulnerable. Their debts to banks, government, and others are large relative to their internal funds,

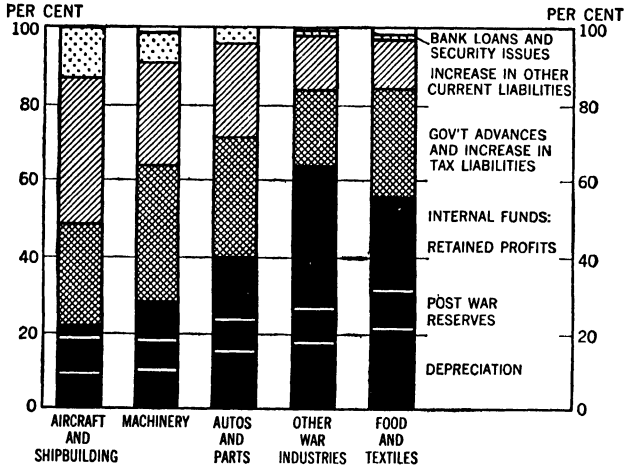

CHART 104.—Major sources of wartime financing for large companies in selected industries, percentage distribution. (*Source: Federal Reserve Board.*)

for rapid expansion necessitated recourse to loans. From the viewpoint of the economy, however, the problems of these particular firms are not so serious as they at first seem. They will, in any case, have to contract greatly after the war. The figures of the Polaroid Corporation present an interesting case study. In the years 1940–1943, the company had a tenfold increase in total current assets and a fifteenfold rise in sales. Net worth, however, rose by only 50 per cent. The ratio of current assets to liabilities fell from 5.4 at the end of 1939 to 1.1 at the end of 1943. Messrs. Butters and Lintner clearly indicate the difficulties which will confront this company in the postwar.[1]

In a survey of 11 large aircraft companies, it was found that at the end of 1942 the typical company did not have enough cash to pay

[1] On these issues see *F.R.B.*, July, 1944, pp. 638–642; Butters and Lintner, *op. cit.*, *Polaroid Corporation*, pp. 11–31; U.S. Treasury Department, *op. cit.*, Part II, pp. 8–15; Butters, *op. cit.*, pp. 7–10; C. C. Abbott, *Business Finance during the Critical Transition from War to Peace*, Graduate School of Business Administration, Harvard University, 1944.

taxes and renegotiation payments; that a shrinkage of 12 cents per dollar in the value of inventories would wipe out the working capital of the typical company; that its working capital covered wages and material expenses for only 2 weeks. An examination of 20 large firms (5 automobile, 5 aviation, and 10 general manufacturing) reveals a current ratio (current assets to current liabilities) of but 1.86 in 1942 as compared with 4.26 in 1939. The ratio was but 1.14 in 1942 for 5 aviation companies and as high as 2.10 for 5 chemical firms. This evidence was presented to impress on Congress the need for expeditious payments on war contracts.[1]

The Treasury nevertheless concludes that industries' postwar financial problems are not serious even for companies which will have to solve the questions of inventory losses, reconversion costs, deferred maintenance, dismissal compensation, or loss of postwar markets. On the basis of a study of 22 companies, the Treasury states that postwar costs, as indicated by reserve deductions, will be covered by net income earned in 1942 and 1943; if inventories of 1942 were completely written off in 1944, net income in the two earlier years could absorb this charge in the case of 17 of the 22 companies. If plants on the books at the end of 1942 were completely written off, net income in 1942 and 1943 could absorb the charge in 15 of the 22 cases. ". . . the carry-backs can adequately absorb postwar losses for most individual corporations as well as corporations in the aggregate, if these losses occur shortly after cessation of hostilities." [2]

The Treasury concludes for all corporations as follows:

"It appears that even under quite pessimistic assumptions, wartime income of corporations in the aggregate is sufficient to absorb most of the companies' postwar losses if they occurred in the first two years after the war." [3]

The Treasury's study of profits for a sample of 650 corporations also revealed that the condition of most corporations was highly satisfactory. Three-quarters of them reported net income after taxes at least equal to 1939 levels; over 40 per cent more than doubled their earnings after taxes. Gains seemed to vary inversely with the size of the corporation.[4]

[1] Senate Hearings on *Postwar Economic Policy and Planning*, Part 2, November, 1943, pp. 443–445, 606–611.

[2] U.S. Treasury Department, *op. cit.*, Part II, p. 12.

[3] *Ibid.*, p. 8.

[4] *Ibid.*, Part II, pp. 8–12; Part III, pp. 2–13.

Perhaps the Treasury is excessively optimistic here. A Treasury study (Table 143) of the average corporation in numerous subgroups reveals a different picture.

TABLE 143.—NET INCOME AFTER TAXES, 1942

(1939 = 100)

Food and kindred products	106
Textile mill products	113
Paper and allied products	167
Chemicals and allied products	119
Petroleum and coal products	137
Stone, clay, and glass products	105
Iron and steel products	279
Nonferrous metals	165
Machinery (exclusive of electrical and metalworking)	188
Metalworking and machinery	390
Electrical machinery	283
Transportation equipment (exclusive of automobiles)	419
Automobiles and automobile equipment	269
Miscellaneous manufacturing	164

SOURCE: U S. Treasury Department, *Postwar Expenses Related to Wartime Incomes*, Part III, 1943.

Many corporations earned less in 1942 than in 1939.

"Although 23 per cent of the manufacturing corporations earned less after taxes than in 1939, a significantly higher percentage is found in food and kindred products (42 per cent), textile mill products (45 per cent), chemical and allied products (38 per cent), and stone, clay, and glass products (43 per cent)." [1]

In general, then, business seems to have the means of financing reconversion and a large expansion. We have not yet, moreover, even considered the possibility of recourse to the credit and capital markets. It was observed that nonwar loans declined by $4 billion in the 2 years 1942 and 1943. Furthermore, total loans from banks were $22.3 billion on June 30, 1940, and $25.4 billion on June 30, 1944. Loans as a percentage of all loans and investments were 44 per cent in 1940 but only 23 per cent in 1944.[2] The ratio of bank loans to national income was around one-third in 1940 and about one-sixth in 1944. *It is clear that a postwar income of* $140 *billion might easily support additional bank loans of* $20 *billion.* In the years 1922–1940, it will be recalled, industry steadily reduced its indebtedness to the banks. It was *relatively* free of bank debt in 1940; and it was even more so at the end of the war.

[1] *Ibid.*, Part III, p. 8.

[2] *F.R.B.*, October, 1944, p. 982.

And why should not some help be obtained from the capital market? Support from the banks and the capital market is more to be welcomed than a reduction of wartime taxation. Industry will then be confronted with objective tests as to its capacity to justify increased equities and debts. In view of the $140 billion of liquid assets held by individuals at the end of the war, the prospects were particularly favorable. Much help may be given to the capital market by the banks in buying securities from the public and by the latter in buying out of their liquid balances. Yet, as Prof. Abbott has well shown, there are difficulties.[1] Our experience in the interwar period was not encouraging; a heavy burden of taxation on business enterprise and high income taxes discouraged risk taking; the unsteady course of business enterprise since 1929 is still uppermost in the minds of investors. The alternative of safe investments yielding 2 to 3 per cent is attractive.

In the 1930's public corporate security offerings for new capital averaged only $1.15 billion, as compared with $4.15 billion in the 1920's and but $1 billion for the entire period of 2½ years ending June 30, 1944.[2] (The last is, however, of limited significance.)

Other considerations are relevant. There is general agreement that the manner in which business obtains payment on terminated contracts of a sum estimated at $75 billion is of crucial importance. Many difficulties will arise in the transitory period although the liquid position of industry in general seems promising. Firms greatly dependent on war business and largely financed by the government and the banks will be in an especially vulnerable position. They may be heavily indebted to the Treasury on tax account and loans, as well as to the banks; and they may seek cash for the purchase of government-owned plants. Their main additional source of liquid funds, their profits, may suddenly dry up. Under these conditions it is especially important that rapid payments of costs incurred should be stipulated. The sum involved, on the basis of war inventories, is estimated at $11 billion to $13 billion. Rapid repayment of these sums plus outstanding debts on war goods will make it possible to accelerate the reconversion process and reduce the contraction following VJ-day.

Although the government may be involved in some losses as a result of rapid payment, the gains resulting from a continued high

[1] C. C. Abbott, *Forces Influencing Investment in Business Enterprise after the Transition Period*, pp. 20–26, 43–51, Graduate School of Business Administration, Harvard University, 1944.

[2] C. C. Abbott, *Business Finance . . .*, p. 17; *F.R.B.*, July, 1944, p. 648.

level of activity are so large that this writer readily approves the recommendations made by the Baruch and the Committee for Economic Development reports as well as the measures taken by the government. Prior approval by the Controller's office and its accompanying delays are unnecessary and should not be considered or supported. Provision of loans from banks for those firms awaiting final payment by the government is also helpful. There is great need that these illiquid assets be turned into cash as quickly as possible. Even the Treasury will gain more through the resulting expansion of income than it will lose through excessive payments.[1] Even when losses occur, they may be considered in the same light as a public works expenditure, and a relatively effective one.

The Contract Settlement Act of 1944 is based largely on the principles enumerated above.[2] It would assure speedy settlement of contracts, provide adequate interim financing, and expedite reconversion. It provides fair compensation on the basis of actual, standard, average or estimated costs, on a percentage of the contract price based on the estimated percentage of the completed work, or on any other equitable basis. The government is to pay 100 per cent on the completed part, and for the uncompleted part, 90 per cent of costs of raw materials, direct labor, and the like, and a reasonable percentage of other allocable costs; in addition, financing aids are provided.

In many cases it will be imperative that the government provide some help through its tax program. I am not now discussing the general postwar tax pattern, which will in no small part determine the availability of funds for business enterprise because it will influence both the net amounts available and the disposition to put them at the disposal of business. Here the issue is different. Should the government anticipate tax credits likely to be earned (1) as a result of delayed expenditures properly chargeable to war income, or (2) as a result of a reduction of income entitling business to relief under the carry-back

[1] On termination of contracts see especially B. M. Baruch and J. M. Hancock, *Report on War and Postwar Adjustment Policies*, Feb. 15, 1944, pp. 40–55; Kaplan, *op. cit.*, pp. 57–65; *Report of War Contracts Subcommittee to the Committee on Military Affairs;* Senate Subcommittee Print 5, June 5, 1944; House Report 1268 on *War Contracts Settlement Act*, Mar. 20, 1944; Senate Subcommittee Print 3, *Contract Termination*, 1944; Senate Report 539, Part 3, *Cancellation of War Contracts*, 1944; Hearings before Senate Subcommittee of Committee on Military Affairs, *Problems of Contract Termination*, Parts 1–8, 1944; House Report 1590 on *Settlement of Claims Arising from Terminated War Contracts*, June, 1944; House Hearings on *Postwar Economic Policy and Planning; and Public Law* 395, July 1, 1944.

[2] *Public Law* 395: *Contract Settlement Act of July* 1, 1944.

provisions, or (3) as a result of relief to be granted under Section 722? Much is to be said for anticipatory payments. Safeguards are, however, required. An obvious one is that these prepayments should be made only to concerns which show evidence that the cash is needed for reconversion or expansion.

Many are disposed to go further: They would even reduce wartime taxation. The writer does not support this position. In view of the large profits made after payment of taxes, in view of the generally liquid position of industry, and in view of the untapped capital resources available, general relief of this sort is not required. Relief now available, with the exception of the 10 per cent refund under the excess-profits tax, is provided according to a rough measure of need. Any further relief that may be granted should similarly take need into account. General relief is wasteful.

This discussion relates of course to the problem of reduction of wartime tax liabilities—whether granted in war or postwar—as a means of making the condition of business more liquid. General postwar tax relief is another matter.

4. CONCLUSION

Our study here shows that, in general, business seems to have adequate funds and to be sufficiently liquid to carry through a successful reconversion and a large expansion. On the supply side, the main source of funds has been the accumulation of cash out of large wartime profits and reserves: reserves are to cover later expenditures related to wartime activities, to protect against contingencies, and to be available for expansion. In addition, however, large potential sources are to be found in the low level of indebtedness of business to the banks and in the unusually large amounts of liquid funds which the capital market might tap. Current assets relative to current liabilities rose from 150 per cent in 1939 to 200 per cent in 1943, for a large sample of corporations.

The demand for funds may not be so large as is commonly anticipated. If we fail to maintain a full-employment economy, the demands may indeed be small. We assume, however, a high-income economy and that the release of these funds will help sustain this economy. Even on this assumption, the funds available should easily be adequate. Our plant in the prewar was underutilized; in the years 1941–1945, we added new plant (which will be available for peace) at a much

more rapid rate than in the thirties; a dollar of new capital will be more effective than in the thirties. Approximately $30 billion out of funds available at the end of the war can be used in the transition years for reconversion and mainly for replacement. These expenditures should go a long way toward providing us with a plant equal to yielding a national income of $140 billion. In fact, expenditures of $20 billion on plant, equipment, etc., in wartime were adequate to raise our income from $70 billion to $160 billion.

We should, however, make some reservations. All groups of industries and firms are not equally fortunate. Even under the most favorable circumstances, many will indeed have to reduce their operations by a very large percentage: aircraft, shipbuilding, machine tools, and equipment. Others—*e.g.*, nonwar industries—not having made large war profits, allowed their plants to deteriorate. The general cash position of these industries—and particularly of large corporations and of growing concerns—may not then seem so fortunate when allowance is made for the uncertainty of the future and the large volume of transactions anticipated. Their cash balances did not rise much more than the volume of payments. For large corporations in manufacturing, admittedly there may even be a decline in the ratio of cash to payments. (The ratio was, however, high before the war.) Yet despite all these reservations, the actual position is not seriously impaired. Where great weaknesses threaten and the economy is likely to support a firm or industry at a reasonably high level of output, the rapid payment of obligations by the government, both on tax and supply account, will help greatly.

An unfavorable liquid position resulting from the war is not likely to account for an unsuccessful reconversion or a deflation. Many fear excessive liquidity in the years immediately following the war. Where funds may be inadequate, the government, the capital market, and the banks should be on the alert. Help should, however, be forthcoming not in the form of wartime tax abatement but through expeditious payments of what is due business, and adequate banking and capital funds.

Chapter XXVII

National Income, Productivity, and Prices

1. INTRODUCTION

From the specific problem of business spending and its significance for the maintenance of demand at an adequate level, we proceed to a consideration of national income and the related variables of productivity and prices. What is the level of income appropriate to a high level of employment? What is the relation of productivity to income levels? And what of price movements and national income? (A failure to maintain a full-employment income in itself tends to bring deflationary pressures.)

Let us assume that we succeed in maintaining a high level of employment after the war. How high will our national income then be? We have had many estimates of postwar income which we shall discuss presently. These estimates are based on certain assumptions concerning the level of employment and, therefore, concerning prices. If the postwar national income attains the high level that is suggested by many of these estimates, then of course we shall have no serious employment problem in the postwar period and, therefore, we shall not be confronted with deflationary forces that result from the failure to dispose of income, from increased unemployment of economic resources, and from the further decline of demand. In truth these estimates generally assume either full employment or a very high level of employment. Any initial decline of prices resulting from an increase of unemployment and a reduction of demand will be especially harmful in the postwar period because of the increased wage rigidity (as compared to that after World War I) and also because of the heavier burden of the public debt which will, of course, weigh heavily on the postwar economy. It is, therefore, imperative to maintain a high level of demand in order to prevent the initial downward spiral.

2. ESTIMATES OF NATIONAL INCOME

A summary of some interesting estimates of national income is given in Table 144.[1] Columns 2 and 3 give the estimates in net and gross national product (GNP). Column 4 indicates the purchasing power of the dollar in which the estimates are made. Thus estimate 3 by the National Resources Planning Board (NRPB) is made in terms of 1942 purchasing power. In the final column, all estimates for net national income are reduced to 1940 dollars.

These estimates of national income are either projections of past experience (Kuznets) or (generally) are calculated on the basis of informed guesses concerning numbers on the labor market and of future improvements of productivity, and on the assumption of relatively full employment. Thus, the figures of the NRPB are generally based on estimates concerning the labor force that will be available and the output per man per year, usually on the assumption that a very high level of employment will be attained. The NRPB report of September, 1941, for example, assumed that we shall have full employment in the postwar period and that productivity will continue to increase at a rate close to that of preceding decades. A further allowance is made for the increased output per man or per man-hour of work when a high level of output should be attained. Perhaps this NRPB estimate of national income was high because the increase of productivity in manufacturing was applied to the whole economy. Or it might simply have been an overestimate of the probable gains for the whole economy. Furthermore, it is not exactly clear whether the allowance for both a rise in output per man and a rise in productivity did or did not involve double counting.

The Kuznets figures were based largely on past history. For example, estimate *C* was based primarily on the experience of the 50 years preceding the recent period. It was assumed that recent gains were at the rate of the gains of the 50 years preceding World War I. This was a rather optimistic estimate as Dr. Kuznets himself admitted. Other figures were based on extrapolation of the national income per capita at constant prices from a curve fitted to decennial averages for a period extending from 1879 through 1943. Dr. Kuznets himself supported, as the more likely assumptions, those which yielded *B* and *C* rather than *A* and *D*.

The estimates of gross national product (GNP) or gross national income run considerably higher than those of national income. This naturally follows because GNP includes certain taxes that are paid by business and are not included in national income, as well as parts of GNP required to maintain capital. Depreciation and depletion are part of GNP but not of net national income. The figures in the estimates for GNP range from $132 to $200 billion. A figure which has been widely used is $165 billion, which would correspond to a national income of roughly $130 billion.[2] On the whole, estimates for the postwar are inflated *pari passu* with the rise of income.

[1] In the discussion which follows, I assume dollars of 1940 purchasing power.

[2] It is not always made clear whether the estimates are in dollars of 1940, 1942, or of current purchasing power.

TABLE 144.—ESTIMATES OF NATIONAL INCOME [a]

Source	Year	National income, billion dollars	GNP, billion dollars	Base year of prices	Net national income at 1940 prices,[b] billion dollars
Kuznets, "National Income and Taxable Capacity," *Proceedings, American Economic Association*, March, 1942, pp. 44–45, 64	1944–1953	Assumption *A*, 93.6	.	1929	77
		B, 99.4		1929	81
		C, 109.6	.	1929	90
		D, 136.1	.	1929	111
NRPB, *Consumer Demand at Full Production*, September, 1941, p. 4	1950	125	.	1940	125
NRPB, *After the War—Full Employment*, February, 1943, pp. 15, 19–20	Early postwar	125	155	1942	107
	1950	155	190	1942	133
U.S. Dept. of Commerce, *Markets after the War*, 1943, pp. 13, 21 35	1946	134	165	1942	115
Bissell, "Postwar Private Investing and Public Spending" in *Postwar Economic Problems* (edited by Seymour E. Harris), pp 92–97	Postwar	100 [c]	132	1941	95
Mayer, *Postwar National Income Its Probable Magnitude*, Brookings, 1944, p. 11.	1947	123	154 [d]	1943	99
Mosak, "Forecasting Postwar Demand" in *Economic Reconstruction* (edited by Seymour E. Harris), 1945, pp. 78*ff.*	1943	152	200	1944	121
Hansen and Perloff, *State and Local Finance in the National Economy*, 1944, pp. 226–237	1947, Model I [e]	140	170	1942	120
	Model II	125	150	1942	107
	Model III	150	180	1942	128
	Model IV	135	160	1942	115
Sonne, *A Preview of National Budgets for Full Employment "Model T,"* 1944, pp. 4*ff.*	Postwar year, Model F-I [f]	143 [g]	170	1941	136

[a] The C.E.D. bases its studies on net income of $140 billion. Dr. Hagen ("National Output and Full Employment," *A.E.R.*, September, 1944) puts the figure in 1950 at $195 billion at prices of 1944. (Both these estimates conform to Dr. Mosak's.) Another estimate by Drs. Goldenweiser and Hagen puts the GNP at $170 billion in 1943 prices. *F.R.B.*, May, 1944, p. 430.

[b] Adjusted by BLS cost of living index.

[c] Estimated national income at given GNP—net national income is assumed to be around 75 per cent of GNP.

[d] Estimated on basis of net figures.

[e] Model I yields high full employment, and private investment equals net savings of individuals and corporations.

Model II yields low private investments—$10 billion less than required for full employment.

Model III yields feverish private investment—investment outruns savings and the government has a surplus.

Model IV is intermediate between I and II.

[f] Other models are presented which conform roughly to the various states of economic activity covered by Prof. Hansen and Dr. Perloff.

[g] Income payments (*i.e.*, excluding business saving).

The national income in the early postwar period (*e.g.*, late forties), on the assumption that a high level of employment is attained, should be in excess of $105 billion in 1940 prices, or $135 billion or more in current prices. If, on the other hand, we assume that difficulties similar to those prevailing in the prewar period will arise, then the estimates by Dr. Kuznets of $80 billion to $88 billion (1940 prices) seem more reasonable. A minimum of $100 billion national income in 1940 prices is required if the objective of a high level of employment (at least 55 million employed as compared with 45 million immediately preceding the war) is to be assured.

3. THE RANGE OF POSSIBILITIES

1. National income (net) *may* in the next *generation* average $150 billion at current prices or $120 billion at 1940 prices. This is of course a very optimistic estimate and is based on the assumption of full employment, large continuing increases in productivity, and allowance for the rise of population and further inventions and innovations in the next twenty years.[1] This compares with a national income of $160 billion in 1944 at a high level of employment, long hours of work,

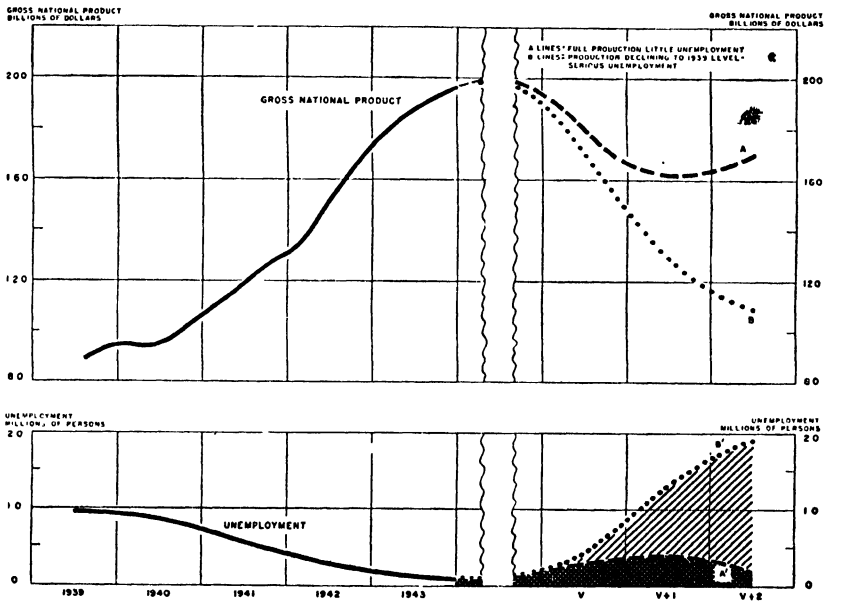

CHART 105.—Postwar production needed to avoid unemployment. (*Source: Federal Reserve Board, May*, 1944.)

[1] Chart 105 shows clearly the relation of unemployment and income in year V + 2 (at 1943 prices). *Cf.* E. A. Goldenweiser and E. E. Hagen, "Jobs after the War," *F.R.B.*, May, 1944, pp. 425–431.

excessive numbers in high-paying industries, with an unusually large number of people on the labor market and relatively large premiums for overtime. At 1940 prices, the $160 billion of national income in 1944 corresponds to about $130 billion. We would indeed be very fortunate to obtain an income of these proportions, but it is unlikely.

2. A more likely outcome is an average of $125 billion to $135 billion ($100 billion to $110 billion in 1940 dollars) for the next few years. We assume several millions unemployed and the withdrawal from the labor market of 5 million employed in the war period, downgrading, reduction of overtime; but also a continued rise of productivity based on the results of the last 50 years. We should allow for an annual gain of 2 per cent or $2 billion to $3 billion per year for the first 30 postwar years. This is a conservative allowance for the rise of productivity and net annual inflow into the labor market. Then *average* income would be in excess of $130 billion (1940 dollars) for the years 1945–1975, or $160 billion by 1975 in 1940 dollars ($200 billion in 1944 dollars), as compared with $100 billion (1940 dollars) immediately after the war. This level will be obtained only through very able management by both government and business. This estimate assumes that there will be no serious price decline and that the burden of our tax system on consumption and on new business enterprise will be reduced. It assumes that with better planning, better integration, more advanced control of our monetary system, with international monetary cooperation, and, finally, when private enterprise is not maintaining a high level of employment, with intervention of the government (either through public investment or tax adjustment), authorities can offset the more important movements of economic activity, particularly the downward movements.

In fact, we should do much better than this estimate indicates. Here we assume an income (1940 dollars) of $100 billion immediately after the war, and $160 billion in 30 years. If we continue to gain as we have in the preceding 50 years, we should attain an income of $200 billion by 1975. Mr. Crowther in an article in the *Yale Review* (Winter, 1944–1945), calculating on the basis of the average between minimum and maximum estimates of fertility and a 1½ per cent annual rise in productivity, concluded that our income in the year 2000 should be 5½ times that of the thirties, or (say) $300 billion. We can and should *attain* these heights. Our past experience is not reassuring, however, as to our ability to *maintain* such peaks.

3. A less cheerful prospect is given by Dr. Kuznets' estimates under *B* and *C*. An average of these would yield a national income of about $105 billion in 1929 prices, *i.e.*, only $85 billion in 1940 prices. Perhaps this is about all that we can expect if we are no more fortunate than we were in the 1930's in dealing with extreme business fluctuations and deflationary forces, especially if the absence of sound planning by the government and lack of cooperation between government and business continue. Even at this level of income we shall have a substantial amount of unemployment partly because some of the gains of the earlier period in average productivity will continue to be made. It should be observed, moreover, that a national income of $85 billion in prices of 1940 corresponds to an increase of almost 50 per cent over the national income in the years 1929–1938 and of 20 per cent over that of 1939. Per capita income in 1929 dollars would be approximately 34 per cent higher than that achieved in 1929–1938 and approximately 25 per cent higher than in 1919-1928.[1]

4. Finally, we may envisage the possibility that our national income will fall as it did in the early 1930's when it dropped to $40 billion. Even in the absence of government intervention, however, it is not likely under any conditions to fall to such a low level in the postwar situation because, among other reasons, productivity is substantially higher than it was at that time and because the total working population, and therefore probably the total amount of potential employment, is higher. Long before national income falls to such a point, serious intervention by the government will be necessary and should certainly be forthcoming. A national income of $40 billion, or even $50 billion, in 1940 prices would involve us in unemployment of 25 to 30 millions, a situation clearly not consistent with the maintenance of capitalism.

We have had many models presented, which may be held to be consistent with full employment and much unemployment. Prof. Hansen, for example, presented a range of national income from a minimum of $125 billion (1942 prices) to a maximum of $150 billion. At one extreme a large amount of private savings are not being absorbed; at another they are more than being absorbed and inflation and budgetary surpluses prevail. Mr. Sonne of the National Planning Association presented several models, each yielding $179 billion of

[1] S. Kuznets, "National Income and Taxable Capacity," *Proceedings, American Economic Association*, March, 1942, p. 64. These figures are based on an average of assumptions *B* and *C*.

GNP. What varies in each of Mr. Sonne's models is not the total but the amount contributed by government or private expenditures.

In a study made subsequently to his studies mentioned earlier in this chapter, Dr. Kuznets made some guesses as to postwar incomes which on the whole are more optimistic than his earlier projections.[1] In this later study he assumes that the war will end in 1945; and basing his projections on the growth of GNP from 1917–1918 to (1) 1922–1938 and to (2) 1922–1928 he finds that in 1955 the GNP will be $141 billion on the basis of a rate growth assumed under (1), and $151 billion under (2). These involve a rate of growth per decade from 1940–1941 of 32.8 per cent (23.5 on a per capita basis) and 39.2 per cent (29.5 on a per capita basis). This rise is substantially more than that achieved in the years 1879–1928. The growth from 1940–1941 was large because of the peak output in his projection year, 1945. These large rises in gross national output are allocated as follows:

Consumption is to be $112 billion to $115 billion; nonwar capital formation, $23 billion to $30 billion; war output, $6 billion. Consumption is arrived at as a residual—after capital formation is estimated on the basis of past relationships to GNP. The rise of consumption to $115 billion represents a decade rise of 40 per cent over 1940–1941—a plausible if optimistic rate of change.

What should we conclude from these various models and estimates of national income? *We must emphasize that the high estimates (e.g., $125 billion in 1940 prices immediately following the war) should be accepted with some skepticism. Many of the authors of these estimates are well aware that they have produced a figure to shoot at.* Clearly the NRPB, Dr. Mosak, and others are attempting to estimate our national income under favorable conditions; good management, continued rise of productivity, and full employment. On the basis of past experience, these figures, which suggest a sustained high plateau, are on the optimistic side.

These estimates were in turn subjected to a blistering attack by Dr. Mayer of the Brookings Institution, whose estimates of a 1947 income of $123 billion in 1943 dollars or $99 billion in 1940 dollars may also, however, in a sense, be interpreted as optimistic. Essentially, he assumes full employment but allows for the large reduction in wages associated with loss of overtime, reduction of numbers on the labor market, downgrading, and the decline of compensation to the self-employed.[2] Part of the difference between the estimates of the Brookings Institution and the estimates of the others is ex-

[1] S. Kuznets, *National Product in Wartime*, prelim. ed., IV, pp. 2–12, 1944.

[2] J. Mayer, *Postwar National Income: Its Probable Magnitude*, pp. 12–22, Brookings, 1944.

plained by the fact that Dr. Mayer assumes a large efflux from the labor market (5 millions) and 3 millions unemployed.[1]

Although many of the criticisms directed against the other estimates of full-employment incomes are unjustified, Dr. Mayer's criticism quite rightly points out that some economists too readily assume (1) that a given rise of prices yields a corresponding increase of incomes; (2) that a given rise in numbers employed yields corresponding gains in national income; (3) that many confuse GNP with net national income.

On the other hand, Dr. Mayer is unwilling to grant that a projection of gains in productivity is appropriate. (We shall return to this issue later.) In reply to Dr. Mayer we contend that a rise of prices will yield a higher income even if the correspondence is not so close as is generally assumed. Not only is his failure to allow for continued productivity unjustified, but his claim that it may not yield *higher money income* is irrelevant. Gains may be reflected in *reduced prices*, not in higher incomes. The gains are just as real. The rise of national income is about the same whether money incomes rise by 25 per cent or prices fall by 20 per cent. Or, again, his point that prices will have to rise in order to offset the wartime gains in wage rates in relation to prices of manufactured goods does not carry weight. It is not at all clear that *basic* wage rates rose more than prices; and the relevant prices will be not prices of products produced in war, but the less inflationary pattern of wages and prices of nonwar goods.

If, then, we are estimating the full-employment income, I prefer the estimates which Dr. Mayer criticized. In addition, if it is the probable post-war income we are investigating, Dr. Mayer's estimates may also be wide of the mark.

Since the above was written, Dr. Hagen, in the most careful study yet made, has presented estimates of GNP *at full employment*.[2] (Only a few of these are considered in my analysis above.) In all he considers 10 estimates. In 1943 dollars, estimates of GNP vary from $146 billion (Brookings) to $207 billion (National Planning Association). Eight of the ten estimates are consistent within 10 per cent. Dr. Tucker's low estimate ($157 billion in 1943 dollars) is explained by his assumptions of low employment and no rise of productivity. Dr. Hagen's explanation of the varying results is not unlike mine. In addition, the following point should be noted: In taking account of the reduction of pay rolls, the Brookings Institution failed to allow for the effects of the decline of pay rolls on prices or profits. *In other words, a given reduction of pay rolls is not by any means reflected in a corresponding real decline of GNP—prices fall or profits rise. We should observe, however, that a decline of money wages through its effect on demand may account for a reduction of output and hence of GNP.*

[1] *Cf.* Ch. XXVIII.

[2] E. E. Hagen, "Postwar Output in the United States at Full Employment," *R.E.S.*, May, 1945. The various estimates of GNP at 1943 prices (for years 1946–1950) were as follows: Brookings, 146; Slichter, 156; Tucker, 157; *Fortune*, 165; Goldenweiser and Hagen, 170; Livingston, 179; Slichter, 1950 estimate, 187; Mosak, 195; Hagen-Kirkpatrick, 198; National Planning Association, 207. (Estimates are all in $ billion.)

4. PRODUCTIVITY

Our postwar national income will undoubtedly depend on productivity, wages, prices, and the amount of employment. Let us begin with a brief discussion of productivity.

In Chapter VI we emphasized the fact that there was a steady increase in productivity, both before and during the war, and that the extent of the rise exceeded expectations. In the years 1899 to 1937, for example, physical output of manufacturing rose by four times, employment by two times, and the number of hours was reduced from 60 to 40 per week. The net effect of these changes is that the man-hour cost of a unit of output was reduced by two-thirds.[1] For the period 1919–1940 output per man-hour rose from 58 to 139 (1929 = 100). This is an average rise per year of almost 4 per cent. In the same period unit labor cost, despite a rise in wage rates, fell from 145.4 to 81.2.[2] The rise of output per man-hour from 1929 to 1941 equals 34 per cent or a rise of 2½ per cent, annually compounded.[3] Finally the Department of Commerce, basing itself on a new revised index of the Federal Reserve Board and using for its series of hours of employment the same weights as in the Federal Reserve Board index, finds an implied increase in man-hour output of 3.1 per cent from 1939 to 1943.[4]

In a circular letter of Oct. 2, 1944, the Bureau of Labor Statistics commented on the probable trend of productivity. Its conclusions, based on past experience, differ radically from the less optimistic view taken by Dr. Mayer.

"During the entire period 1909–1941 productivity in all manufacturing industries increased at the rate of about 3½ percent per year. With regard to the first World War period, no measures were available between 1914 and 1919. However, since our economy was not initially substantially affected by the war, we have no reason to suppose that the increase between 1909 and 1914 stopped at the later date. However, since the figures for 1914 and 1919 were identical, it appears that there was probably first some increase and then a decline. This is indicated by the dotted line between 1914 and 1919 on Chart 106. Beginning in 1919 productivity measures became available on an annual basis, and the increase for three years was at the rate of 10 percent per year. After 1922, the general trend was resumed.

"Approximately the same behavior is expected during and after World War II. In the manufacture of civilian type goods, productivity generally has declined during the present war period. The productivity index for 23 civilian type industries combined increases from 100 in 1939 to 107.6 in 1941 and then declined to 104.6 in 1943. Some further decline during the war period is expected.

"The reasons for the decline in productivity in the civilian industries

[1] S. Fabricant, *Employment in Manufacturing*, 1899–1939, pp. 153–154, NBER, 1942.

[2] U.S. Department of Labor, *Productivity and Unit Labor Costs in Selected Manufacturing Industries*, 1919–1940, February, 1942, p. 1.

[3] *Markets after the War*, p. 3.

[4] *S.C.B.*, October, 1943, p. 8.

during the war include the following: Perhaps most important, new equipment and machinery has not been available and to a certain extent the capital structure of these industries is declining, using the word 'capital' here in the physical rather than the financial sense. In addition, the civilian industries have received less protection from Selective Service than the war industries. Because of their generally lower wage structure they have found it more difficult to attract or retain competent workers. Where materials were limited, the civilian industries have had to use inferior grades or substitutes. They have been most affected by transportation difficulties. Look-

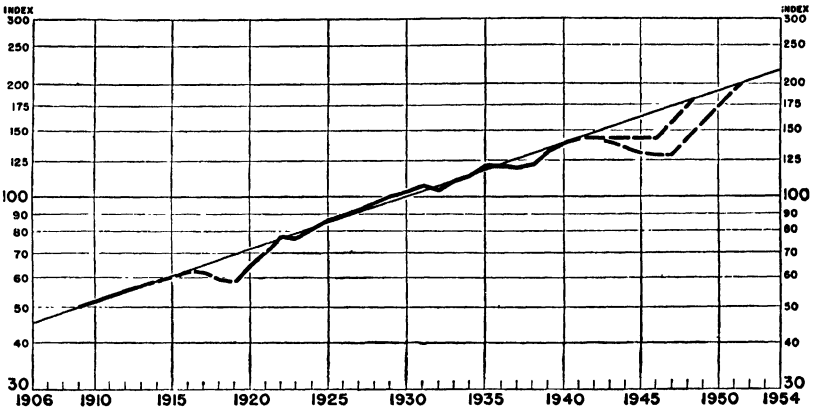

CHART 106.—Productivity in all manufacturing industry. (*Source: U. S. Department of Labor.*)

ing at the whole picture, the maintenance of productivity at even the present levels must be considered a creditable job.

"After the war most of the factors which tended to hold back productivity in the civilian industries will disappear. Replacement of old equipment at greater than the usual rate and installation of many new processes and methods is expected. It does not seem unreasonable to suppose that productivity will increase at a rate approximating 10 percent per year as it did after the last war. The two dotted lines on the chart after 1941 indicate the area within which productivity is expected to fall, depending on different assumptions regarding the extent of the decline during the war and the length of the war."

In a discussion of productivity, we should distinguish period 3 (after VJ-day) from the later periods. In period 3 productivity in civilian goods industries might well decline. Output may be at a subnormal level; scarcities of material, machinery, and components in the first year or two after the war will keep output in some industries at a low level; labor turnover will continue to be high; and the inflow of inexperienced help and returning veterans not quite adjusted to civilian life

will continue. For these and other reasons, productivity may decline in 1945 and 1946.

In all the periods under discussion, the volume of output will be decisive. *At a high-employment level, productivity will almost certainly continue to be high and to improve. At a level that yields only* 35 *to* 40 *million jobs, man-hour output will be low.* In this discussion, since we assume a high level of employment, we also assume that output per man-hour is likely to be high.

In periods 4 (catching-up) and 5 (the long pull), industry will be supported by renovation of plant, the availability of new plant and new processes, the return of skilled workers, a reduction of labor turnover, and the weeding out of the most inefficient workers who will either desert the labor market or, in some cases, become unemployed. There will also be much downgrading.

These are the factors that will account for a continued rise of man-hour output. (On the assumption that basic wage rates and prices remain unchanged, there will be a corresponding rise in GNP.)

Two factors should, however, be considered as offsetting this rise of man-hour output. The first is the improvement in the quality of the product at a given price, once conditions are normal again. A given supply of factors will then yield a smaller GNP. Dr. Mosak estimated the resulting loss of product at $7.5 billion. This is not, however, a loss in any real sense. A given number of dollars of GNP corresponds to a substantially larger real product when the quality of the product rises.

A more important problem is the changing composition of the employed. In wartime, the proportion of workers in high-paying industries rises. In manufacturing industries, for example, annual wages in war industries as of 1943 were 50 per cent higher than in nonwar industries. These higher rates of pay reflect higher physical productivity; but they also largely reflect the government's willingness to pay sufficiently high prices to attract workers to war industries. The redistribution of workers as between occupations and industries will undoubtedly result in a reduction of the average pay roll. A cut in pay rolls associated with the redistribution of workers, though it is reflected in a reduction in the money GNP, does not account for a corresponding fall in the *real* GNP. This follows because in part the rise in wartime is not associated with an increase in physical product but rather with inflated rates of pay offered by the Treasury. The rise in real product

does not correspond to the increase in pay; and, correspondingly, the fall will not be so large as the decline in the average pay roll.[1]

When we add it all up, the conclusion seems to be that after a temporary pause, man-hour output should continue its rise of the last few generations. The rise in money GNP may not be quite so large as in the immediate postwar; but the rise in real GNP should continue unabated. *The larger numbers of new workers, the new skills, the improvements in plants and techniques, the maintenance of a high level of output—all of these will be decisive.*

5. GROSS NATIONAL PRODUCT AND PRICES

A. INTRODUCTORY. How large the dollar value of the GNP will be depends in no small part upon the price level. The higher prices are, the larger the GNP is likely to be, although a rise of x per cent in prices need not bring about a rise of x per cent in GNP. Price movements are also of vital significance for another reason. If prices decline, the effect on GNP is likely to be adverse:[2] falling prices generally bring (and reflect) reduced demand, declines in output, and a contracting economy. Rising prices, on the other hand, tend to stimulate output; and a high-level output in turn tends to bring inflation. If we succeed in achieving a full-employment economy or a high level of employment, we can expect stable or, more probably, rising prices; and a rise in GNP associated both with expanding output and with rising prices.

Our gains may, of course, be accepted not in rising money income, but rather in falling prices. Our gains will then be just as real. Actually, in view of the organization of labor and agriculture and the large amounts of surplus purchasing power available, the economy will be disposed to accept its advances in rising incomes rather than in falling prices.

From our previous discussion, it must be clear that *real* costs per unit of output will continue to decline. Efficiency will rise as hours are shortened, inexperienced workers weeded out, turnover reduced, and full use made of available skills. Capital costs should also fall.

[1] Dr. Mosak, however, concluded that the GNP per man-hour of work in the postwar will not be reduced as a result of the changing composition of the labor forces. His position is based (1) on the similarity of gains in war for workers in the high-paying metal-goods industries and other nonagricultural employment and (2) on a study of current wages as compared with 1939 on the assumption that the distribution of workers in 1939 prevailed today.

[2] *Cf.* next paragraph. I am not here discussing falling prices associated with rising productivity.

Maintenance, repairs, and deferred replacement will begin to be made; and much new capital, and very efficient capital, will become available.

B. THE BROAD CONTOURS. Prices depend upon supply and demand. Supply of goods available will depend upon the availability of man power, the number of hours of work, the productivity of each laborer and also of capital resources, and the degree to which our resources are concentrated in the production of capital as against consumption goods. What will be available to the American economy will also depend upon the distribution of goods as between domestic and international markets.

The more we concentrate our production on capital goods or the more we distribute goods abroad rather than at home—i.e., the larger the excess of exports—the greater must be the inflationary pressure in the postwar period, because as we concentrate on capital-goods industries, accumulate inventories, and export more and more to foreign countries, the income which is earned in the process of producing these capital goods and in increasing our exports will not be offset by a corresponding availability of supplies on the domestic market. The situation will be similar to that in the war period when the money earned in the production of munitions and consumption goods was used to buy limited supplies of consumption goods available. In other words, the income earned is not offset by a corresponding supply or flow of goods made available to those who spend this income. In the longer run, of course, the accelerated output of capital goods will yield an increased flow of consumer goods.

Let us now consider the demand situation. First, we shall have available a large volume of savings which might be used to purchase goods. To that extent demand will be intensified.

Second, much depends on the amount of income in the postwar period and the percentage of that income which will be saved, because the more that is currently saved, the less the demand for consumption goods. If these savings are not converted into investments, then, of course, the effect of a large volume of savings will be a reduction of demand for goods. If, however, the savings are used to produce capital goods, then the reduction of demand for consumption goods will be offset by an increased demand for capital goods.

Third, much will depend upon what is subtracted from income through taxation. The general view is that in the postwar period taxes will be much heavier than they were before the war although not so heavy as during the war. The net effect of taxes on the national income will

depend not only upon the amount of taxes, but upon the nature of the tax system, *e.g.*, to what extent taxes will fall on costs and to what extent they will fall on surplus income; and it will also depend on the use to which the government puts the money thus obtained. It may be said, in general, that the greater the taxes on consumption, the more difficult will be the problem of sustaining demand in the postwar period; and the greater the taxes on business enterprise, the less willing business will be to undertake risks. Transfer of tax burdens from corporations, for example, will help. *Moreover, if the government uses a significant proportion of tax revenue to pay off debts and in this manner destroys purchasing power, then to that extent the available supply of money will be reduced and prices will tend downward. Large reductions of deposits, it may be observed, are not likely to be effected in other ways.*[1]

Fourth, total demand will also depend upon the contribution of the government. *If the government is prepared to fill the gap when private spending is inadequate, then demand will not fall so much as it otherwise would.* This might be effected by the provision of adequate programs of public investment and of social security financed in part by taxes on high-income groups and borrowing, and through adjustments in the tax program. Where business enterprise is not sympathetic with these programs, however, such government expenditures may result in a reduction of private expenditures.

Finally, the monetary situation will affect the total situation. *If the supply of money is more than adequate and if the government will have learned how to manipulate its monetary supplies and the rate of interest, the situation will be considerably healthier than after World War I.* In addition, preparations are being made (under the Bretton Woods Agreements) to assure international cooperation so that countries that will be predisposed to suffer from losses of international reserves will be supported to some extent by an international organization. Insofar as this organization will have the effect of stopping deflationary practices in many countries, the net effect on prices will be an upward pressure, relatively or absolutely. Such policies may also lead to a reduction of trade restrictions.[2]

C. PRICES—PERIOD ANALYSIS. Our discussion earlier in this section related largely to the long-run aspects of transition. We discuss transitional problems of periods 2 and 3 in other chapters of Part IV.[3]

[1] *Cf.* Ch. XXIV.
[2] *Cf.* Ch. XXXI.
[3] Especially Chs. XXIV, XXV, XXVIII, XXXII.

We may conclude that the pattern is as follows:

1. 1945—*Period* 2. *Partial demobilization.* The government cuts expenditures by $15 billion to $25 billion (annual rate). (In April, 1945, Justice Byrnes estimated the Army cutbacks at 15 to 20 per cent in the first three months following VE-day and about 40 per cent before the end of the year following Germany's defeat. He put the over-all release of munitions production at about 20 per cent in the first quarter, an additional 5 per cent in the second, and still another 5 per cent in the third quarter, or roughly $20 billion (rate of) by the end of three quarters following VE-day.[1]) Actually cut-backs had not attained expected levels when the Asiatic war suddenly ended.

2. 1946–1948. *The inflation (?) periods* 3 *and* 4. A reconversion crisis arises as the government reduces annual expenditures by $50 billion to $60 billion additional. Inflationary pressures may be felt on some consumption markets while numerous markets suffer from deflationary pressures. The movement of prices may well be downward in many markets, and particularly for nonconsumer goods, in the early stages of reconversion, and there will probably be a significant amount of unemployment. On balance, however, inflationary pressures should prevail during most of period 4.

3. 1949 *et seq. Deflationary pressures.* This period, in the absence of far-sighted planning, brings a continuance of the downward pressures of the 1930's resulting from short-sighted policies of prices, output, and wages, and possibly from deficiencies of demand associated with technological change, a declining rate of population growth, excessive savings, etc. These latter problems are not entirely unassociated with the price policies. They are discussed more fully in Chapter XXIX.

D. WAGE RATES. It will be recalled from the discussion of wages in Chapters XIX–XXII that the main part of the increase of money earnings for labor was explained by a rise in the number of employed and of hours of work. Furthermore, according to the War Labor Board, only a small part of the increase in wages associated with changes in the average hourly rates was to be explained by an increase in the *basic* hourly wage rate. The average earnings per hour of work rose because of a movement to more productive and higher paying war industries, because of the increased importance of overtime pay, reclassification, increased pay for seniority, etc. It was not at all clear,

[1] Second report by the Director of War Mobilization and Reconversion on *War Production and VE-Day*, pp. 13–14.

as Dr. Mayer claimed, that basic wage rates rose more than output per man-hour corrected for price changes. Yet the rise in basic wage rates accounted for a significant part of the rise in hourly earnings.

It follows that the reduction of average hourly earnings in the postwar period might not bring any serious labor difficulties. These reductions will be associated with a loss of overtime, downgrading, movements into lower paying industries, and the like. The total reduction from the 1944 level of $116 billion for total compensation of employees might be estimated as follows: loss of overtime pay, $13 billion; downgrading, $3 billion; associated with loss of jobs and military pay, $8 billion.[1] The total reduction is then $24 billion or 21 per cent of the 1944 total. This should be reduced by several billion dollars to cover resulting reduction of taxes, and the addition of demobilization pay and unemployment benefits.[2]

In our discussion of postwar wage rates, we must consider that labor is well organized—much more so than in World War I. To some extent there will undoubtedly be some tendency to raise hourly wage rates in order to offset the effect of the reduction of total earnings, of weekly wages, and of average hourly earnings resulting from causes enumerated above. On the other hand, it is possible that the more recent recruits to the labor market will not desert it in so great numbers as might be desired. This will tend to bring about an excessive supply of labor and may create a certain pressure for downward revision of wage rates, especially if a position close to full employment is not reached. Any rapid technological gains not accompanied by appropriate price policies and spending responses would further increase

[1] The figure of $8 billion is obtained as follows: Reductions of 9 millions in military services = loss of $10 billion pay. Here I assume that there were 65 millions on the labor market and in the military service at the war's end. In 1950 (say), we estimate that there will be 59 millions, of which number 3 millions will be unemployed and 2 millions in the military service. Hence, there will be one more million employed in 1950 than in 1944, when unemployment was less than 1 million. (They will earn $2 billion.) The net loss is $10 billion − $2 billion = $8 billion. Employment today = 65 million − 1 million (unemployed) and − 11 millions in services. Total = 53 million jobs. Employment in 1950 = 59 millions − 3 millions unemployed and 2 millions in military services = 54 million jobs. This is actually a low estimate of numbers on labor market in 1950. If we allow for the influx of 3 millions from 1944 to 1950 and the efflux of 5 millions of 7 millions not ordinarily on labor market, then the numbers on labor market would be 65 + 3 − 5, or 63 millions, and the total of jobs, 58 millions. (We deduct 2 millions for military service and 3 millions for unemployment.)

[2] For an estimate of a much larger decline in pay rolls, see Ch. XXVIII. The estimate in the next chapter, however, is projected on Dr. Livingston's estimate, which was based on the assumption of the war ending on both fronts at about the same time—an assumption that actually came to pass.

labor's difficulties, for the reduction of demand for labor per unit of output would not be offset by a corresponding rise in sales.

With labor well organized and supported by an expanded social-security program, labor leaders will be remiss in their responsibility if they insist on wage rates which are not justified by productivity. Inevitably the result will be increased unemployment. Employers will be equally remiss if they press for wages below the rates fixed by productivity and thus contribute to a consumption demand insufficient to absorb the supply of goods made available. A probable decline in the country's wage bill of $20 billion or $25 billion is in itself a serious factor in the total demand situation. *If prices are allowed to fall not in response to rises of productivity but as part of a deflationary fiscal and monetary policy, then there may be even greater difficulties because labor will contest a reduction in wage rates. Labor, too, should profit from an increase in productivity and to this extent it would be entitled to an increase in average hourly wage rates or a reduction of prices.* It would be desirable to allow the workers to obtain part of their advantage in an increase in wage rates rather than to concentrate the effects of an increase of productivity in falling prices. Labor, on the whole, prefers an increase in money wage rates and stable prices to stable earnings and a reduction in prices, even though the net effect on the standard of living is similar. This increase in average hourly earnings will, moreover, offset to some extent the reduction associated with the loss of overtime, the movement to less productive industries, etc.

E. STRUCTURAL CHANGES. *Important changes in business structure raise difficult problems of pricing.*

1. *Monopoly control of trade with the connivance and cooperation of government is on the increase.* Cartels sponsored by Russia and Great Britain may be countered by competitive practices of American business underselling the cartels. Many, however, will be tempted to join and gain through restrictions and higher prices. When, moreover, commodity agreements are made for products purchased here, the only defense against deterioration in our terms of trade may be monopoly agreements on this end. *At any rate, any net movement toward monopoly may well mean a loss of flexibility of pricing though it may also mean increased flexibility as against pricing by a limited number of sellers; prices generally will be higher and output less.*

2. *World War II raised many issues of overcapacity.* The government's investments in war plant and equipment amounted to $15 billion.

Even if, as is generally agreed, one-third will be made available for private enterprise, this represents a substantial expansion of capacity. New methods will further increase existing capacity. (Private enterprise, moreover, expanded its plant and equipment in war by about $6 billion.) In addition, we must take account of an estimated $60 billion of government property available at the end of the war. Even if, as Dr. Kaplan estimated, but one-quarter of this property is salable and supplies valued at but $6 billion are to be sold at home, serious effects on particular markets may be felt for many years.[1] Another consideration relevant to capacity is the accessibility to foreign markets. Industrialization has been progressing rapidly in Latin America; and other countries will have to watch their imports for many years. Only heroic cooperation of all nations can bring large foreign markets. *In short, the war contributed toward an excess of capacity and supplies and possibly restrictive policies abroad which may be a long-run depressive factor.*

Yet we must not forget that the large capacity, the additional supplies, improvements in techniques, and the increase in labor supply, especially of highly trained workers, may yield an unprecedented output of goods. The problem then will be to assure a pricing system, a wage and fiscal and monetary policy which will assure a demand for the goods turned out.

We may conclude on this note. *Industry is saddled, as a result of the war, with heavy fixed charges:* the Federal tax bill will be about $15 billion higher than the prewar Federal tax bill; wage rates are likely to be less sensitive on the downswing and more sensitive upward; monopoly elements are likely to be more troublesome—in part because of the important advances made by large corporations during the war. Yet improvements in technology may make possible significant rises in wage rates; and a significant part of the tax burden may be shifted to individuals. Business can, moreover, be aided greatly by a policy of output expansion rather than restriction and higher prices. Its liquid position will also be helpful.

The Hot Springs Conference concerned itself with many issues related to these above.[2] It emphasized the relationship of world pros-

[1] A. D. H. Kaplan, *The Liquidation of War Production*, p. 67.

[2] See especially United Nations Conference on Food and Agriculture, Hot Springs, Va., May 18–June 3, 1943, *Final Act and Section Reports*, pp.1–31; J. D. Black, "The International Food Movement" and J. A. Flexner, "Food Policies of the United Nations," *A.E.R.*, December, 1943, pp. 791–824. Also see *Economic Problems of Latin America* (edited by Seymour E. Harris), Part I, McGraw-Hill, 1944.

perity and reduced tariff barriers, on the one hand, and increased demand for food on the other; the reallocation of factors to bring about the production of the maximum nutritional values and the best use of labor and capital in agriculture; the need of large amounts of energy foods in the immediate future and protective foods later.

On one major issue, however, no clear-cut decision was made at Hot Springs. One group representing the producing countries favored production control; the other, buffer stocks. They were both interested in removing extreme fluctuations in prices. Nevertheless the issue was and still is largely between those who wish more output and lower prices and those who prefer less output and higher prices. Producing countries are not impressed by the effectiveness of buffer stocks in preventing large declines in prices in depression periods. In short, the supplies and prices of the future will be influenced in no small part by controls of production and cartel arrangements on a national or international basis, for the purpose of keeping prices up. Developments in Latin America since 1940 are portentous.

6. CONCLUSION

Before turning to the next chapter, which covers a broader discussion of employment in relation to GNP, it seems desirable to give a résumé of the main conclusions of this chapter:

1. In estimating postwar income, experts are frequently not in close agreement. Their differences arise in no small part because their assumptions are dissimilar. Most prognosticators assume relatively full employment. Their estimates run higher than those estimates which are based on historical experience and therefore assume continued high levels of unemployment.

2. There are, however, serious differences also among the more optimistic ones, or those who are primarily interested in providing a mark to strive for. Estimates are high according as large gains in productivity, long hours of work, a large labor force, and minimum amounts of unemployment are assumed. Some differences also result from the choice of year under study. Income, under the same assumptions, will be higher in 1950 than in 1946.

3. Of the estimates based on assumptions of a high level of employment in the postwar, the Brookings Institution is particularly pessimistic. Why? In part because of their low estimates of the possible

gains in productivity and the size of the labor force. In the author's opinion, their estimates of these variables are low.

4. On the basis of past experience, all those who assume full employment, or unemployment of less than 3 millions, may of course be overoptimistic.

5. Continued gains in productivity are to be anticipated. The experience of the past 50 years supports this conclusion; and as a result of the increase in skills, the improvement and extension of plant, technological and managerial progress, and the maintenance of a high level of output, man-hour output should continue to rise.

6. It is not easy to predict future prices. Over the whole period (3–5), deflationary pressures will be strong though over short periods, and in particular markets inflation may prevail. Particularly in period 3, the large drop in government spending, which had begun even in period 2, may be a decisive factor. The net movement will depend on many factors and notably on our success in the reconversion period and our capacity later to sustain spending for consumption and investment at the high levels required by a high- or full-employment income.

Chapter XXVIII

Gross National Income and Employment

1. INTRODUCTION

This chapter continues the discussion of the preceding one. It is especially concerned with the relation of gross national product (GNP) and employment, and, therefore, raises some issues of vital significance for our postwar economy. How much employment and unemployment will our postwar GNP yield? How can it be made to yield more employment or less unemployment? For the problems of inflation and deflation, the amount of unemployment is especially important in that large amounts of unemployment and its threat affect the propensity to spend for consumption.

It is evident from the preceding chapters that the size of the GNP will depend on the numbers seeking work and in particular on the numbers finding work, and on the hours of work. We may dismiss the last with a few words.

In the three years preceding the war, hours in manufacturing averaged 37.3 hours per week; in 1943, 44.9 hours or a rise of 20 per cent. The rise was uneven and the working week of varying lengths: by 1943, the maximum was 49.3 hours in machinery (except electrical) and the minimum 38.0 in apparel and other finished textiles. The percentage rise from 1939 to 1943 was 25 per cent for the former and 10 per cent for the latter.[1]

Estimates of the postwar GNP are generally based on a working week of 40 hours. A difference of an hour either way, on the assumption of 60 million jobs, might make a difference of 1½ million jobs. If the country returns to a 37-hour week (which we shall assume as the average for the country) for *all* employments, then 4½ million more jobs will

[1] *Hours of Work in Manufacturing*, 1914–43, BLS Serial *R* 1635, 1944, p. 7.

be available than if we return to a 40-hour week. If the downward trend of hours of the last 50 years should continue, then by the fifties we might well have a 35-hour week and 7½ million more jobs than under a 40-hour week.

These calculations leave out of account here any effects on profits, productivity, and the like of a shorter working week. Undoubtedly output per man-hour may be less under a 35-hour than under a 40-hour week: the gains from less fatigue may be more than offset by a less effective utilization of plant and the enlistment of less efficient workers. The 35-hour week will, however, make an important contribution toward the solution of our postwar employment problem. *If the GNP is somewhat less, distribution will be considerably improved; and rather than a policy of sharing work, this program might be considered one of sharing leisure and income, and distributing the gains of progress in an appropriate manner as between goods and leisure.* And the GNP may not suffer. We should not leave out of account the relationship of better distribution, and more jobs, to the propensity to consume.

2. FULL EMPLOYMENT AND NUMBERS ON THE LABOR MARKET: SOME GENERAL CONSIDERATIONS

Let us consider the problem of employment somewhat more fully. How much unemployment can the country endure without serious deflationary effects? To what extent can the problem be solved by a withdrawal of workers and a reduction of hours? (This is admittedly a possible way out but, as we shall see, not necessarily the best.)

In recent years the emphasis has been put on maintaining full employment. This emphasis is the result of the large amount of unemployment in the thirties. In that period we learned that output might rise to the 1929 level and yet serious unemployment might persist. *Significant technical gains not compensated by corresponding reductions in prices and rises of demand, and the growth of the labor force accounted in no small part for the continued high level of unemployment in the thirties.* (Other considerations also are relevant of course.)

As we look forward to 194*x*, we are once more impressed by the growth of the labor force and the advance of technology. We are told by the Department of Commerce that even at the high level of output of 1940, there may well be 19 million unemployed in 1946. Stabilization of output is not enough. *We must steadily raise output in order to exclude a growing volume of unemployment.*

I am not sure that it is necessary to maintain full employment, and moreover it is not even clear what is meant by full employment. Frictional unemployment (*e.g.*, those on the move from one job to another, those temporarily out of work on account of health, etc.) accounts for 2 million. Another million seeking work and counted as unemployed may not qualify on grounds of health, mental aptitude, personality, etc. Many of them will find employment only under conditions such as prevail in wartime. *Possibly an additional 2 millions of unemployed may serve the useful function in a dynamic society of constituting a labor reserve; and in addition, as a bulwark against inflation. For, once full employment is attained, the democratic economy faces a new danger: a cumulative inflation.* There may be a net gain for society—and we assume the unemployed will be adequately provided for—if by attaining a position of high, though not full, employment, we contribute importantly to warding off inflation.

Sir William Beveridge estimated 3 per cent as the average rate of unemployment compatible with conditions of full employment: 1 per cent for seasonal, 1 per cent for movement from one job to another, and 1 per cent associated with fluctuations originating abroad.[1] In these calculations he apparently did not include any allowance for reserves; his objective, in fact, was more jobs than workers; and the unemployables and the ill were apparently not included as members of the labor market. This figure of 3 per cent should be compared with 10 per cent unemployment in the best prewar year (1937). Unemployment of 3 per cent would yield but 2 million unemployed in this country and clearly assumes a perfectly functioning labor market. We shall be fortunate indeed if *on the average* we can keep the figure down to 6 to 8 per cent, or 3½ to 5 millions.

The number accounted as unemployed depends on the difference between the numbers seeking work at current rates of pay and those actually employed. It follows that when numbers on the labor market are reduced, unemployment declines. Reduction of the number on the labor market may be accomplished to some extent through further democratization of education and liberalization of social security. More adequate provision for the aged will then encourage workers to abandon the labor market earlier than they otherwise would. As our population gradually becomes a stationary one, the large annual influx to the labor market will be reduced. Finally, the gains of economic progress might be taken increasingly in leisure rather than in a higher standard of

[1] Sir William Beveridge, *Full Employment in a Free Society*, p. 129, Allen & Unwin, 1944.

living. Reductions in the working week, from 60 to 40 hours in the last generation or so, indicate that we are making progress along those lines.

It is possible to absorb an additional 5 million in the schools. If this influx into the schools is voluntary, then many of our postwar employment problems will be solved although our national income, at least in the short run, will be lower than it otherwise might be. A significant part—but not by any means all—of these would come from the labor market. If we are unable to find jobs for many millions, then a policy which encourages a movement to the schools of potential students who meet the tests of intelligence will help to save human resources that might otherwise have been wasted.

There are no immediate gains; insofar as potential workers go to school, incomes are, on the contrary, reduced for the time being. (Insofar as productivity rises with education, there is an offset.) Consumption as a function of income will rise, however, and in an under-consumption economy this would be a significant gain.

The possibilities are given by the following figures. They have been worked out independently but check with conclusions reached by an official committee which estimates that close to 5 million more should attend our schools and colleges. My figures below overstate the potential reduction of employment, since there are included a substantial number who would not, in any case, be members of the labor market.[1]

1. Despite the fact that from 1900 to 1940, the percentage of students in higher education (college) to population rose by almost four times, yet in 1940 it apparently was only about 15 per cent of the population aged nineteen to twenty-two. An increase of students of 100 per cent in colleges and the like would account for additional attendance of 1.5 million and bring the total to approximately 30 per cent of those aged nineteen to twenty-two, or 2.5 per cent of the population.

2. Attendance at secondary schools in this period rose from 1 to 5½ per cent of the population. A further increase of 1.7 millions is considered desirable.[2]

3. A rise in 1940, of those enrolled in elementary schools, to the 1930 level would have accounted for almost 1 million additional enrollment. (School population had declined.) Actually, the elementary-school population might easily rise by 2 millions.

The total school population might rise by about 5 millions. A reduction of those seeking employment of perhaps 3 to 4 millions would follow. Fur-

[1] NRPB, *National Resources Development Report for* 1943, *Part* 1: *Postwar Plan and Program*, pp. 69–70.

[2] "At least 90 per cent of the 9,750,000 youths of appropriate age should be retained in high school, with at least 80 per cent remaining through graduation. The 1940 high-school enrollment was only a little more than 7,000,000. An increase of almost 1,700,000 high-school pupils would thus be necessary to reach the desired goal." *Ibid.*, p. 69. Also see National Resources Committee, *The Problems of a Changing Population*, Ch. VIII, pp. 196–198.

thermore, millions of new jobs might thus be created as a result of the additional spending. (This is on the assumption that the millions thus added to the labor market would otherwise have been idle with resulting adverse effects on demand.)

Many agree that the issues of capitalism in the next generation or two may well be resolved by our success in keeping unemployment down from a potential figure of 10 to 20 millions to 5 millions or less. Educational expansion may then make significant contributions.

In the longer run, the reduction in the population of school age will make it difficult, however, not only to increase the school population but even to maintain it. On pessimistic estimates of fertility, it is predicted that the age group of those from five to nineteen will decline from 35 millions in 1940 to 22 millions in 1980; and on more favorable assumptions from 35 to 30 millions.[1]

Let us return to the main argument of full employment and numbers on the labor market. *A reduction of numbers seeking work and of hours does not, in fact, offer an ideal solution. Unless the public wants more education and unless it seeks more leisure, this solution of the unemployment problem is one of forcing potential workers off the market:* A worker who wishes to be employed 45 hours and is offered but 30 hours may in truth be said to be one-third unemployed. Many draw the conclusions, from the large wartime influx into the labor market and the substantial rise in the wartime working week, that the unemployment problem was much more serious in the thirties than statistics indicated. It is argued that these workers in the thirties preferred jobs and at long hours; but millions stayed off the labor market because no opportunities were available. Those who wanted jobs but did not seek them were in fact unemployed though official statistics may not have set them down as unemployed.

Nevertheless, it is safe to conclude that a significant contribution might be made to the solution of the unemployment problem through an increase of educational facilities for those who wish more education, and through an encouragement of removal from the labor market of older workers through social-security measures, and a continued reduction in the working week. Productivity will continue to rise as it has in the past; and we should not assume that all the gains of progress should be taken in a higher standard of living. At a 30-hour week, we may well have a much higher standard of living a generation from now than the 37-hour week yielded in 1940. Our national income will be lower than it otherwise would be, but the enjoyment of life

[1] *The Problems of a Changing Population*, p. 25.

may be much greater. And if unemployment is 5 millions (say) less as a result of reduction in hours and relative reductions in numbers on the labor market, then sociological and distributional problems raised by high levels of unemployment may be solved.

Of this we may be sure: with modern gains of technology, full employment for 55 *to* 65 *million workers in the next generation at a* 40*-hour week is not going to be achieved through increased output in agriculture, mining, and manufacturing.* A much larger part of the consumer's dollar will have to go for services, for inflated distributive costs, and possibly for various government services. We may consider again the problems raised in the Twentieth Century study, *Does Distribution Cost Too Much?* In 1929 the cost of distribution of commodities was $38.5 billion, whereas terminal buyers' outlay was only $65.6 billion. Of 39 millions gainfully employed in production and distribution, the latter plus services accounted for 21.4 millions. It may well cost too much when viewed from the angle of distribution—when there is so much want, why should more than one-half of the cost of the finished product go for distribution; or from the angle of what the consumer wishes to buy—this raises, for example, the question of monopolistic competition. Would the consumer really wish to pay more for branded soap if he were given a choice of an equally good standardized soap at 25 per cent less?

In summary, the problem of unemployment is one of numbers on the labor market and the length of the working week; the task of providing jobs for at least 90 *per cent of those seeking work; of a proper distribution of gains between increased output and added leisure; and the provision of additional jobs through an increase in the output of goods, a rise of distribution outlay and the offer of a wider variety of services; and, finally, a distributive system which assures the purchase of current output.*

Ceteris paribus, the more nearly we approach full employment, the higher our output and the less wastage of our resources. (We may exaggerate the amount of wastage. This has been done, for example, by estimates of losses through wastage of $1,000 billion in the thirties. This estimate was obtained through a comparison of incomes in the thirties and potential incomes as indicated by our war experience.) Full employment, moreover, makes an important contribution to equitable distribution.

Yet full employment does not assure the country the highest possible national income. We are reminded of the experience of Latin America where on

the whole unemployment is apparently not large. Yet per capita national income seems to be substantially less than $100 per year. It is necessary also to have a high level of productivity; and this depends on national resources, an intelligent labor force, good management, sound institutions, the optimum allocation of economic factors, and the like.[1] It is important, for example, to use highly skilled labor for the highest type of work and not to waste it; and similarly with other factors. Any country can assure itself of full employment if it refuses to trade and insists on producing everything at home. To paraphrase Adam Smith, the Scotch could produce grapes. But at what a cost in man power! We can reduce technological unemployment by discouraging innovations, buying off patent rights, etc. Few would say we would be better off.

Then there is the question as to how far we are prepared to discourage enterprise in order to provide employment and security for all. Are we prepared to go as far as Sir William Beveridge according to whom all claims on income other than military needs should yield to the demands of social security? Many of us would go far to provide an adequate social-security program. But would we go that far?

In summary. We seek a high level of employment and of output. We should not tolerate large amounts of unemployment for long periods of time. Our chances of reaching this goal may be increased not only through improvements in our pricing and fiscal systems but also through desired withdrawals from the labor market. We seek security also. Yet here it is necessary to weigh the costs to enterprise against the gains in security.

3. A PROJECTION OF GNP AND EMPLOYMENT AND UNEMPLOYMENT

How much employment and unemployment there will be will depend upon (1) the postwar GNP and (2) the GNP per engaged worker. The higher (1) is and the lower (2) is, the more jobs will be available. On the basis of estimates of (1) and (2) we can draw some conclusions concerning the amounts of employment and unemployment. Unfortunately, we have to assume that the GNP per engaged worker per year at the war's end will prevail in the postwar year. Actually the product per worker will diverge from that of 1945 (say) with changing composition of working population, variations in hours, productivity changes, and the like.

[1] *Cf. Economic Problems of Latin America* (edited by Seymour E. Harris), Ch. I, 1944.

Several estimates have been made of the probable amount of employment and unemployment.[1] On the basis of GNP of $128, $141, and $151 billion (1939 prices), Dr. Kuznets estimates employment at 53.7, 59.1, and 59.6 millions, respectively. Comparing these totals with the anticipated numbers on the labor market, he finds that they will yield 9.7, 4.3, and 3.8 millions of average unemployment and maximum amounts in the troughs of depression of twice as much. On the basis of estimates by Drs. Livingston and Hagen of numbers on the labor market, Dr. Kuznets finds average unemployment at 2 millions more on the average and 4 millions more in the troughs of the depression than is indicated above by his rough estimates of the gainfully occupied.

4. PROBLEMS OF THE TRANSITION

A. WITHDRAWALS OF WORKERS. A most important problem is how many will leave the labor market. At the war's peak, there were more than 6 millions on the labor market (inclusive of military) who ordinarily would not have been there. As of the latter part of 1943, 3.2 million men and 2.6 million women constituted this new reservoir. Approximately 3.4 million or more than one-half came primarily from the schools and colleges. Most of the remainder were women aged thirty-five to sixty-four and men twenty-five years and over.[2] Many who left school will not return, and the longer their service the smaller the number that will return. An army expert estimates that only one-third of 2 millions under twenty-five and eligible for further college education are likely to return to colleges and schools. It is dubious that more than 1 or 1.5 millions will return for further schooling.

The ultimate size of the labor market will of course not be influenced by these decisions of students. They merely join the market much sooner than they otherwise would have. In the crucial periods 3–4, however, a large proportion of soldiers and war workers who had left schools and college, never to return, may well substantially increase the numbers on the labor market. Whether they return to school, however, or not will depend (1) on the appeal of education for them

[1] See, especially, S. Kuznets, *National Product in Wartime*, prelim. ed., IV, pp. 18–26; E. A. Goldenweiser and E. E. Hagen, "Jobs after the War," *F.R.B.*, May, 1944, pp. 424–431; S. M. Livingston, "Postwar Manpower and its Capacity to Produce," *S.C.B.*, April, 1943.

[2] *Factors Determining Postwar Job Transfers and Unemployment*, BLS Serial *R* 1620, February, 1944, p. 4.

and (2) on economic conditions. A relatively effective and successful reconversion will result in a very large proportion of the workers staying on the labor market. Workers will be tempted to stay on the job, and demobilized soldiers and sailors will prefer a $2,000 job (say) to a $1,000 stipend at school. If jobs are not available, school will be an attractive alternative and especially for the veterans.

In our discussion of the withdrawal of workers from the labor market, another effect of any depression should be considered. If unemployment is reduced through a return to college and school of veterans and war workers, by the very same token it will be increased; for when the main breadwinner loses his job, the numbers per household seeking employment rise.

In summary, the labor force is likely to be inflated in periods 3 to 4 as a result of failure of former students among veterans and war workers to return to school and college. Housewives and older workers, on the other hand, will be disposed to leave the labor markets. In general, however, the economic conditions in 1945–1948 will be a decisive factor in the determination of numbers on the labor market.

In the *longer run*, it is not likely that a large proportion of the workers who would not ordinarily have been members of the labor market will remain as a result of the war. One estimate puts the permanent addition at 2.5 millions out of 6.5 millions.[1] That estimate seems too high to the writer. Of the almost 6 millions additional available in 1943, the ex-students and the older workers (over sixty-five) clearly do not permanently influence the numbers added. Of the remainder, the permanent addition may be put at one-half, or approximately 1 million.

B. THE ONE-THIRD CUTBACK: PERIOD 2.[2] In the fall of 1944, it was generally assumed that after VE-day, one-third of the output of combat munitions would be cut and total war production would be reduced by less than one-third. By the early part of 1945, the government seemed less disposed to plan for a cut of these dimensions.

Since the time between VE- and VJ-day actually was but three months, the problems raised were less serious after VE-day and more serious after VJ-day. In fact, the cut after VE-day was small; the major and most difficult transition was concentrated in the period after VJ-day.

But to return to Dr. Livingston's analysis of the one-third cut after Germany's defeat: Dr. Livingston estimated that a one-third cut would mean a

[1] Goldenweiser and Hagen, *op. cit.*, p. 430.

[2] See S. M. Livingston, "Magnitude of Transition from War Production," *S.C.B.*, August, 1944, pp. 6–11.

release of 4.2 million workers in war industries and of 2 millions from the armed services. In his view, however, there would be but 2.9 million additional workers made available for civilian output as a result of these changes. He guessed that the minimum labor float would rise by 1 million, voluntary withdrawal from the labor market would account for another million, and a reduction of hours by one-third of the abnormal increase in war would absorb 1.3 million additional workers. In short, 6.2 millions would be released; but only 2.9 millions additional, the difference between 6.2 and 3.3 millions, would become available (see Chart 107).

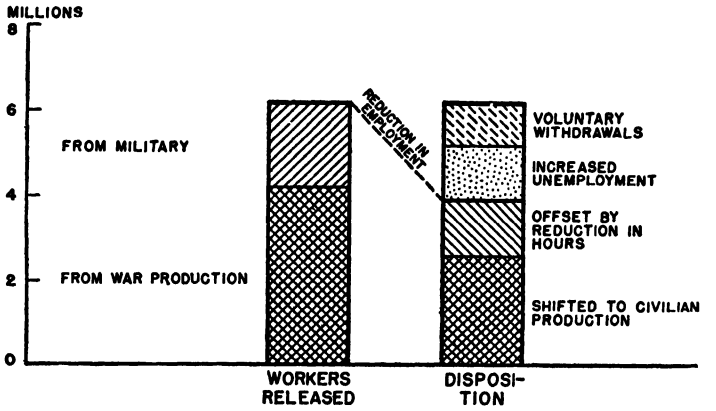

CHART 107.—The one-third cut. (*Sources: U. S. Department of Commerce and U. S. Department of Labor.*)

Much depends on the decline of income and demand during this period: any substantial decline is likely to be cumulative. In the most careful survey yet made, Dr. Livingston is relatively optimistic on this score:

1. The demand for consumers' goods will be sustained during this period.

2. An estimated 5 per cent decline in man-hours of employment and a reduction of average hourly earnings of 5 per cent would account for a decline in wages and salaries of $10 billion. To this should be added the loss of pay by the 2 millions demobilized (around $1.5 billion); but unemployment benefits at the rate of $1.5 billion annually and demobilization pay at the rate of $1 billion annually should be deducted, leaving a net decline of $9 billion.

3. This decline is not held to be adequate, in the light of the large deferred demand, to dampen prospects greatly and therefore to discourage production or to reduce purchases of consumption goods substantially. With the large volume of savings available, the public could easily, despite a reduction of wages and salaries of $9 billion, increase their purchases of civilian goods to the extent that additional supplies become available.

4. The total reduction in GNP would be only $15 billion, or 8 per cent: a gross decline of $20 billion would be reduced by $5 billion as a result of the expansion of output in civilian-goods areas.

Dr. Livingston's estimates above were made, to repeat, on the assumption of a substantial reconversion before VJ-day. The actual course of events, unfortunate for these assumptions but fortunate nevertheless, was more nearly like another assumption projected by him: it is presented in the next paragraphs. We can be sure that had the war in Germany ended early enough before VJ-day to allow a cut in war production by one-third, the reconversion would have been achieved with greater ease.

Dr. Livingston considered the effect of an abrupt termination of hostilities on all fronts and of a reduction of output of munitions to a peacetime basis concentrated over a period of 4 months.[1] These are his estimates of the resulting effects on employment, wages and salaries, spending, GNP.

1. The shrinkage of employment in nonagricultural war production would be 12 millions.

2. If there were no shrinkage of civilian demand--unfortunately there would be--6 million jobs in civilian production might be made available in 3 months.

3. Man-hours of work in civilian employment would be reduced by 15 to 20 per cent.

4. With a return to the average hours of work prevailing in 1940 and the spreading of the remaining employment over more wage and salary earners, the net reduction in jobs would be at least 5 million.

5. A drop of 15 to 20 per cent in man-hours, elimination of most overtime, and a wholesale shift out of high-wage war industries would reduce total civilian wage and salary payments by roughly $30 billion. Adding the reduction in pay for the armed forces but allowing for the reduction in taxes as incomes drop, and the rise of social-security payments, Dr. Livingston puts the net reduction of disposable income of workers and demobilized soldiers and sailors at $22 billion.

6. A gross decline in salaries and wages (inclusive of $5 billion for the armed services) of $35 billion, plus a commensurate reduction in profits and business taxes, account for a shrinkage of $40 billion to $50 billion in GNP.

7. Would demand for civilian goods rise as much as has been anticipated above? The amount involved is at the annual rate of $15 billion. A reduction of $22 billion in wages and salaries, a sum which exceeds the annual savings of the wage-earning groups, would probably have a serious effect on demand for consumption goods, and have a further adverse effect on GNP. (In September, 1945, the decline in GNP for the second half of 1945 was estimated at $24 billion from the $206 billion in the first half.)

5. GEOGRAPHICAL AND INDUSTRIAL SHIFTS

In the course of the war, there were large changes in the occupational and geographical distribution of workers.[2] The amount of unemployment, the success of reconversion, and even the GNP will depend in no small part upon how expeditiously workers move back into expanding civilian industries.

[1] *S.C.B.*, August, 1944, pp. 10–11.

[2] *Cf.* Ch. XXXII.

The issues involved are well presented in Charts 108 to 110. In Chart 108, it is indicated that 4 million workers will have to withdraw from manufacturing. Aircraft and private shipbuilding will have to drop most of their workers; and machinery, chemicals and petroleum

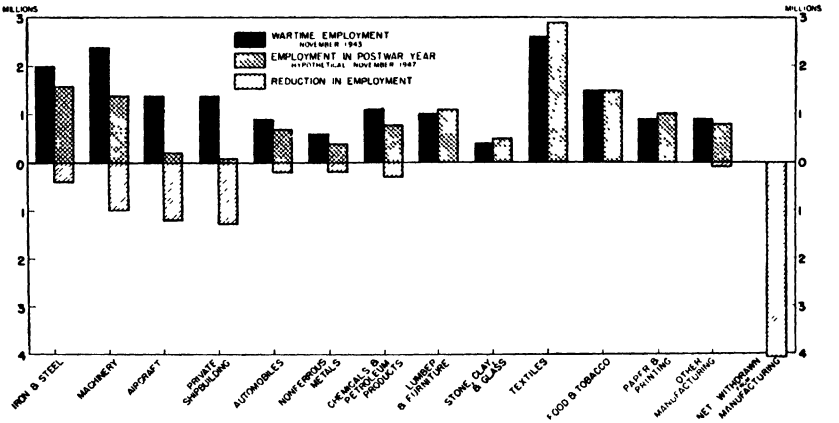

CHART 108. Shifts in manufacturing labor force. (*Source: U. S. Department of Labor.*)

products, iron and steel, automobiles, and non-ferrous metals a significant proportion. The only large influx is expected in textiles, apparel, and leather products.

In Chart 109, the shifts in nonmanufacturing labor forces are presented. Here it is anticipated that about 1 million less jobs will be available in government, and the largest gains will be in construc-

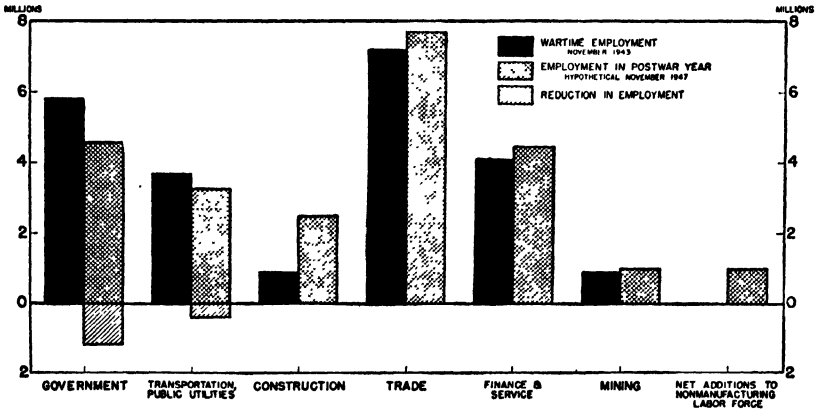

CHART 109.—Shifts in nonmanufacturing labor force from war to peace. (*Source: U. S. Department of Labor.*)

tion; a substantial rise in jobs is expected in trade, finance, and service.

Chart 110 indicates the relative postwar military and industrial demobilization by states. This demobilization is given by the ratio of the

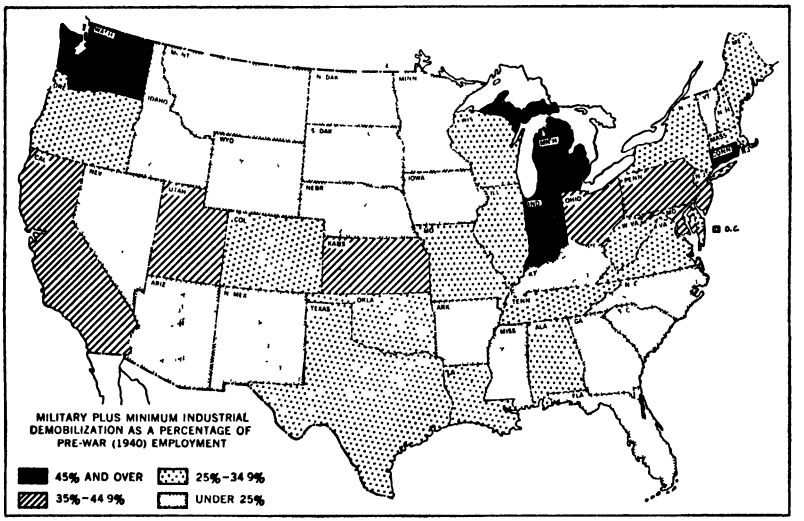

CHART 110.—Estimated impact of military and industrial demobilization by states. (*Source: U. S. Department of Labor.*)

total number of demobilized persons in each state to the employment in 1940. The estimates are based on the following assumptions:

1. That the two wars would end simultaneously in Europe and Asia by December, 1944—unfortunately a false assumption.

2. That the United States would maintain an armed force of 2,500,000 in the early postwar years.

3. That war production would be rapidly curtailed to the level of postwar defense requirements.

4. That industrial reconversion and expansion to high civilian levels would proceed as rapidly as technology and physical requirements allow.[1]

The estimates, based on these assumptions, may well be on the pessimistic side. They may understate the rate at which civil industries will absorb workers and demobilized soldiers; they put the industrial demobilization at the high figure of 6 millions; and the assumption of

[1] *Relative Severity of Demobilization by States*, BLS Serial *R* 1549, July, 1943, pp. 2-4.

a simultaneous contraction on both fronts tended to reduce the ratio of new jobs made available relative to the numbers demobilized from industry and war. Yet the regional variations are of much interest and suggest the immensity of the problem. In particular, the problems of the states of Washington, Indiana, Michigan, and Connecticut will be serious indeed; other states, too (*e.g.*, California and Pennsylvania), face difficult transitional problems. In these states, every effort should be made to encourage movements back to the farms, to the schools, and to the states of origin. It is indeed unfortunate that Congress is unwilling to provide transportation expenses for workers marooned in states with large excesses of workers.

6. THE LONGER RUN

By now it must be clear that the amount of employment, unemployment, and the GNP will depend especially on the numbers on the labor market, the hours of work, and the productivity of the workers. The success of the transition will certainly influence the long-run situation. Much depends on psychological imponderables. An initial failure in 1945 or 1946 may well be cumulative in its effects. There can be little doubt but that with increasing productivity, the problem of attaining a high level of employment and, a fortiori, of maintaining it, will not be easily solved. We can easily envisage a long-run situation with 20 millions of unemployed. An improved tax system; a social-security program which discourages excessive saving; flexible prices and wages; a relaxation of trade barriers and renewal of foreign lending —all of these will help. Yet if, despite all these measures, private enterprise is unable or unwilling to risk large amounts of capital, and if, at high incomes, savings become excessive, other measures will be required. An important contribution may be made by a continued reduction of work hours and an increase of numbers going to schools. By the latter I mean a permanent rise in the school population. *A reduction of hours from* 40 *to* 35 *and a rise in numbers going to school may reduce unemployment by* 10 *millions and make the difference between a relatively stable and an unstable economic system. This may well be an ideal solution if the public wishes to take a large part of its gains in leisure and schooling.* We should not end without this word of warning: excessive numbers of highly trained men and women, relative to the number of appropriate jobs open, may prove to be a source of political friction.

7. CONCLUSION

A one-third cut in war spending following Germany's defeat would have eased the transition after Japan's defeat. Cutbacks, unfortunately, were not large, and reconversion had scarcely started when Japan surrendered.

Most serious problems were then raised after the end of the war with Japan. The degree of demobilization was so much greater, perhaps five times as great as post VE-day. Germany's defeat had not offered an ample opportunity to make preparations. Deferred demand, the rebuilding of our civilian plant, the restocking of inventories, renewal of non-lend-lease exports will all help to sustain demand. The problem becomes largely one of timing. Large reductions of government spending not offset adequately or quickly enough by spending for civilian capital and consumption goods will bring a serious deflation. Nevertheless, inflationary pockets may prevail.

Both in the transitional period and in the long run, the amount of employment will depend upon total demand, the numbers on the labor market, and the hours of work. A potential unemployment of 10 to 15 millions might easily be reduced by one-half or two-thirds, if hours are cut from 40 to 35; if several millions of the potential members of the labor market return to schools in the transition period; and if, in the long run, a larger proportion of those of school age remain in the schools. Any serious decline in total demand will, however, greatly affect the numbers on the labor market: depression tends to increase the numbers seeking employment.

Finally, the general problems of demand, employment, and prices will not be solved satisfactorily unless the serious maldistribution of man power by industries, occupations, and regions is corrected. In the absence of vigorous measures, we may experience areas depressed over decades or even generations, which in turn tend to pull down the country's level of activity. It will be necessary to urge workers to move out of these areas or to take special measures to move industries into these areas or subsidize those now available. The movement of labor seems to be the more sensible and less costly approach. General measures (*e.g.*, public investment) which tend to raise total demand may well be relatively ineffective in increasing employment in the depressed areas. These will not be able to attract much of the additional cash which is created or disbursed in successive cycles of expenditures.

Chapter XXIX

Fiscal Aspects

Whether expenditures are maintained and deflation is avoided will depend in no small part upon our fiscal system. The fiscal program is especially important for two reasons: (1) There is a relation between total taxes and private spending and between tax structure and private spending. (2) Through adjustments in the volume of public spending and of public deficit the government can add to or reduce *total* spending.

1. COMPENSATORY ASPECTS: INTRODUCTORY

Many estimates have been made of the postwar tax burden. Federal expenditures will be at least $22 billion and may well gravitate toward $25 billion.[1] These are estimates for the early postwar. With a public debt of $275 billion at the war's end, the debt charge alone will be $6 billion. If we add to this the prewar expenditures (exclusive of public debt) of $8 billion, the total rises to $14 billion. To these we must add expenditures for a much enlarged military program, increased outlays for veterans, agriculture, and the like. A total of about $22 billion seems to the author a minimum estimate for the early postwar. This is exclusive of any large public investment program which may be required; and it does not allow for the probable rise (especially in later years) of the social-security budget. For the latter, the National Planning Association (NPA) estimated the cost of a comprehensive program (on the most reasonable assumptions as to unemployment) at $12 billion in 1955 and $15 billion by 1980.[2] Senator Wagner's bill, which has support in the Administration, would require an 8 per cent pay-roll tax, or roughly $8 billion annually in pay-roll taxes. Estimates by the Committee for Economic Development (C.E.D.) of public expenditures of $18 billion obviously do not include adequate allowances for

[1] See the excellent survey in *Fortune* ("Taxes after the War"), December, 1944.
[2] NPA, *Joint Statement on Social Security*, 1944, p. 24.

these programs. (The C.E.D. does not include social-security expenditures and taxes in the budget.)

From our previous discussion, it is evident that there is a real danger that consumption and private investment will not expand adequately to provide a high-employment income. It may be necessary, for example, to attain a consumption level of $120 billion and $35 billion of gross investment.[1] *Unless private expenditures are of these proportions, a cumulative decline is likely to set in.* If gross capital formation equals 20 per cent of national income, the ratio over a long period prior to the war, and that for 1920-1928, then investments may be adequate; but if the average is 16 per cent, as in the years 1920–1938, or the even smaller average as for the thirties, spending on investment will be deficient. The alternative to a decline is, then, large public investments. On the assumption of a gross national product (GNP) of $141 and $151 billion (1939 prices), Dr. Kuznets estimated nonwar capital formation at $23 and $30 billion, respectively, or four and five times the amount of the thirties, and flow of consumption goods at $112 and $115 billion, respectively.[2]

Among those who anticipate a deficiency of spending there are some (*e.g.*, Mr. Ruml and Prof. A. P. Lerner) who would attack the problem, at least to a substantial degree, through a reduction of taxes rather than a rise of spending. Dr. Lerner's position is extreme, though carried through with admirable logic and consistency. In his view, "taxation should therefore be imposed only when it is desirable that the taxpayers shall have less money to spend, for example, when they would otherwise spend enough to bring about inflation."[3] If then, deflationary forces are in operation, taxation should be reduced until the downward movement of demand is checked. Similarly, if inflation prevails, taxes should be increased.

Two criticisms might be leveled against the Lerner position. First, under a system of private enterprise, the fiscal position of the government is a matter of concern to all. It follows from this that not only the stabilization of the economy but also the size of the public debt are matters of importance. A theoretical position, however sound, must take into account the attitude of the public toward the public debt.

[1] See Chs. XXV and XXVI.

[2] S. Kuznets, *National Product in Wartime*, prelim. ed., IV, pp. 11–12.

[3] A. P. Lerner, "Functional Finance and the Federal Debt," *Social Research*, February, 1943, pp. 38–51; see especially p. 40. See also A. P. Lerner, *The Economics of Control*, Chapter 24, Macmillan, 1944.

The public requires much more education in these matters before public policy based on Dr. Lerner's theory would be acceptable. A second point is that, however important the compensatory aspects of taxation are, the government must also pay attention to the equity principle. It is not likely, for example, that the country would tolerate the elimination of $20 billion of taxes in a period of deflation in, say, 1947–1949. Assuming much unemployment and distress in our hypothetical period of deflation, what would be the reaction of a democratic society to the release from tax obligations of high-income groups in that period?

These criticisms apply also to Mr. Ruml's proposals but in a smaller degree, since his proposals are much more modest. He (and Mr. Sonne) rely on public investments, though on a limited scale, and both would balance the budget at high-employment income levels.[1] From a practical viewpoint, it still seems easier to pay out cash which benefits the low-income groups directly than to rescind taxes which seem to favor relatively high-income groups. *Messrs. Ruml and Sonne seem to rely rather too much on tax reduction and too little on compensatory spending.*

Mr. Ruml would control the timing of disbursements (*e.g.*, public construction, conservation, Federal loans). He would have them rise in periods of substandard employment and be reduced in periods of high employment. Public works are, however, to have the limited responsibility of stabilizing the construction industry.[2]

2. THE CONTRIBUTIONS OF THE CONSTRUCTION INDUSTRY

To stabilize the construction industry by public works is not an easy task.[3] It has been estimated that the productive capacity of the construction industry may rise to $11 billion within one year after Japan's defeat. Yet the response of the construction industry is slow and its variations in activity are large. Its stabilization would be a significant contribution. From a peak of about $11 billion (average for 1925–1929) in the late twenties, construction

[1] B. Ruml and H. Chr. Sonne, *Fiscal and Monetary Policy*, NPA, July, 1944, especially Chs. 2–4. *Cf.*, however, H. Chr. Sonne, *op. cit.*, pp. 1–15. Here the author shows very well the part to be played by adjustments in taxation and Federal expenditures. See also the excellent discussion in A. H. Hansen and H. S. Perloff, *State and Local Finance in the National Economy*, Part III, Norton, 1944.

[2] *Fiscal and Monetary Policy*, p. 15. A similar position is taken in M. L. Colean, *Stabilizing the Construction Industry*, NPA, February, 1945, p. 1.

[3] On these issues see Senate Hearings on *Postwar Economic Policy and Planning*, Part 4, June, 1944, pp. 1016–1062, and *A Sound Plan for Postwar Roads and Jobs* (printed for above Committee), 1944; "Postwar Capacity and Characteristics of the Construction Industry," *BLS Bull.* 779, 1944; *The Contribution of Public Investment and Construction*, "The Construction Industry in the United States," *BLS Bull.* 786, 1944.

volume fell to $3 billion in the early thirties and rose with interruptions to $11.5 billion in 1942, then declined to $6 billion in 1943 and, under increased controls, to an estimated $3 billion to $4 billion in 1944.[1] Construction carried more than its share of total employment in the twenties and much less in the thirties. Its contribution to a full-employment economy in the postwar should be around $15 billion per year. (Contributions in *percentages* are revealed in Chart 111.) These variations of $10 billion to $12 billion from peak to trough are a decisive factor in the ups and downs of business activity. The total effect is at least twice the extent of the variations. A contraction in construction brings, for example, declines in other segments of

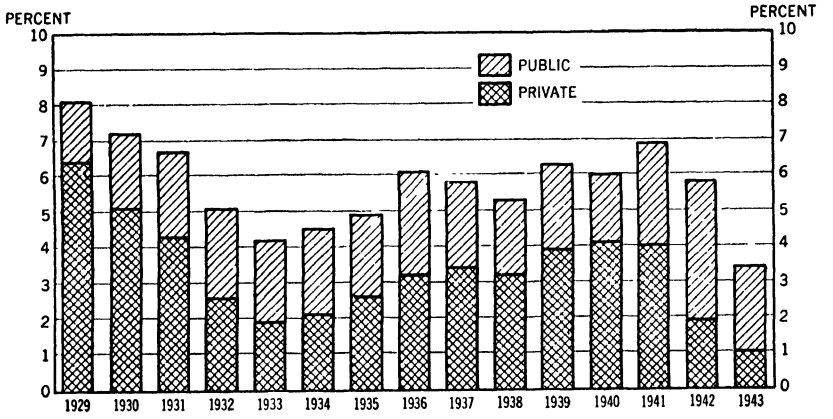

CHART 111.—Construction employment as a percentage of employment in nonagricultural establishments. (*Source: Bureau of Labor Statistics.*)

the economy. It may be necessary for the government to spend up to $10 billion a year on investment in order to maintain stable construction expenditures. *Average* public expenditures of a compensatory type required to offset declines in *construction* may, over the years, be only half that amount. Public construction, moreover, if it is to make the average contribution of the prewar, should provide about one-third of total construction expenditures.[2]

To attain the objective of a high level of expenditures for construction many improvements are required. Construction expenditures were, for example, around $3 billion to $4 billion a year in 1944. The average rise in the interwar period had been little more than 10 per cent per year; the maximum was almost 50 per cent (1936). If construc-

[1] Although the figures do not exactly agree with others given in text (latter based on another government document), the general contours of both are similar.

[2] The reader should consult an unpublished ms. by Robinson Newcomb of the WPB, "Can the Construction Industry Carry Its Share of Postwar Employment?" (published in revised form in *Review of Economic Statistics*, August, 1945), and Colean, *op. cit.*

tion should double in 1945 and 1946 and rise by 50 per cent in 1947, the amount in the last-mentioned year would be $18 billion. (This equals around $12 billion to $14 billion in prewar construction dollars.) These are, however, unheard-of and fantastic rates of growth.

There are, moreover, serious obstacles to the rapid expansion of public construction expenditures. In the first postwar year or two there will be serious bottlenecks and competition with other starved industries. Should a serious decline in economic activity occur in 1945–1947, construction will probably not fill the gap. In the longer run, other obstacles will block the rapid expansion of public construction expenditures. Public construction on an adequate scale is deterred by excessive fears of a large public debt, by slowness of planning, and, on the part of states and local governments, by the uncertainty of their budgets and their unwillingness to go ahead until the time when Federal contributions are likely to be a maximum.[1]

In the housing area, other problems arise. In the years 1940–1944, around 2.5 million units were built. The number of new houses for which there will be a demand depends upon the income level, housing costs and prices, and the number of new families and their geographical location. Unless incomes are maintained at a high level and costs and prices of houses are reduced, the purchase of more than 700,000 units ($3 to $4 billion) per year on the average in the first 5 years of the postwar is likely to result in a saturation of the market. The National Housing Administration estimates expenditures for home construction at $5 billion to $6 billion per year within 1 or 2 years after the war.[2] In the 10 years ending 1955, its estimate is a *need* of 12.6 million housing units, the average price apparently $5,000, or at a cost of about $6 billion annually.[3] In the longer run, saturation remains a problem, which can be alleviated to some extent by continued rises of incomes, reduction of costs, and migration. It should be observed, moreover, that in periods of depression the demand for housing falls greatly, and yet this is the time when large amounts of housing construction are required as an offset to declining demand. When this is not forthcoming, the burden upon other construction fields then is increased.[4]

In this discussion, I have concentrated on construction activities, for these can play a decisive part. If plans are not speeded up, however,

[1] See especially the Federal Works Administrator, *Postwar Public Works*, 1944.
[2] Senate Doc. 106, *Postwar Economic Policy and Planning*, 1943, p. 68.
[3] National Housing Agency, *Housing Needs*, November, 1944, p. 6.
[4] See especially *BLS Bull.* 779 and *BLS Bull.* 786, and Newcomb, *op. cit.*

their contribution may well be small and ill timed; and in that case, recourse will be had to *ad hoc* arrangements as in the thirties: the result per dollar of spending will be meager. As early as 1943, the government announced a Federal program of postwar construction and improvement works. The total and largest single items are given in Table 145. Only about $2.2 billion of $7.7 billion were considered extremely flexible expenditures.

TABLE 145.—FEDERAL PROGRAM OF POSTWAR CONSTRUCTION, ETC., JAN. 1, 1943

(Several small items omitted)

	Million Dollars
Total	7,695
Flood control	1,999
Irrigation and reclamation	1,587 *
Forest development	226
Range land	128
Rivers and harbors	1,047
Airports and airways	345
Roads	555
Power generation and distribution	1,106
Welfare and health	172
Government administration	368

SOURCE: House Doc. 128, Part 2 (1943), *Message of President Transmitting the Report of National Resources Planning Board* (NRPB); *National Resources Development Report for* 1943, Part II.

* A more recent estimate puts the cost of irrigation and reclamation at $2,952 billion. Hearings on *Postwar Economic Policy and Planning*, Part 5, June, 1944, p. 1073.

In the two years after this program was drafted, little progress in postwar construction plans had been made other than passage of a public roads bill.[1] Yet the Administration had for many years been focusing attention on the need for preparation of adequate investment programs.[2] In January, 1945, the President announced that plans for public investment had attained in all $5.5 billion. These were not by

[1] A public roads bill provided for $1 billion of Federal expenditures annually to be matched by $250 million of state expenditures annually over a period of 3 years. A Senate Committee estimated that the country required expenditures of $3 to $3.5 billion per year for 3 to 4 years. Senate Doc. 106 on *Postwar Economic Policy and Planning*, p. 48. Actually Public Law 521 (approved Dec. 20, 1944) appropriated but $1.5 billion to be available at the rate of $500 million annually in three successive postwar years.

[2] See especially the following reports of NRPB: House Doc. 128, Parts I and II; *Post-war Agenda*, November, 1942; *Security, Work and Relief Policies*, 1942; *After the War—Full Employment*, rev. February, 1943; *Demobilization and Readjustment*, June, 1943; *Postwar Plan and Program*, February, 1943; *Building America: Better Cities*, April, 1942; *The Housebuilding Industry*, July, 1942; *The Future of Transportation*, September, 1942. Also see Hearings of Senate Committee on *Post-war Economic Policy and Planning*, 1944, Part 4 (*Housing and Urban Redevelopment*) and Part 5 (*Reclamation, Irrigation, and Power Projects*).

any means all even in the blueprint stage.[1] Subsequently a committee appointed by Justice Byrnes estimated that $4.5 billion of Federal projects authorized by Congress might be gotten under way rapidly; and $2.5 billion of other projects, or $7 billion in all.[2] A private agency had reported for December, 1943, that $6.8 billion of postwar projects were planned: approximately two-thirds (in number and much less in value) were private. Approximately 44 per cent were in designing stages.[3]

In short, many were the plans for recourse to construction expenditures as a means of neutralizing deflationary factors in the economic situation. *We have, however, a long way to go before public investments will be used effectively to compensate for declines in the construction industry or general declines.* Insofar as they are used, the government should give preference to expenditures that have a high leverage, *i.e.*, those that, for a given expenditure, make the largest net contribution. Such, for example, are the river-development projects: they do not seriously compete with private outlays and they give private enterprise in the region a large stimulus. Similarly, housing subsidies may be very effective: total expenditures are large for a given outlay by the Treasury and are largely noncompetitive.

Public investments, we should add, can take many forms. There were proposals made by Mr. Patton and also by the National Resources Planning Board (NRPB), for example, that wartime plants be kept operating even if subsidies were necessary. A subsidy of 10 per cent of costs might be tantamount to a relatively costless type of public works. The NRPB commented as follows: "It is agreeable that it would be less wasteful to continue some war production beyond absolute military necessity rather than to halt it all precipitately at the same time." [4]

Mr. Crowley of the Foreign Economic Administration dissented and Congress was not sympathetic.[5] It was provided in the War Mobilization and Reconversion Act of 1944 that military men should not be kept in the service to shield them from unemployment, and that contracts should not be continued when not needed for war unless (1)

[1] *Budget*, 1946, pp. xiv–xv.

[2] Second Report by Director of War Mobilization and Reconversion, *War Production and V-E Day*, p. 28.

[3] Hearings of House Committee on Public Buildings and Grounds on *Public Planning*, 1944, pp. 560–564.

[4] NRPB, *Postwar Plan and Program*, 1943, p. 4.

[5] Report of War Contracts Subcommittee to the Committee on Military Affairs, *Summary of Recommendations Submitted on Surplus Property Legislation*, 1944, pp. 40–45, 61–62.

the Office of War Mobilization and Reconversion affirms that continuance will help the government or (2) it is necessary to avoid substantial physical damage to plant or property.

Finally, let us note that public investment unaided cannot carry the burden of full employment. The amounts involved are too large; investment programs are too inflexible; much help is required from programs to increase consumption expenditures; a reasonable distribution of the burden as between investment and consumption programs will yield a more desirable flow of goods than excessive reliance on investment.

The manner of financing the additional investment or consumption is, of course, a vital matter. Much is to be said for financing through deficits and for modifying the tax system in the direction of heavier taxes on surpluses rather than through rises in the tax burden. The last tends to reduce private spending with the result that fantastic increases in taxation are required in order to attain a given level of total expenditures. Nevertheless, the reader should weigh this plan, *e.g.*, more taxes, against the earlier mentioned Lerner-Ruml approach of tax reduction.[1]

3. TAXATION

A. INTRODUCTORY. Tax policy of the immediate and distant future is a vital matter, if for no other reason than because taxes are likely to equal 20 to 30 per cent of our net national income. We shall confine our attention here largely to the long-run problems. This might be said of the immediate future—say periods 3 and 4. *So long as inflation is a threat, the government should go slow in rescinding taxes.* So long as large profits associated with the war and its immediate aftermath are being made, the excess-profits tax should not be revoked. Once significant deflationary forces begin to prevail, immediate relief should be granted; but even this should be tempered insofar as a reappearance of inflationary pressure is likely.

B. COMPENSATORY VS. OTHER ASPECTS OF TAXATION. *In this discussion compensatory taxation—i.e., taxation which is levied not only for the immediate revenue yield but also according to the deficiencies and excess of private spending and according to the effects of the taxes upon spending—will be the major consideration.* Yet we must not lose sight of other criteria of a sound tax program. A tax system which yields the highest and most stable

[1] See especially Sir William Beveridge, *Full Employment in a Free Society*, pp. 142–152.

income may not be acceptable because it fails to meet the tests of adequacy and justice. Taxation is a burden. If there were no taxation, spending and incomes would be higher. In other words, the maximum support cannot be given to national income through fiscal policy because a compromise must be found between (1) no taxes and maximum incomes and (2) excessive taxes and low incomes.[1] Low incomes, moreover, must not be taxed so heavily in relation to other groups as to yield an unjust tax system even if, which is unlikely, the effects were to be more favorable on total income than the system actually put into operation.

C. RECENT CHANGES IN TAX PATTERNS. Those who espouse the compensatory theory of taxation propose to levy taxes on surpluses and insofar as is practical to reduce taxes on consumption, investment, and costs. *It has long been a fundamental principle of taxation that, whenever possible, a tax should be levied on surplus not on cost.* Alfred Marshall and Henry George were supporters of this theory. Taxation of surpluses is to be preferred because, it was held, surplus is a result of price and, therefore, taxes on surplus do not affect output adversely. One of the perplexing aspects of tax administration is, however, to discover surpluses. It was generally assumed that incomes in the high brackets are surpluses and hence could be taxed at rates as high as 90 per cent. But it has been found that these high rates influence enterprise and output, and therefore, for risky investments, the incomes at the higher brackets are not entirely surplus. Unless the investor can obtain much more than 10 per cent of profits after taxation, he is unlikely to take risks: he demands compensation for risk taking.

Yet the development of our tax program in the last 50 *years has, on the whole, been toward taxation of surplus and away from taxation of consumption and cost items.* Excise, sales, and pay-roll taxes may be considered for the most part taxes on consumption. Pay-roll taxes are paid, for the most part, by the workers either directly or in higher prices for commodities.[2] Income and excess-profits taxes are, for the most part, taxes on surpluses (see reservations above). Corporation taxes may be classified, for this discussion, as falling in between these two groups. There is evidence that corporations, at least in part, pass their taxes on in higher prices or in reduced wages. In this connection a rise in the course of

[1] *Cf.* A. P. Lerner, *Economics of Control*, Chapter 24, "Failure to have recourse to taxation." Alternative (1) above may result in inflation and thus depress real income.

[2] I have considered this matter fully in *Economics of Social Security*, pp. 436–441, McGraw-Hill, 1941.

this war of corporate profits before taxation from $5 billion to $25 billion is significant; and despite a rise of income and profit taxes from $2 billion in fiscal year 1939, to $36 billion in fiscal year 1945 ($17 billion on corporations), profits after taxes were up more than 100 per cent.[1]

In 1902, consumption taxes were 46.9 per cent of tax receipts of all governments; in 1938, but 30.2 per cent. This change is explained by the increased importance of Federal taxation and the tendency of the Federal government to rely more and more on direct taxes. Consumption taxes accounted for 98.1 per cent of Federal taxes in 1902 and but 34.8 per cent in 1938.[2] This trend has been accentuated since 1939, as shown in Table 146.

TABLE 146.—INTERNAL REVENUE COLLECTIONS, FEDERAL GOVERNMENT, FISCAL YEARS
(In billions of dollars)

	Total	Individual income tax	Corporation and excess profits	Employment taxes	Miscellaneous internal revenues
1939	5.2	1.0	1.1	0.7	2.2
1944 *	45.4	20.3	15.3	1.8	4.8
1945 †	47.0	18.9	17.0	1.8	6.0

SOURCES: *Tr. Bull.*, and *Budget*, 1946, p. A2.

* Miscellaneous receipts = 3.3.

† Miscellaneous receipts = 3.3. (1945 is estimated.) Actual results were: Total = 47.7; internal revenue = 43.9, *Tr. Bull.*, August, 1945, p. 5.

D. TAX PLANS. In the past few years, numerous tax reform plans have been proposed. *In general, they favor a tax system which would yield the largest income and the maximum number of jobs.* Yet they are not by any means in agreement as to the manner of attaining these goals.

At one extreme we have the Congress of Industrial Organizations (C.I.O.) proposals, which would maintain taxes on incomes above $5,000, increase personal exemptions under the income tax, repeal excise taxes and shun sales taxes, maintain heavy taxes on corporations, and give relief to small business. But the C.I.O. goes even further: It would remove the discrimination as between loan and equity capital of corporations rather than resort to a drastic reduction in corporation taxes. "The guiding principle must be the maintenance and extension of purchasing power, and that taxes be levied in accordance with ability to pay, with employers bearing the social security taxes." [3]

[1] *Budget*, 1946, p. A2; *Tr. Bull.*, November, 1943, p. 7; August, 1945, p. 5.

[2] Figures from S. Kuznets, *A.E.R. Proceedings*, March, 1942, p. 73.

[3] *Minutes of Seventh Constitutional Convention of C.I.O.*, November, 1944, p. 44; J. R. Walsh, "Taxation and Fiscal Policy in the Postwar," *National Tax Association* (mimeographed), 1944.

At the other extreme, we have the Twin Cities plan: This would raise only $5 billion from the personal income tax, $5 billion from corporate income tax, $6.8 billion from excise taxes and sales taxes, and $1.2 billion from other taxes. Here is a tax program which puts a heavy burden on consumption through its heavy excise and sales taxes and on investment through the small taxation of personal incomes and hence the relatively heavy taxation of business directly.[1]

We have three other programs between these two extremes. At one end of these is the Ruml-Sonne proposals: Corporation taxation virtually disappears, and the burden on income tax is to be heavy. Income tax is to yield $13 billion, whereas its yield in 1944 is estimated at $18 billion. The C.E.D. proposals are similar; but a somewhat greater burden is to be put on corporations ($2 billion against $1 billion in the Ruml-Sonne program) and a smaller revenue is expected from the income tax ($12 billion on the assumption of $18 billion of Federal tax collections). At the other end of these three programs is the Hansen-Perloff plan: It calls for $4 billion of corporate income tax and only $2 billion of excise taxes. (The plans of Messrs. Ruml and Sonne and the C.E.D. plan would raise $3 billion from excise taxes.) [2]

Let us comment briefly on these various plans. *In the writer's opinion, the most vital matter is the burden of the taxes on consumption.* We already emphasized the unprecedented gains in consumption which are required if a high level of employment is to be maintained. A rise of consumption by 100 per cent in current dollars and at least 50 per cent in 1939 dollars above prewar levels is indispensable, because the largest part of expenditures must be for consumption (an average of 80 per cent of income in the last 50 years) and because the level of disbursements for investments is, above all else, a function of present and anticipated consumption. *Allow the tax system to discourage consumption excessively, and no incentive to invest resulting from a curtailment of business taxes*

[1] An even more extreme program along these lines was proposed by Prof. H. Lutz. He would rely almost exclusively on consumption taxes and an individual gross income tax at flat rates, the latter affecting consumption of most recipients almost like a consumption tax. This tax would yield $5 billion; customs, excise, and retail sales taxes the remainder of a total tax bill of $14.5 billion to $15.5 billion. See *Tax Policy*, Tax Institute, pp. 10–13, October, 1944.

[2] Hansen and Perloff, *op. cit.*, pp. 258–259, 261. C.E.D., *A Postwar Federal Tax for High Employment*, August, 1944. H. M. Groves, *Production, Jobs, and Taxes*, McGraw-Hill, 1944. Twin Cities Research Bureau, *Postwar Tax Plans*, St. Paul, 1944; Ruml and Sonne, *op. cit.*, Ch. 3 and p. 39. Also see the excellent summary in *F.R.B.*, December, 1944, pp. 1163–1176 (R. A. Musgrave, "Three Plans for Postwar Taxation"); "Taxes after the War," *Fortune*, December, 1944; and also *Tax Policy*, *op. cit.*

will be very effective. Any relaxation of business taxes is justified largely on the grounds that more investments will be made and hence there will be more jobs; but especially on the grounds that prices will be reduced and/or wages raised and hence consumption stimulated. For these reasons, the Hansen-Perloff program is the writer's preference; although the C.E.D. and the Ruml-Sonne programs are not unreasonable.

This generalization may be made: *We may all be disposed to overemphasize the gains in consumption and investment of a given reduction of taxes.* Let us not forget that other considerations are also relevant; among them that the cash saved as a result of a reduction of taxes may be hoarded.[1]

I would not go so far as the C.E.D. or the Ruml-Sonne plans in their proposals of the reduction of business taxes. A virtual disappearance of the Federal business taxes would seem to be impractical. First, the virtual elimination of the corporation income tax is based on the assumption that Federal expenditures will be less than $20 billion. If expenditures rise to $22 billion or more, as seems not at all improbable, then revenue needs alone would preclude the virtual elimination of the corporation tax.

Second, the political aspects of this question should not escape the economists. (See comments above by C.I.O.) It is proposed by the C.E.D., for example, that business taxes inclusive of excess-profits taxes should be reduced from $17 billion expected in 1945 to $2 billion, and individual income taxes from around $19 billion to $12 billion. (The total of all income and profits taxes was but $2 billion in each of the fiscal years 1939 and 1940.) Even though the plan essays a sugar-coating with a courageous proposal for a substantial cut in excise taxes and large concessions to low-income groups under the Federal income tax, the rise in income tax rates over peacetime rates (and especially for low and moderate incomes—see Chart 112) may be a bitter pill for the public to swallow. The C.E.D. itself estimates that out of $12 billion anticipated from the income tax under their plan, $8.7 billion would be paid out of taxable income brackets below $5,000.

Third, there arises the almost insoluble problem of justice between corporate and noncorporate business enterprise. No one solution seems generally acceptable. Corporations, despite heavy taxation, have been able to maintain their position relative to other business enterprises. If the tax burden is reduced for the corporation, large-scale business

[1] *Cf.* M. Newcomer, *R.E.S.*, August, 1945, p. 144.

will make further large gains relative to other business enterprise.[1] In particular, the problem of undistributed savings is a serious one. Heavy taxation of undistributed savings is inconsistent with the objective of reduction of taxation on business enterprise. Failure to tax heavily, however, may result in the withholding of dividends, adverse effects on

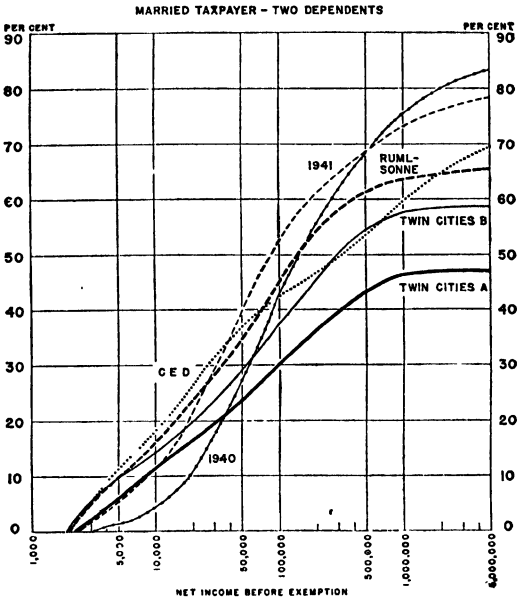

CHART 112.—Proposed effective income tax rates. (*Source: Federal Reserve Board, December,* 1944.)

spending, and favored treatment in relation to nonincorporated business. The C.E.D. proposal of a tax of 16 per cent on distributed *and undistributed* income does not go far enough.

Space allows only this brief discussion here of postwar tax plans in our study of taxation. We must proceed.

E. OTHER ASPECTS OF TAXES AND EXPENDITURES. From the preceding discussion it must be clear that the distribution of taxation over time is a matter of primary importance. *Of a given amount of taxation and public spending, the government should, insofar as is practical and appropriate, increase the proportion of expenditures and reduce that of taxes in periods of depression*

[1] Let us also not forget what was said before: If the corporation tax is passed on, it is not a burden. If it is not passed on, then the reduction should be justified not because, as the C.E.D. suggests, the restraint on enterprise is too great, but because consumption is discouraged.

and deflation, and reduce the proportion of expenditures and increase that of taxes in periods of full employment and inflation. Compensatory objectives will more easily be attained insofar as the government relies on taxes that vary with income. This is why income taxes are to be preferred to property taxes: they respond automatically to rising or falling incomes. Property taxes, on the other hand, rise tardily if at all in response to an improvement of income and become an intolerable fixed burden in the downswing. The theory of compensatory taxation also requires that insofar as practicable the lag between receipt of income and taxes should be reduced. Otherwise the lag contributes to inflation in periods of great activity and to depression after the downturn. In 1944–1945, for example, the total yield of income and profit taxes was $35.2 billion; but only $10.3 billion were withheld at the source.

It is possible to use special techniques which tend to distribute tax burdens along the lines suggested. The British White Paper on *Employment Policy*, for example, suggests that tax rates be increased in prosperous years, the additional receipts to be credited to the taxpayer for use in depressed years. Any systematic variation in rates according to business conditions would be helpful. Here the pay-roll tax offers an inviting field of experimentation. Aside from changes in the tax structure, automatic rises in yield of income and pay-roll taxes in prosperity and reductions in depression serve as correctives to rises or declines in the business situation.

Special adjustments may be made which tend to increase tax burdens in good periods and reduce them in bad periods. An example is the allowance of recalculation of profits after the war when inventories, reduced during the war, are replaced. It should be noted, however, that whatever else may be said for the carry-back and carry-forward provisions of net operating losses and unused excess-profits credits, they may well operate in a perverse manner. Thus, under carry-forward provisions taxes are reduced when profits once more are sufficiently high to allow reduction of losses. Yet the general effect of the taxes should be that *total* taxes are higher in prosperous periods and lower in depressed periods. In general, a greater use of averaging of income for tax purposes would tend to reduce the adverse effects of taxation on risk taking.

Depreciation and obsolescence might be apportioned in such a manner as to reduce economic fluctuations. Thus, if depreciation is allocated according to output, the depreciation per unit will be small

(and tax large) in prosperous periods, and depreciation large (and tax small) in depressed periods. This is, of course, to be desired. Another possibility is to accelerate depreciation allowances in periods of depression or when special stimuli for new investment are required.

Similar techniques might be applied to other accounting items. Thus the encouragement of last-in-first-out inventory valuations has been helpful. Cyclical fluctuations in income thus are markedly reduced. Basic inventories need not then be changed in response to price changes.

Specific measures might be taken to reduce the risks inherent in a system of taxation based on annual accounting. Possibly an averaging system might be used. Unfortunately experience with averaging so far has not been encouraging. The government has made some improvements: the Revenue Act of 1938–1939 allowed inventories to be carried on a last-in-first-out basis, thus reducing cyclical fluctuations. In 1939, the two-year carry-over was allowed on net operating losses. In 1941 and 1942, concerns carrying inventories on last-in-first-out basis were given the privilege, when profits rose greatly on account of the low book value of these inventories and when these inventories were reduced on account of war conditions, to recalculate their profits if they restocked within three years. Under S. 722 of the Internal Revenue Code, taxpayers are allowed, under certain conditions, to use special base periods for the computation of their excess-profits tax. In 1942, finally, a two-year *carry-back* of net operating losses and unused excess-profits credits was allowed. This was supplementary to the existing two-year carry-over of losses and unused excess-profits credits. A longer carry-forward for operating losses might be given serious consideration.

4. SOCIAL SECURITY AND PAY-ROLL TAXES

A. INTRODUCTION. *In the field of compensatory taxation, pay-roll taxation is especially significant.* A tax on pay rolls may be held to be a tax on consumption and for that reason must be carefully scrutinized. Even more important is the fact that social-security financing involves decisions concerning the distribution of burdens and financing over time. A pay-roll tax is largely a tax on consumption and may account for a large subtraction from *current* purchasing power. This raises the question of reserves vs. pay-as-you-go financing. Social-security taxation also lends itself to adjustment according to economic conditions: higher rates in periods of inflation and lower rates or suspension of payments in periods of deflation.

B. THE TRANSITION PERIOD. For the reconversion period, the social-security program has been expanded. The government has recently

covered 13 millions in the armed services against unemployment: if unemployed they are entitled to $20 weekly for 52 weeks in the 2 years following termination of services. In addition, each member of the armed forces is to receive mustering-out pay of $100 to $300, and provision has been made for Federal loans to state unemployment insurance funds. Dr. Livingston estimated that the unemployment benefit and mustering-out pay would be at the rate of about $2.5 billion per year in the period immediately following VE-day. On the assumption of an abrupt end of the war on both fronts, he put the benefits at the rate of $4 billion per year plus a saving of $1 billion in benefit payments. In addition, other tax savings on wages and salaries would be in the neighborhood of $3 billion to $4 billion.[1]

It is not clear that the transitional arrangements are adequate to ward off deflation. In period 2, the problem was not serious; for the loss of jobs (net) was considerably less than a million. In the period following VJ-day, however, the maximum unemployment is estimated at 8 millions. Unemployment benefits and other offsets will certainly not equal the losses of wages in this period.

Adequate provisions had not been made for war workers. The Committee on Postwar Planning of the Senate estimated that as of May 14, 1944, the unemployment compensation funds held more than $5 billion of reserves and were growing at the rate of more than $1 billion per year. By the end of 1944, these, plus the railroad unemployment insurance account, held an estimated $6.5 billion, or three times the total expenditures for unemployment compensation since the inception of the two systems.[2] These reserves could provide workers with maximum benefits as provided by law for 60 per cent of all the workers now covered. Benefits, however, are inadequate. Moreover, only 30 million of 42 million workers and of 55 millions (inclusive of self-employed, farmers, etc.) on the labor market and 67 millions inclusive of the military, are covered. According to a member of the Social Security Board, average benefits are but one-third of current wages, and the period of eligibility for benefits varied from 10 to 26 weeks in 1942. Al-

[1] Senate Report 539, Part V, on *Postwar Economic Policy and Planning*, June 23, 1944, pp. 1–6; House Report 1148, *Providing Federal Government Aid for the Readjustment in Civilian Life of Returning World War II Veterans*, May 5, 1944; *Public Law* 225 (S. 1543), *An Act to Provide for Mustering-out Payments*, Feb. 3, 1944; S. M. Livingston, "Magnitude of Transition from War Production," *S.C.B.*, August, 1944, pp. 9-10; C. H. Danhof, "Compensating Transitional Unemployment," *S.C.B.*, December, 1944, pp. 12–17.

[2] Danhof, *op. cit.*, p. 12.

though $5 billion of reserves might be adequate to pay benefits of $20 a week for 20 weeks to 12.5 millions unemployed, the distribution of the reserves was such that, in a period of mass unemployment, some states might become insolvent while as much as one-half or two-thirds of the total reserves might still be unused.[1] (Provision was made in 1944 for Federal loans to state funds that become insolvent.)

Two very careful surveys of the problem of transitional unemployment are available.[2]

As a result of the provisions of the Servicemen's Readjustment Act of 1944 (the G.I. Bill of Rights), unemployment compensation protection was given to 12,750,000 in the armed services. Thus, in 1944, 68 per cent of the labor force possessed some form of coverage against unemployment. Minimum weekly payments of unemployment compensation vary from $2 per week to $10, the maximum being from $15 to $22. Actual payments in the third quarter of the year averaged from a minimum of $9 in North Carolina to a maximum of $19 in Connecticut. The ratio of maximum potential unemployment compensation benefits to annual taxable wages in 1943 is well shown on Chart 113. The ratio varies from 11 to 26 per cent. Dr. Danhof shows also that on the assumption of 12 millions of unemployed of whom 6 millions are covered and on the assumption that these 6 millions will be entitled to maximum benefits and maximum duration, the drain on the reserve funds in one year will be $2 billion. If a uniform period of 26 weeks of benefits were established, the annual cost would be but $500 million additional.[3] *We can conclude that adequate provision has not been made to take care of the unemployed in the transition period and that the large accumulation of* $6 *billion in unemployment funds will not be used in the most effective manner to sustain purchasing power in the transition.* Let us not forget that there were 15 millions employed in producing war goods—a large

[1] Senate Report 539, Part V, *op. cit.*, p. 2, and Senate Hearings on *Postwar Economic Policy and Planning*, Part 3, pp. 751–781, May–June, 1944; House Doc. 380, *Eighth Annual Report of Social Security Board*, 1944, pp. 12, 26-40.

[2] R. A. Lester, *Providing for Unemployed Workers in the Transition*, C.E.D. Research Study, 1945. Danhof, *op. cit.*, pp. 12–17. In a well-balanced discussion, Dr. Lester points to the need of increasing the amount and duration of unemployment benefits; proposes a Federal guaranty fund adequately protected; increased grants for relief by the Federal government to the states; a well-planned and flexible public works program; a plan of dismissal compensation to be paid by employers. I would be more inclined than Dr. Lester to set up higher Federal standards of unemployment insurance. Dr. Danhof shows in some detail the shortcomings of our present unemployment-benefit system.

[3] Danhof, *op. cit.*, pp. 16–17.

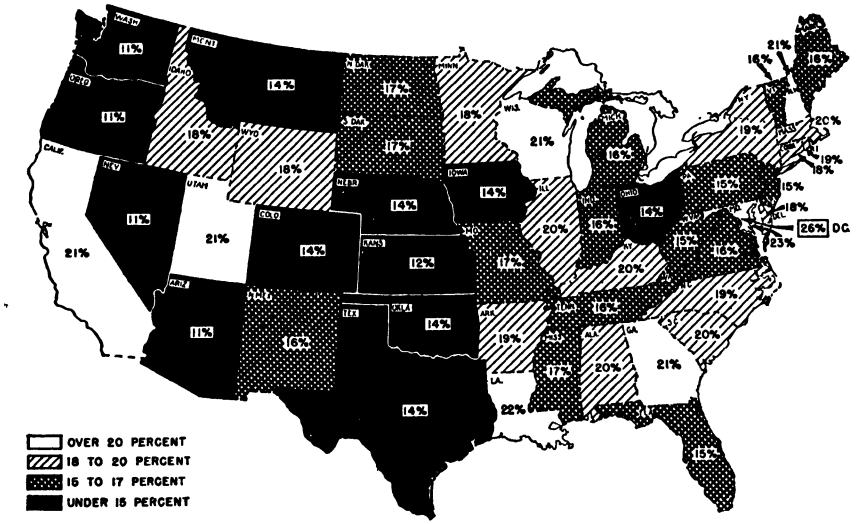

CHART 113.—Ratio of maximum potential unemployment compensation benefits to annual taxable wages, 1943. Data represent average weekly earnings based upon 52 weeks employment per year rather than a weekly average of total annual earnings. (*Source: U. S. Department of Commerce.*)

proportion will be unemployed temporarily in the transition. Some additional help will of course be available from the old-age insurance fund and from funds provided under the Servicemen's Readjustment Act.[1]

C. LONG-RUN ASPECTS: COVERAGE AND COSTS. At present, coverage under unemployment insurance and old-age insurance is inadequate. An extension of social security, both as to numbers and contingencies covered, would involve the government in a large rise of expenditures, however.

Costs will obviously depend upon coverage. *If perchance a comprehensive program contributes toward a rise of national income and a reduction of*

[1] In the summer of 1944, the Congress considered S. 1893, a bill providing unemployment compensation for 2 years after the war ranging from $12 to $35 per week for nonservicemen and $20 to $35 per week for servicemen; the bill also provided transportation expenses for workers who wished to return home. The bill was not received favorably by Congress which, however, approved loans from the Federal government to state unemployment funds. See Hearings of Senate Committee on Military Affairs on *Mobilization and Demobilization Problems*, Part 10, 1944, pp. 610, 655. House Hearings on *Postwar Economic Policy and Planning*, Part 2, 1944, pp. 335–384. In September, 1945, Congress was considering a liberalization of transitional unemployment benefit and later was to consider the comprehensive Wagner Social Security Bill.

unemployment, then the burden will be reduced on two counts: the dollar cost will be less and the ratio of costs to national income will be reduced further in response to rises in the latter. Much will depend then upon the adverse effects of taxation on the one hand and the favorable effects of any net addition to consumption and a better distribution of consumption over time. For these reasons it is important to consider carefully the methods of finance.

The NPA's estimates of the costs of their program of old-age and survivors' insurance and unemployment insurance are given in Table 147.

TABLE 147.—COSTS OF PROPOSED SOCIAL-SECURITY PROGRAM

(In billions of dollars)

Year	2 million unemployed	5 million unemployed
1955	5.3– 5.5	7.9– 8.1
1980	7.5– 9.2	10.1–11.8
2000	8.1–11.9	10.7–14.5

SOURCE: NPA, *Joint Statement on Social Security*, 1944, p. 24.

Health and employment services will cost $3.6 billion additional in 1955 and $4.15 billion in 1980 and 2000. The total costs in 1955 would then be about $9 billion if unemployment is kept down to 2 millions, and $16 billion if the unemployed are 10 millions. The ratio to national income might then be 6 to 13 per cent.

The Beveridge Plan, which is more comprehensive than the NPA's plan, will cost, it is estimated, £858 million in 1965. The National Exchequer (inclusive of some local rates), it is proposed, will pay about 60 per cent and insured and employers about 40 per cent. The net increase in cost for the employee is very small even if he is assumed to pay both the employer's and employee's contribution: in large part the new charge is a substitution for payments made privately. This program involves an added burden for the Exchequer of £86 million annually. But if, as Dr. Kaldor shows, unemployment is kept down to ½ million and not to 1½ million as assumed by Sir William Beveridge, then the social-security budget would save £101 million and there would be no net increase in cost; and budgetary receipts would be at least £100 additional.

The official British government proposals for social security involve expenditures of £650 million for 1945 and £831 million by 1975, the largest increases being anticipated in retirement pensions. For the whole cost of the services, the National Government is to provide 54 per cent from taxation

at first and 64 per cent 20 years later. For insurance proper, the ratio is 31 per cent in the first year and 50 per cent in 20 years.[1]

Before continuing our discussion of social security, I should summarize what went before. Coverage is inadequate; transitional arrangements are not sufficiently bold to stave off deflationary pressure resulting from unemployment; and the best possible use is not provided for available reserves.

D. THE BURDEN OF SOCIAL INSURANCE. An adequate social insurance program will involve the country in annual costs of $10 billion or more within a generation, and substantially more in later years. This allows for medical insurance, permanent disability, liberalization of benefits, and extension of coverage under present programs. The amount involved will be from 5 to 10 per cent of the national income, the exact percentage depending on the level of income, the degree of unemployment, and the extent of liberalization. Under the British program, the costs will be around 10 per cent of national income. Total costs are gross rather than net for the general taxpayer: a substantial part will be covered by pay-roll taxes paid by employers and employees; and the payments will contribute to the maintenance of income and its disbursement. Also, we should not lose sight of the fact that in part the expenditures and taxes levied may be considered substitutes for outlays otherwise privately incurred. In 1942, costs of medical and public health services in this country were $4.5 billion, of which but one-quarter was covered by taxpayers and philanthropy.[2]

The less liberal the insurance provisions, the larger will be the burden on relief and work programs. In general, the larger the burden on the latter, the more costly to the general taxpayer, for he will pay the costs of relief and work programs. A long-range public-works program, and particularly one that yields revenue, is another matter. In the past, insurance benefits have made only a small contribution to total spending for the unemployed. In one month in 1938, for example, benefit payments were but 16 per cent of relief payments. At that time, the

[1] For figures in last three paragraphs, see NPA, *op. cit.;* H.M. Minister of Reconstruction, *Social Insurance,* I, September, 1944, pp. 6, 49, Macmillan, 1944; *Social Insurance and Allied Services,* report by Sir William Beveridge, pp. 104, 112, Macmillan, 1942; N. Kaldor, "The Beveridge Report, II, The Financial Burden," *E.J.,* April, 1943, p. 19. *Cf.* House Doc. 620, *Fourth Annual Report of Board of Trustees of Federal Old-age and Survivors' Insurance Trust Fund,* May, 1944, p. 27. Benefits under old-age insurance are estimated at $2.6 billion to $3.9 billion in 1980, or only a little more than one-half the estimated cost of the NPA program.

[2] *Eighth Annual Report of Social Security Board,* 1944, p. 24.

insurance program had not been fully launched, however. In 1940, $500 million were paid out in unemployment benefits, but wage losses were $7 billion; and it has been estimated that for the State of Ohio the law in effect in 1941 would have yielded benefits for eligible workers in the years 1928 to 1932 equal to but 10.4 per cent of wages lost through unemployment.[1]

E. PAY-ROLL TAXES VS. TAXES ON GENERAL REVENUES. *Excessive reliance on pay-roll taxes may seriously impair consumption and raise problems of the accumulation of reserves and thus aggravate deflation.* (Reserves accumulate under unemployment insurance in periods of prosperity—*e.g.*, 1940–1945; and under old-age insurance, reserves may well continue to rise as long as the proportion of old people is disproportionately low compared to the proportion in later years. In the next generation, receipts may greatly exceed payments of benefits.) Many have contended that the absorption of cash by the social-security reserves contributed importantly to the downturn of 1937–1938. Though this position has an element of truth in it, it may be carried too far. The excess of United States government expenditures over receipts, for example, declined by $1.8 billion in 1938 over 1937; but the excess of receipts over payments in old-age and unemployment reserves rose by only $500 million. In later periods, the accumulation of reserves may be more serious. A recent estimate puts the accumulation of reserves in old-age and survivors' insurance and trust fund for 1948 at $11.4 billion to $12.9 billion; and by 1945, amounts in unemployment and old-age reserves are in excess of $10 billion.[2] These amounts are still small as compared with the reserves of $50 billion contemplated for old-age insurance in 1935. Yet they raise serious problems.

Large pay-roll taxes are to be discouraged in part because they are largely taxes on consumption. *Yet, in view of the large burdens put upon the Treasury by increasing costs of social security and in view of the need of associating benefits with contributions, there is much to be said for financing a substantial part of the program through pay-roll taxes.* Let us note that here the compensatory objective must yield, at least to some extent, to the correct principles of insurance. Recourse to 4 per cent pay-roll taxes in all will leave the Treasury burdened with a heavy responsibility in later years. Recourse to a 12 per cent tax, as was proposed in the Wagner

[1] Hearings Senate Committee on *Postwar Economic Policy and Planning*, p. 756. *Cf.* Seymour E. Harris, *Economics of Social Security*, Ch. I.

[2] House Doc. 620, *Fourth Annual Report of . . . Trust Fund*, p. 12.

bill, may well be too much. Perhaps a wise compromise might be a tax of about 6 to 7 per cent on the average. (The present tax is 4 per cent on employers and 1 per cent on employees.) With wide coverage, this might raise around $6 billion per year; and for a $12 billion program the government might contribute at least one-half out of general tax revenues. The limits of the relative amounts provided by pay-roll taxes might be one-third as a minimum and one-half as a maximum. In good years, the total amount paid in the pay-roll taxes might rise to $9 billion and in poor years decline to $3 billion. In the war period, for example, there was every reason for increasing pay-roll taxes by $3 billion per year (3 to 4 per cent). Yet strong opposition was voiced by those who would put the tax burden largely on future generations and also by those who were fearful that the tax might not be reduced once it was raised. Under experience rating, the ratio of taxes to income steadily declined.[1]

Much is to be said for imposing a pay-roll tax on the beneficiaries —say 3 to 4 per cent for a comprehensive insurance program—and the remainder on the general taxpayer. In that case, the employer will not vigorously oppose the introduction of a comprehensive program and a significant part of the burden will be put on surplus income and on nonbusiness income. To this extent, the pressure to increase prices or cut wages will be reduced.[2]

In this field above all others, there is scope for compensatory finance: large taxes on surplus incomes and benefits paid out to those who spend; large taxes in periods of prosperity and reduced taxes in depression. We should not lose sight of the fact, finally, that an adequate social-security program may to some extent correct the general tendency to oversave.[3]

5. THE PUBLIC DEBT

At the war's end the public debt was $275 billion in round numbers, and, as was suggested in Section 2, it may be necessary to continue to accumulate debt. Let us assume that an average rise of $5 billion to $10 billion per year may be necessary. In good years, it may be

[1] *Eighth Annual Report of Social Security Board*, 1944, pp. 28–29. The later (1945) Wagner bill proposes a pay-roll tax of 8 per cent (S. 1050).

[2] *Cf.* E. M. Burns, "Social Security," in *Economic Reconstruction* (edited by Seymour E. Harris), 1945, pp. 381–396.

[3] See my *Economics of Social Security*, Introduction and Chs. 2, 6, 7, and 10, and British White Paper on *Employment Policy*, pp. 23, 29–31.

possible to pay off $5 billion to $10 billion of debt annually; in bad years, debt may grow at the rate of $10 billion to $15 billion. And on the average, the net rise would be $5 billion to $10 billion annually. We may then well have a public debt of $400 billion to $500 billion a generation from now. We should also then have a national income exclusive of transfer payments (*e.g.*, interest on public debt) of $200 billion.

Let us not be too self-complacent about the rise of the debt. The C.E.D., for example, writes, "If an unchecked rise in the Federal debt should undermine confidence, this increased supply of money and liquid savings might at some time be converted into property, equities and commodities at a rate that would involve a disastrous inflationary rise in the price level." [1] The expansion of debt, insofar as it is accompanied by an expansion in the supply of money and other liquid assets, may well result in excessive purchases out of accumulated cash and savings. This is a real danger which should not be minimized. And as long as well-informed businessmen and the public in general have these strong fears concerning the instability inherent in a rising public debt, their fears have to be taken into account. Those who are less timid, however, have an important educational job to do.

Yet two important points should be made here. *The first is that the long-run danger is deflation, not inflation, and that, therefore, a rise of liquid assets relative to other assets is likely to have a corrective influence. At particular times, however, inflationary phases may occur. At these times careful management will be required. The second point is that the expansion of public debt is not necessarily accompanied by an expansion of money; and in fact in peacetime, the main objective is not to expand money but to absorb unused savings (divert cash to the Treasury for spending) and to replace money destroyed by deflationary forces.* Whereas in wartime debt rises, money expands, and assets are produced and destroyed, in peacetime we have other results: a sensible spending program in peacetime would call for the creation of assets, which will yield income or stimulate an expansion of income. The purchasing power is obtained largely through transfers, not creations.

It is easy to show that large amounts of public debt can be financed out of current taxes: it is not required to pay interest out of money created for the purpose. In an earlier paper on this subject,[2] the writer

[1] C.E.D., *A Postwar Federal Tax Plan for High Employment*, p. 23.

[2] My essay on postwar public debt in *Postwar Economic Problems*, pp. 169–185, 1944. In this essay, I discuss various levels of debt in relation to national income and tax burdens; the extent of the burden; the important transitional effects; the manner in which the rise of debt takes place, etc. *Cf.* A. P. Lerner, *Social Research*, pp. 46–49.

estimated the charge on a fantastic hypothetical public debt of $4,000 billion; and Dr. Lerner hypothesized an even higher figure, $10,000 billion. Neither of us proposed, recommended, or envisaged a debt of these inconceivable proportions, though careless (I hope not dishonest) readers read into my statement what, to say the least, was not in it. A debt of $4,000 billion in 1980 at a national income of $200 billion (plus $80 billion of interest on the debt) could be supported out of this income. *The burden is, however, real; and the transitional effects would be very serious; the growth of a rentier class owning* $4,000 *billion of assets would have political and sociological effects which might well undermine our society. Above all, I emphasize that a debt of these proportions is not required and is most unlikely to be created. If the correct principles of compensatory finance prevail, the rise of debt will stop long before we attain a public debt of* $1,000 *billion within the period of time for which we have any responsibility to plan. And once inflationary pressures appear, the task is to pay off debt, not accumulate it.*

It is hoped that the government will have the courage not only to incur debt when deflationary forces are rampant but also to pay it off when inflation prevails. Those who are skeptical of the government's willingness to raise taxes and pay off debt in periods of inflation may be reassured by our experience in the twenties and by the heavy taxes of the war period.

No one welcomes the accumulation of public debt. Do not all of us who prefer a system of private enterprise want to have the main part of spending done by consumers and private investors? Only when these fail to spend a substantial part of current income and serious reductions of income and maldistribution of income result, do we ask that the government increase its share of spending.

6. CONCLUSION

Taxes that fall on consumption should be discouraged as much as possible, and taxes on enterprise and risk taking should be reduced. Insofar as possible, taxes should fall on surpluses, not on costs.

In the revision of our tax system, we should keep these and other principles in mind. Time distribution of taxes is also of some importance. Insofar as is practical, as large a proportion of taxes as is feasible should be collected in prosperous times, and correspondingly less in depression. This objective can be attained to some degree through the choice of taxes as well as through variations of rates and through a synchronization of earnings and tax collection.

It is necessary to reduce taxes on business and especially to remove the favored treatment of loan as against equity capital. How far we can go in this direction will depend on the level of expenditures in the post-war and on other considerations. A drastic reduction will be justified only if it is reasonably clear that the removal of this deterrent to investment will result in large investments and risk taking and increased jobs. Much will depend upon industry's willingness to pass on the savings in taxes to wage earners in higher (or more) wages and reduced prices.

Spending should also be compensatory; and if there is a deficiency of spending over long periods, the public debt will continue to rise. There should, however, be periods of debt repayment as well as of debt increases. In periods of unemployment, moreover, the expansion of debt should largely be not through an *addition* of *active* money but rather through the absorption of unused savings. The rise of debt raises serious problems, however, and these problems should not be dismissed too lightly.

Social-security taxation and disbursements lend themselves to compensatory programs. Pay-roll taxes should be light since they are burdens on consumption. Yet principles of sound insurance require contributions by beneficiaries and sound finance may require moderate reserves. At any one time, taxes on pay rolls should be levied as consistent with insurance requirements. The burden should rest largely on surplus incomes. Taxes should be a minimum in depression periods and a maximum in prosperous periods. Disbursements will automatically be reduced in prosperity (*e.g.*, 1940–1944) and expanded in depression.

Chapter XXX

Controls and Prices[1]

1. SOME GENERAL CONSIDERATIONS

We saw earlier in this volume that the controls of prices and related controls aided greatly in warding off a serious inflation. Controls should continue to be of some importance after VJ-day.

Prices in the reconversion period will depend in no small part upon the timing of demobilization of controls and their efficiency. A strong case could be put forth for the retention of many controls in periods 2 (after VE-day) and 3 (after VJ-day) and of some even in period 4. In period 5 (after reconversion) it may be practical and helpful to retain a few wartime controls—*e.g.*, consumer credit and inventories. But it is assumed, and desirable, that most wartime controls must go.

Demobilization began as far back as 1943. By the late autumn of 1944 more than 1½ million had been demobilized from the armed services. Abandonment of one-plant towns had already raised the problem of ghost towns. The workers quickly dispersed to other areas, and this procedure continued as long as war industries provided jobs for them. Cutbacks on war contracts amounted to more than $10 billion by January, 1944, and at that time it was already estimated that cutbacks would rise to about $1.5 billion per month during the first half of 1944.[2] By the latter part of 1944, commitments of $25 billion had been canceled; at the same time the undelivered value of outstanding contracts was $65 billion.[3] We see, then, that demobilization was with us long before the end of the war and is, and will certainly be, one of the most serious and difficult problems of the next few years.

In this discussion I assume that the country is anxious to abolish wartime controls as soon as possible. It is also assumed, however, that insofar as disequilibrium is associated with the war, the government will

[1] *Cf.* my *Price and Related Controls*, Part VII.

[2] *Third Annual Report of the Truman Committee*, p. 6.

[3] *First Report by the Director of War Mobilization and Reconversion*, Jan. 1, 1945, p. 54.

maintain controls wherever such maintenance or continuance will be to the public's benefit. *The burden of proof for the maintenance of controls should, however, rest with the government.* Wherever a strong case can be made out for removal, a particular control should be removed.

Controls are interrelated. As long as the government continues to apply allocations, conservation and limitation orders, and rationing, it will control demand and supply and to that extent there will be less need for price control. Moreover, the maintenance of these controls contributes to the effectiveness of price control. If shortages are not serious, it may be enough to maintain vigorous supply *or* price controls in some areas. If, however, shortages are serious, it will be necessary to maintain control of price *and* supply and demand. Much will also depend upon the supply conditions. Should the government, for example, quickly remove its equipment from plants and quickly dispose of plants to private enterprise and should it dispose of surplus materials expeditiously, then the supply conditions to that extent will be more favorable. In short, the need for price control, to take one type of control as an example, will depend upon the extent of disequilibrium between supply and demand at reasonable prices. If demand is controlled or if supply is increased, disequilibrium will be less serious or may even disappear. *A proper attack, therefore, involves not only a consideration of price control but also adequate treatment of demand and supply directly.*

The timing of the removal of controls should also be related to the economic conditions of demobilization. When a large reduction of war expenditures occurs, then there may temporarily be some deflationary pressures. The expansion of civilian demand may not be rapid enough to take up the slack induced by these large cutbacks. In such a case the pressures to remove price control and controls of supply and demand may be great. This strong pressure was felt in the second half of 1944 although war output had not been significantly reduced. In many cases such removals were justified; on the other hand, the strong possibility of inflationary pressures and scarcities in some markets at various times during the reconversion require watchfulness.

This inflationary threat may never be realized, particularly if adequate provisions are not made for jobs for a large part of the working population. *If there is widespread unemployment and no adequate social-security program, then, despite the large amount of savings or cash available, the expected excess of demand may not be realized.* In this case, the pressure for the removal of controls would largely be justified and it may be

desirable in many cases to remove controls, especially price control, at a more rapid rate than otherwise would have been necessary. In other words, the timing of controls may be determined by the general economic conditions. Ordinarily, removal will be an anti-deflationary measure, the maintenance of controls will be an anti-inflationary measure. In any case, once the demobilization has been effected, most of the wartime controls should be removed as soon as possible.

Our system of price control in the pre-demobilization period may not be the appropriate one for the demobilization period; yet in the interim period, the same general principles may, unfortunately, largely prevail. In any case, the principles of wartime control would certainly require modifications if price controls were to be maintained for a long period after the war. The further away in time we get from the base period 1936–1939, the less meaning the profits of this period have for a later period; and similarly the period 1941–1942—the prices of that period, when prices were frequently frozen, become less and less appropriate. Our system of price control has unintentionally tended to freeze inadvertencies in our price structure, frequently to keep high-cost producers in business, and in general to have the effect of freezing the allocation of economic resources. However inadequate the freezing and the formula techniques (the latter is in no small part based on freezes), they will be even less adequate in the demobilization period. Yet it will not be easy to put price control on a scientific basis in the demobilization period. Only if the authorities decide to maintain price control for a long period of time will it be possible to overhaul our system of price control. In fact the OPA has announced that the pricing policies and ceilings for goods produced during the war will continue to be used in the reconversion period.

Prior to a discussion of concrete pricing policies, it may not be amiss to state a few principles of price control in the period of demobilization. In general, the government should concentrate its price control on vital areas. It would be more difficult in this period to justify price control of nonessentials. With the passage of time, larger and larger fields will become free markets: first raw materials, then food, then clothing, then consumers' durables. In these free markets, one might argue, an excess of purchasing power will gradually be spilled, exerting excessive pressure upon them. This, however, is not accurate because the assumption is that price control will be removed in these areas only when supplies are adequate, given the volume of money

and spending and saving. In other words, against any excess of purchasing power and savings is to be put the rise of supplies. In general, it may be said that the presumption is not so clearly for price control in the demobilization period as in the war period.

Yet as long as serious threats of inflation remain it may not be wise to disturb the delicate balance of prices and wages. The renewal of the inflationary spiral following substantial break-throughs in prices may bring further significant rises in prices.

New problems will arise in relation to price control in the demobilization period. In many cases the products to be priced will be new ones, and frequently they will not have been produced in substantial quantities for many years. In order to suggest appropriate prices it may be necessary to make careful studies of costs. If, for example, high-cost plants are allowed to resume production first, then prices must be adequate to cover these high costs. If, on the other hand, the war plants of high efficiency begin production first, allowance must be made for their high efficiency and frequently for the low costs of acquisition. In the $5 to $6 billion of plant and equipment financed by private enterprise the costs were largely put upon the government. Private owners were able to pay for these plants largely under an accelerated depreciation program. (The resulting reduction in tax liabilities accounts for the largest part of the outlays.) Where prewar high-cost plants compete with the more efficient war plants, the problems of pricing will be very complicated. It may be necessary to allow differential pricing based on varying costs per unit. Where private entrepreneurs purchase government-owned plants for civilian output, other problems arise. If the price that is paid is low, then production may very well be at low costs. It is highly improbable, however, that prices will be paid for these plants which are too high relative to the anticipated productivity of the plant—inclusive of the prices of the products to be manufactured. In other words, it may be assumed roughly that the pricing of the government-owned plants will have some relation to the competitive position of the owners of existing plants. Prices will be paid which will allow the new owners to compete with owners of existing plants.

2. OPA POLICY

In a statement issued by Mr. Bowles on Aug. 17, 1944, and supplemented by other statements, the Office of Price Administration (OPA)

announced the broad principles of pricing for the reconversion period.[1] These were related to the problems of the immediate future and particularly of the period after VE-day (period 2). In general, according to the OPA, prices should be set at a level which will yield maximum production and minimum prices for consumers; the cost of living must not be allowed to rise; prices should be adequate to assure the payment of high wages; for articles currently in production, existing standards which were approved by Congress in 1944 will be continued in the reconversion period; for items production of which is resumed, modified principles will prevail; price controls should be removed as soon as the danger of inflationary rises has disappeared.

For products coming into production once more, the OPA is prepared to take into account any rises in costs of straight-time wage rates and raw materials. It will, however, continue to require absorption to the extent that profits are above the 1936–1939 level. It follows from this that any rise of wage rates and materials may be compensated by any economies resulting from technological advances, cheap plant, reduction of overtime and labor turnover, and the like. Rises in direct costs will be offset by any reductions in other costs. Any residual of the rise in wages and raw materials (not offset by reductions in other costs) may well have to be absorbed unless profits are reduced to a point where adjustments may be obtained.

In the area where reconversion pricing is likely to be most important, *i.e.*, consumers' durables, the OPA is disposed to deal with prices on an industry-wide basis. Apparently, seven-eighths of the expenditures on consumers' durables are spent on 12 products. For these, specific dollar-and-cents ceilings may be worked out with the industry all along the line from manufacturer to consumer. One of the perplexing problems here is the volume of output upon which prices are to be based. If, for example, 1941 volume is assumed and if actually volume is less than in 1941, then production may be deterred. (If production drops, costs per unit are likely to rise above the ceiling price.) Flexible and prompt adjustments may solve this problem. But as an allowance for a temporary drop in production may unnecessarily raise prices for a long period, adjustments must not be overliberal. For the miscellaneous groups of consumers' goods, no better solution may be found than some form of automatic formula pricing. This may be done on a

[1] *Press Release*, Aug. 17, 1944, NB-2724.

regional basis, though regional pricing brings distortions, *e.g.*, the relation of the price of parts to that of the finished goods.

In a letter of Apr. 7, 1945, to the President, the heads of the four agencies responsible for stabilization reiterated many of the points made by the OPA in its Aug. 17, 1944, statement and in other announcements. In addition, the authorities commented on the success of the hold-the-line order over a period of 2 years. Average straight-time hourly earnings had risen 10 per cent, but the cost of living was up but 2 per cent. Stressing the strong inflationary pressures still at work, the four signers of the letter warned against premature lifting of controls. They urged low prices geared to large volumes of sales and small margins, high wages, and high labor productivity. In the Addendum to this volume, "Reconversion Viewed after VJ-Day," I discuss control policy after April, 1945. Actually, the broad outlines remain substantially as announced just before VE-day.

3. PRICING IN THE RECONVERSION PERIOD: IN MORE DETAIL

To suggest price policies during the transition from war to peace is the purpose of this section—price policies, that is, which will facilitate the change-over from military to civilian production and yet be consistent with over-all objectives of the OPA.

In reconversion pricing, the following will have to be taken into account:

1. The pricing of *products not manufactured since* 1941 *or* 1942 and about to be manufactured again.

2. Pricing of *new products* subject to existing regulations. New products may be manufactured and the manufacture of formerly manufactured products resumed as restrictions are relaxed.

3. Pricing problems associated with changes in the volume of output, related to (1) above:

a. Pilot programs.

b. Transitional problems arising from the gradual transition from no production or a small volume, to normal production (say, the 1941 volume).

c. Expansion of volume above the normal.

4. Adjustments in pricing techniques for civilian goods produced in substantial volume, both in war and reconversion periods. The official views on this problem were discussed above.

The next section concerns itself with all these problems although our most immediate concern is with items coming back into production.

4. GENERAL PRINCIPLES OF PRICE CONTROL IN THE RECONVERSION PERIOD

a. In general, price control in the reconversion period should be somewhat more liberal than in the war period. This will be necessary because of the lessening of popular support for price control; because general deflationary pressures (in periods 2 and especially 3), reduce inflationary threats, even in particular areas; and because of the inexpediency of risking another deterrent to the successful outcome of the reconversion process.

This is not, however, a plea for that bête noire for every price administrator, the cost-plus principle. And this brings us to our second principle.

b. The cost-plus principle should not be the technique of price control in the reconversion period. The most commonly accepted approach in wartime price control was to apply the price of a base period (generally 1941 or early 1942) and allow for a rise of costs whenever the additional costs could not reasonably be absorbed out of profits. If, for example, absorption of additional costs should reduce profits for the industry below the 1936–1939 level, then upward revisions adequate to hold profits to the 1936–1939 level would be granted. Under many formula ceilings, moreover, business was allowed to pass on increased costs associated with any increase in quantities of labor or materials used.

Under conditions of full employment, there was no necessity to be more generous. (Special concessions were made only when essential supplies might be increased.) Even so, profits were generous. Clearly, a program of price control in the reconversion period encouraging a more generous level of profits than that attained in 1942 to 1944 is not required; especially so if inflationary pressures are strong.

Nevertheless, some changes from the wartime pricing program are necessary in the pricing program of the reconversion period. For the civilian-goods area, it is imperative to provide a formula which will give the businessman the green light; which will be sufficiently flexible so that where 1936–1939 profits were low or nonexistent or where costs may be so high as to cut profits below a normal level, entrepreneurs may obtain *immediate* relief. The price administrator cannot risk taking the responsibility for a delay in reconversion and, thereby,

for unemployment. Limitations to profit levels of 1936–1939, a period when they were low or nonexistent, were entirely justifiable in wartime when full employment prevailed (with special provisions for essential production); but they are more difficult to justify in the period of reconversion after VJ-day. While the war was on, the Price Administrator could not be overly generous in setting prices of reconversion items: excessive diversions to civilian goods industries would have resulted. With the war won, however, his task is the preclusion of inflation and noninterference with reconversion.

c. Business should still operate under incentives to cut costs. This principle will be achieved through failure to cover all increases in costs since the base date. When it may reasonably be expected that costs will come down under the impetus of reasonably good management, the government should not guarantee a price which might discourage cost cutting. Thus it should be expected that (1) the weeding out of inefficient labor; (2) the reduction of overtime ($4 billion were paid as premiums for overtime in 1943); (3) the reversal of the upgrading of labor which in no small part constituted a disguised rise of wage rates—all these pressures to reduce costs and others to be mentioned should not be stymied by excessive generosity in price fixing. This must not mean, however, that price control should be used to force workers off the labor market; but rather that, insofar as a large proportion of the 7 million new members of the labor market are bound to leave the labor market, it would be unfortunate, indeed, if price policy should make it easier to retain inefficient workers at the expense of the efficient ones.

d. A reasonable markup over costs should be allowed. What is reasonable will depend, of course, upon volume: a 10 per cent markup may be adequate when volume is 1 million units; and a 20 per cent markup may be inadequate if volume is substantially less.[1]

The allowance for markups depends largely on the guesses concerning future output. One might, for example, allow markups equal to those received in 1941. In that case, it is assumed that output in the future will reach 1941 levels or more, and that markups in 1941 were adequate to enlist the necessary output. If, however, 1943 volume and 1943 profits were taken as the test, then the markup might be less. Markups in manufacturing were in general somewhat lower in 1943 than in 1941. In my opinion, margins on 1941 sales would be adequate to assure a price policy that will facilitate the reconversion process. Insofar as volume should exceed that of 1941, the profits would be larger than had been anticipated. (Adjustments might

[1] This problem relates largely to items again coming into production. For items produced before and throughout the war period, war pricing methods generally allowed at least the markup prevalent in the base period. In some cases, however, where output expanded greatly and direct costs were up, entrepreneurs had to be satisfied with a reduction in the allowances for overhead costs per unit of output.

take care of cases where volume, during a significant transitory stage, is too low to assure an adequate incentive.)

Is it fair to assume that 1941 volume should be equaled (or exceeded)? It is fair to assume this. National income payments were $92 billion in 1941. A much higher income level is required in order to prevent a real postwar collapse.

An income at the 1941 level (1941 prices) will leave us with 15 million unemployed or more. If incomes fall substantially below 1941 levels, price control will not be practical.

An income level equal to that of 1941 (see Table 148) is a reduction of about 40 per cent from the income level of 1944, but 37 per cent more than the 1935–1939 level. (Figures are in current dollars, however.)

TABLE 148.—PRODUCTION AND NATIONAL INCOME, 1939–1944

(1935-1939 = 100)

	Production	National income
1939	109	106
1940	125	114
1941	162	137
1942	199	172
1943	239	211
1944	235 *	227

SOURCE: *F.R.B.* and *S.C.B.*

* Preliminary.

The margin might well be based on returns on *civilian goods* in 1941. That this margin was profitable is evident from the very large rise both of consumer expenditures and profits in that year.

1. The rise of consumer expenditures was $9 billion or 14 per cent.
2. The rise of net corporate profits was $2.7 billion or almost 50 per cent.
3. The margins for 2,187 corporations are given in Table 149.

TABLE 149.—MARGINS FOR 2,187 CORPORATIONS: PERCENTAGE ON NET SALES

Before taxation						After taxation					
1936–1939	1939	1940	1941	1942	1943 *	1936–1939	1939	1940	1941	1942	1943 *
6.4	8.5	10.6	13.8	12.0	11.5	6.9	7.0	7.5	7.1	5.1	4.3

SOURCE: OPA.

* 1943, not strictly comparable with 1942.

Actually, the OPA's formula is as follows: prices, *and hence margins*, of 1941 are taken as a base and to these are added *legal* increases in wage rates and material costs. When this results in hardships, individual manufacturers may obtain adjustments. In the adjustment cases, the OPA allows, when the resulting price is less than the ceiling price, an *increase* based on 1936–1939 profits for the industry or firm.

e. Reconversion price control on an individual firm basis should be avoided but, if necessary, used only where it is not likely to result in a bogging down of price control. This type of price control has the advantage of adjustment to costs of individual firms, of keeping prices down for low-cost operators and yet offering an incentive to the high-cost producer; of giving the economy the lowest possible price level (consistent with maximum production) which is of course an indispensable condition for survival of our system of free enterprise.

Once the reconversion program is in full swing, this type of price control will offer many challenges to the price administrator. It may not be possible to continue it except for industries with a relatively small number of firms or through the use of loose and automatic formula pricing for producers of miscellaneous products; and not long after period 2 (the defeat of Germany), but certainly after period 3, we should begin to allow the forces of competition to squeeze out the high-cost operators. Industry-wide price control, which tends to discourage high-cost production, might be especially appropriate at this point. In the early reconversion period, however, some protection should be offered high-cost producers, and the economy will gain in maximum use of resources.

f. It would be as great a mistake to allow overgenerous conversion pricing as to be niggardly.

Excessive prices will result in buyers' strikes, in absorption of purchasing power by a relatively small volume of output and sales and, therefore, in the discouragement of a vigorous reconversion program.

5. PRICE TENDENCIES IN THE RECONVERSION PERIOD

a. Price pressures may well be downward in period 3, although many inflationary pockets will prevail, and notably in consumer goods. Much will depend on the speed of reconversion and the related amounts of unemployment and spending; on wage policy, which promises to be *at least* mildly inflationary soon after VJ-day; and upon the release of surplus materials. In period 4 (the catching-up period, 1946 to 1947 or 1948), the net pressures are likely to be upward. Premature removal of controls—as seems probable in September, 1945—will increase inflationary dangers in both these periods.

b. Supplies will be increased and prices reduced, the more government stock piles (and private inventories) are released. The Surplus Property Act, passed in 1944, in providing for stock piles of war minerals and Congressional review of the disposal of large government plants, will tend to raise prices.

c. In general, costs are likely to fall in the reconversion period though clearly not in period 2 and the beginning of period 3. For all periods other than 2, therefore, the assumption of increased margins resulting from a whittling down of real costs may well be justified. This, of course, is subject to the reservation that any large disbursement of past savings, or a failure of the expected general contraction to materialize, might result in the superimposition of general monetary inflationary forces upon the downward course of prices associated with lower costs.

Labor costs per unit of product are likely to fall because of (1) savings on overtime premiums ($4 billion in 1943); (2) increase of efficiency associated with a reduction of hours by about 15 per cent per week; (3) the downgrading of workers who had been upgraded excessively in war; (4) the weeding out of many of the relatively inefficient among the 7 million new workers who had come on the wartime labor market and ordinarily would not be members. These will weigh more heavily on labor costs per unit of product than any rise of costs associated with the maladjustments of returning veterans.

The writer makes no predictions concerning basic wage rates; he does suggest that downward pressures, associated with an increase in unemployment, will be more than offset by the effects of demands for higher rates resulting from a reduction of total pay envelopes by approximately $25 billion and continued rises in productivity which may be expected with a successful reconversion.

Capital costs should also fall. Maintenance, repairs, and deferred replacement will begin to be made; much capital will have been written off out of tax concessions, large profits, etc., and in general much capital largely financed by government should be available. Against this is to be put the cost of reconversion which has in some quarters been estimated at over $4 billion.

Selling costs are likely to be higher; taxes and material costs, lower. The net tendency should be downward.

6. INTERRELATIONSHIP OF CONTROLS

So far we have commented briefly on the relations of price and other controls for the reconversion period. These problems are com-

plicated and not easy to solve. We can get a glimpse of the WPB position by giving verbatim the major part of a press release of Oct. 1, 1944 (WPB-6588), in which the then acting chairman of the WPB, J. A. Krug, presented WPB policy on demobilization of controls.[1] This release is based on the work of CODCAVE (Committee on Demobilization of Controls after V-E, sometimes facetiously referred to as CONCLAVE: Committee on No Controls Left after V-E). From this release, it is clear that the WPB would rely largely on the usual price incentives to determine the distribution of supplies. Where scarcities are serious, however, and notably in chemicals, textiles, and forest products, a substantial number of controls are to continue. A feature of this plan is the protection offered after VE-day to military requirements and the *most essential* civilian requirements. Part of the press release follows:

"The Task Committee has been operating under a specific directive of the full War Production Board, which on September 5, 1944, unanimously adopted a V-E Day policy that included the following basic principles:

"1. WPB to remove controls over materials immediately upon the defeat of Germany except those controls that are absolutely necessary to assure the reduced measure of war production necessary to beat Japan. This means that all manufacturers can use for any civilian production any plant and any materials that are not needed for war production.

"2. The War Production Board, in cooperation with other Government agencies, is to do everything within its power to assist and encourage industry in resuming civilian production and maintaining employment through the 'know-how' of its industry divisions and industry and labor advisory committees.

"3. The board to maintain its organization and powers so as not to relinquish authority until it is certain that the war production program is adequate for victory over Japan."

To carry out this mandate, the task committee made the following proposals:

"1. Replacement of the present preference rating structure by a single, fully extendable, MM rating band, reserved almost exclusively for direct military requirements, including military lend lease.

"2. Continuation of the AAA preference rating, which will be used as at present to break military production bottlenecks, but also for civilian emergencies of a serious nature. This rating is tantamount to a motorcycle escort through traffic.

[1] *Cf. Reconversion, op. cit.*, pp. 5–6.

"3. Authorization on V-E Day for steel, copper, and aluminum mills and warehouses to accept orders and make deliveries of these materials without CMP 'tickets,' and complete elimination of the Controlled Materials Plan as soon as practicable thereafter. However, orders placed prior to V-E Day for CMP materials should retain preferred status for a limited period.

"4. A transition to the new priorities policy that will combine a minimum of paper work and reshuffling of production schedules with necessary protection of military procurement and the earliest possible achievement of free action in the civilian economy.

"5. Revocation on V-E Day of the great bulk of conservation, limitation, and other WPB orders and regulations; retention of orders in simplified form only where clearly necessary to protect military procurement or minimum civilian requirements basically essential to the effective functioning of the economy and progressive revocation of remaining orders as quickly as feasible.

"In all, some 500 L, M, P, E, U, and R orders are on WPB books today. Of these about 200 apply to chemicals, textiles (including leather and cordage), and forest products (including containers)—in which widespread shortages are expected to continue. Only half of the orders on this group of tight materials can be revoked immediately; about 100 will have to be retained.

"Of the other 300 orders, covering other areas of the economy (particularly metals and metal products), it is proposed to revoke 250, leaving only 50. Thus, all told, the proposal calls for revoking 350 out of 500 orders. And the 150 that are to be retained will be greatly simplified. In effect, orders controlling hard goods—metal products—are to be virtually eliminated.

"6. Maintenance of a full kit of tools to deal with emergencies. The committee recognizes that military cutbacks will necessarily be uneven in their impacts, producing extremely heavy reductions in demand for some materials and products and virtually no change in others. So long as this is the case, WPB must retain some allocation and scheduling controls and must maintain its contingent authority to minimize the consequences of acute shortages when they develop. To do this, WPB must maintain an effective organization, including a competent field staff, a compact group of industry divisions staffed by men with industrial know-how, and continuing contact with business and labor through the operation of industry and labor advisory committees.

"7. Maintenance of sufficient reporting of information to afford at all times a clear understanding of the industrial picture and to permit immediate and intelligent remedial action where indicated."

According to the report there should, however, be no spoon-feeding of the economy. No attempt should be made to curtail individual initiative in the search for and purchase of materials and components

that will remain in short supply for only a brief period. No action should be taken that might hamper private enterprise or ingenuity, either by restricting members of an industry to a historical pattern of business or by preventing entry of newcomers. Except for military requirements, which were to be protected at any cost until victory over Japan was secured, it was expected that essential needs would by and large be met without government control, either restrictive or supporting.

The task committee, in carrying out its responsibility, was instructed to eliminate rules, regulations, and orders whenever and wherever feasible—on the theory that the fewer the restrictions the quicker would be reconversion and reemployment. However, in cases in which materials and components were certain to be in short supply, maintenance of conservation and allocation orders was prescribed.

In a release of Apr. 3, 1945, J. A. Krug, WPB chairman, presented the main outlines of WPB policy following victory in Europe. The program was based on Justice Byrnes' second report to the President and Congress. In general, it approximated the policies announced in October, 1944. The statement of April, 1945, emphasized, however, the need of protecting the military requirements for war against Japan; the small realization of cutbacks as compared to 1944 plans; specific programs to make use of free resources and make early preparations for production of "lead" items; revocation of most conservation orders specifying materials to be used; and retention of numerous L and M orders.

The release (with some omissions) follows: [1]

"Mr. Krug said that the objectives announced by Mr. Byrnes represent the established policy of WPB to relax and to revoke material and production controls as rapidly after V-E Day as may be consistent with safeguarding the continuing all-out war effort against Japan. He emphasized, however, that such a proposed program must be tentative and that revisions, reflecting the continuously changing war situation, will prove necessary from time to time.

" 'The primary goal of the War Production Board,' Mr. Krug said, 'must be the prompt filling of all military needs and the maintenance of a sound war-supporting economy for a speedy conclusion of the Japanese war. As Justice Byrnes pointed out, even when the war in Europe ends, production of munitions, though reduced, will still absorb a large proportion of our country's manpower and materials and represent a tremendous strain on our productive capacity. As long as the Japanese war continues, we will

[1] *WPB*, 7627 *Release*, Apr. 3, 1945.

not enjoy anything like a free economy. There will be continued shortages of textiles, lumber and other forest products, leather, containers, tires and rubber products, and some metals, such as tin and lead.

" 'I want to stress again that the war job will not be over on V-E Day. Procurement for the major military effort against Japan will be enormous. The first duty of WPB is to see to it that these demands are met on schedule and to make certain that only those resources which are not needed for the war with Japan and for essential war-supporting production and activities are released for reconversion to civilian production. The program must be extremely flexible and the relaxation of controls will be gradual, after taking into account the changing needs of the military.'

"According to our present information, military cutbacks will be more gradual than those projected last summer. The extent and timing of WPB's reconversion program depends, of course, upon the margin of resources actually released from direct war use after V-E Day. In developing our plan, we are attempting to provide for all eventualities with a program sufficiently flexible to meet the situation that we finally experience. Even with minimum cuts, there should be sufficient material and resources to prepare many facilities for rapid reconversion. Justice Byrnes referred to this as giving positive assistance to the acquisition of facilities, equipment and of long-cycle components and materials necessary to fill material, component and equipment pipelines."

The WPB reconversion program was to be implemented by the following procedures, which were to be perfected and put into effect at various times after VE-day, their timing depending upon the actual programs of military cutbacks. The procedures as announced in April, 1945, are given here:

1. Cutbacks will be handled, wherever practicable, in such a way as to distribute equitably the production load throughout the nation.

2. Positive assistance through controlled material allotments and preference ratings for new or additional production of a very limited number of civilian products now in such short supply as to endanger the war-supporting economy.

3. Measures to facilitate rapid reconversion through positive assistance for tools, equipment, construction, and long lead-time materials and components needed to begin large-scale production promptly when further cutbacks occur.

4. Suspension of most of the so-called "rating floors" which now prohibit the acceptance or delivery of materials, components, and equipment on unrated orders. There may be some exceptions in the case of scarce commodities and components.

5. "Open-ending" the Controlled Materials Plan (CMP) by permitting the delivery and acceptance of controlled materials (steel, copper, or aluminum) without allotments, subject to preference at mills and warehouses for all orders covered by allotments.

6. Relaxation or suspension as quickly as practicable of a substantial number of WPB's L and M orders that now prohibit or restrict production and distribution. WPB will continue to limit the production of some goods requiring materials still in scarce supply.

7. Revocation of most of the conservation orders specifying the kind of materials to be used in making certain products.

8. Some relaxation in the construction order L-41 to permit the most urgently needed civilian construction.

9. Take steps to ensure that, where production is authorized on a restrictive basis, small business and new producers are given full opportunity to participate.

10. Introduction of a simplified priority system to replace CMP and other priorities at the earliest possible date.

11. Procedure for authorizing construction or production in certain local areas, as exceptions to nation-wide limitation orders, to permit utilization of labor and resources that cannot practicably be used for war production or civilian manufacture not under limitation orders.

12. WPB will continue specialized controls over all materials continuing in tight supply such as tin, crude rubber, textiles, lumber, and certain chemicals, to assure meeting all essential war and civilian needs.

Throughout the war, the OPA found its controls strengthened by the imposition of related controls by other agencies, controls which tended to make more supplies available or to restrict demand. Under the EPCA, the WPB was given the responsibility for supply problems arising out of the war. (This authority was, of course, shared with the War Food Administration for food, the Petroleum Administrator for petroleum products, etc.) Obviously, the OPA is inclined to ask for the retention by other agencies of the controls which will facilitate price control, whereas the agency which would have to administer these controls is only lukewarm in support of their retention, if not opposed.

Orders which conserved materials and provided for the most desired use as to qualities, prices, utilities, etc., were of special importance and will continue to be in the reconversion period. Whenever significant scarcities appeared, the WPB was inclined to take measures to conserve. As a condition of obtaining leather, shoe manufacturers reduced the number of styles and

colors and produced a large number of shoes in cheap price classes. Textiles were set aside for the purpose of producing low-priced infants' wear, heavyweight underwear, work gloves, etc. In the first quarter of 1945, most cotton woven goods were allocated to essential uses. Early in 1945, Order M-388, the most extreme order controlling the allocation of materials in favor of low-priced items, was issued. Once consumers' durable goods, out of production since 1941, are produced again, there will be a real danger that manufacturers, at least in the early stages, will produce a disproportionate amount of high-priced items. A serious question debated early in 1945 was: Should the government require production of low-priced or standard items?

For the reconversion period there are, in fact, two problems involved in the matter of supplies, which should be differentiated. The first is the assurance of the most effective use of materials in short supply. Here WPB orders are vital. Unless the WPB interferes, corduroy is made into expensive vests rather than low-priced children's pants. *The second problem is that of prices for scarce commodities.* Notwithstanding controls by WPB, many scarcities persist. Support of the OPA's price controls will be especially required in those instances. When a small number of firms controls an industry and the product is homogeneous (*e.g.*, electric refrigerators), WPB help will not be nearly so important as in an industry where there are innumerable products and thousands of prices (*e.g.*, manufacture of women's dresses). In the latter cases, unless the WPB makes more supplies available and restricts demand, prices will move skyward.

A few examples may be given of the problems involved. Such orders as M-385 (apparel) and M-328 (special programs in textiles), L-247 (knit underwear, etc.), L-85 (women's apparel), L-116 (women's lingerie), M-317 (shoes), L-41 (lumber), L-261 (grocery and variety bags), M-269 (charcoal), M-373 (vitamin A), L-2-g (passenger autos), and L-18-b (vacuum cleaners), inventory priority regulation 1 (production and distribution stocks), L-219 (distribution stocks of soft and hard goods)—all of these raise important problems. Some provide specifications which facilitate compliance with price orders; others save materials through simplification, restriction of deliveries of materials, control over end uses, etc. Control of fashions saves materials used in women's clothing. Under M-373 the use of vitamins for pharmaceutical purposes is controlled; under M-369, the use of charcoal for domestic purposes is restricted; and under L-2-g, the production of passenger automobiles is stopped.

Inventory controls are especially important in the reconversion period. Large inventory accumulations, more than anything else, accounted for

the inflationary prices of 1919–1920 and 1937. Continued restrictions on the rise of inventories are to be welcomed.

In the construction field (L-41), there is some agreement that inevitable delays will prevent a construction program exceeding $5 billion in the first year after VJ-day. The serious bottlenecks other than planning, legislation, etc., may, however, be removed in less than one year.[1] But the problem still remains as to choice of alternative uses of scarce materials and labor even within the framework of a $5 billion total program; and the demand may well exceed $5 billion. To whom, for example, should the limited supplies of plumbing and electrical equipment be made available in the first year? Similar problems arise in the field of consumers' durable goods. Removal of L orders helps price control in that restrictions on output are removed. Yet it is not clear that these industries will not—at least in the early period—draw scarce materials and labor from more essential areas and also that they will produce an appropriate proportion of low-price and standard items. By spending too much of their resources on high-priced items and de luxe models, they will fail to make the most effective use of limited supplies.

7. THE ISSUES SUMMARIZED: PRICES AND RELATED CONTROLS IN THE TRANSITION PERIOD

In the transition period retention of numerous controls is required until an orderly reconversion has been effected. It will then be possible to assure adequate production of low-cost items, flow of materials into essential lines, economies resulting from simplification, specifications, and conservation. Here, then, are the main issues:

1. *The interrelationship of these controls rests in large part upon the contribution to lower prices of WPB controls which tend to increase supply and reduce demand.* Many of these controls have been very helpful to the OPA, though the gains pricewise have not been their main objective but rather a by-product.

2. *Once the decontrolling begins in an important area, the pressure to decontrol in related areas gains momentum.* A large and general decontrolling phase introduced by the WPB is bound to result in wholesale removals of controls by the OPA and the Foreign Economic Administration (FEA). Even if price controls are retained, they will not function nearly so smoothly when the underlying controls of supply and demand are removed. WPB may ask or recommend that the OPA and the FEA retain

[1] *Postwar Capacity and Characteristics of the Construction Industry, BLS Bull.* 779, 1944, especially pp. 1–3. Here it is shown that capacity can expand rapidly and production can reach $11 billion one year after VJ-day. Present capacity seems to be much in excess of $5 billion.

controls, yet the FEA may, for example, find it very difficult in the existing political and business milieu to retain controls when allocations are not required by the WPB.

3. If *prolonged* controls are to be required, we must distinguish between controls in wartime operation and new ones based on new conditions. It is far easier, however, to retain existing controls than to introduce new ones.

4. The issues concerning the future of controls then (before VJ-day) in effect may be summarized as follows:

The WPB position late in 1944 seemed to be that controls should be removed unless it could be demonstrated that a serious deficiency was threatening. *From the viewpoint of price control it would be better, perhaps, not to require absolute proof of a coming shortage in order to maintain controls.* It would be particularly helpful to maintain controls which would assure the provisioning of the market with low-cost items and give some protection against excessive deterioration. *This would be necessary only until the supplies of materials began to flow at a rate roughly equal to demand at reasonable prices;* the time required will vary according to the period needed for the resumption of full production and also according to the magnitude of the demand following VJ-day. If the public should dishoard its cash quickly, controls must be retained longer than otherwise. It would also be useful to retain the L and M orders which assure the flow of adequate supplies for essential purposes and limit use for nonessential purposes. Retention of inventory controls would also be of great value to the price administrator. Congress, we should add, seemed in April, 1945, even less disposed than the WPB to support controls after VE-day.

5. It is not an easy matter to justify the introduction of new controls. Political and business pressures, however unjustifiable, would have to be taken into account. Take, for example, the problem of production of new consumers' durable goods. The WPB might merely point out that it would be very helpful to resume production of standard items rather than de luxe items so long as scarcities prevail. Possibly a special incentive may be given for this purpose. There are, however, some differences of opinion as to whether "standard items" may be easily determined or defined.

6. In the area of consumers' durables, a simple system of distribution control could be introduced until the initial bottlenecks are removed and flows of supplies assured. It would probably not be practical

to introduce a rationing system. The following, however, might be helpful:

Distribution to dealers according to prewar population and purchases, with some corrections for changes during the war; some clarification on priority of needs at least to the extent of assuring priority on grounds of health, essentiality of occupation or industry; and some general instructions for cooperation on the part of dealers.

Finally, it is important to recognize that whether these controls are temporarily maintained or new ones introduced will be determined largely by political considerations. *It may, however, be pointed out to those who object to the retention of controls or to the introduction of new though temporary ones, that much more damage may be done to our system of private enterprise, through effects on prices and distribution, by a premature decontrolling than will be done to it by the temporary maintenance of controls.*

7. The reader should consult the Addendum to this volume, "Reconversion Viewed After VJ-Day," for some final and summary remarks on controls.

8. EXPORTS AND IMPORTS

Before concluding this chapter on controls and prices in the reconversion period, we should comment on the control problems raised in the reconversion period by our exports and imports. In this discussion, we distinguish the short-run considerations (especially period 2 and the early postwar) and the longer run considerations—especially period 4 (the catching-up period) and period 5 (the long pull). In the short run, much is to be said for maintenance of export controls. When serious shortages prevail at home, the FEA—*i.e.*, the agency which is claimant for foreign demands—will be deterred by whatever allocation or ration systems are retained, from making excessive demands. In some cases, export controls should be retained even when domestic ones have been removed. In the first year or two of reconversion, supply and demand may be out of equilibrium on many markets. Under these conditions, the retention of limited export controls may prevent a serious disequilibrium at home or may make it possible to dispense with domestic controls. This is not an argument for discriminatory treatment against foreign purchasers but rather for some control over excessive foreign demands. It is particularly important, in fact, that our long-run export position should not be jeopardized by severe export controls in the first year or two of reconversion.

It was made clear in a letter from President Roosevelt to Mr. Crowley that there was considerable pressure to remove export controls. In the letter the President suggested that only through the removal of controls will international trade once more be reestablished on a high level. He stated further that in order to maintain a full-production and full-employment economy it is necessary to increase exports.

It is quite clear from Mr. Crowley's press release of Oct. 23, 1944 (OWI-3685), that the FEA was relaxing controls at a fairly rapid rate. General licenses (these give virtual freedom to export) were being expanded to cover increasing numbers of commodities, and, for commodities in short supply, were being used for increased values. Again, the decentralization program in Latin-American countries, which was a check on United States exports imposed abroad, was rapidly being scrapped. Furthermore, the FEA used self-rating increasingly as a means of obtaining exports for foreign markets. This, of course, however justifiable it may be on administrative grounds, meant further relaxation of current controls on exports.

In this connection, the large amounts of funds available to foreigners should be noted. In addition to the funds that might be made available under the United Nations Relief and Rehabilitation Administration (UNRRA), the Bretton Woods program, the Export-Import Bank, private lending, any release of $12 billion of blocked balances in London, the following should be noted:

	Billion Dollars
1. Central gold reserves of foreign countries, end of September, 1944.[1] (This compares with $6.3 billion at end of 1928.)	14.4
2. On June 30, 1942, according to the Treasury, foreign-owned gold and short-term assets held in the United States equaled $6.5 billion. To this should be added the major part of the additional inflow of capital, middle 1942, to May, 1944. (A large part of this total is included in (1) above; moreover, to some extent these balances have become part of the domestic cash resources of the country.)[2]	8.0
3. Long-term investments held by foreigners here. Estimate of Commerce Department, end of 1941[3]	5.3

Allowing for the duplication in (1) and (2), the total figure of gold and dollar balances owned by foreigners may well be from $18 billion to $20 billion. Some indication of potential demands may also be given by the large foreign disinvestment suffered by the British in 1940–1944. It may be estimated that by the end of 1944, they had used up $15 billion of their foreign assets *and* in a little more than 4 years had obtained $13 billion of lend-lease aid.[4] Blocked balances of $14 billion[5] in the summer of 1945 or there-

[1] *F.R.B.*, November, 1944, p. 1046.

[2] U.S. Department of Commerce, *The United States in the World Economy*, 1943, pp. 22–23; *Tr. Bull.*, September, 1944, p. 76.

[3] *U.S. in the World Economy*, p. 22.

[4] *Nineteenth Report on Lend-lease*, Mar. 31, 1945, pp. 12–13; H.M. Stationery Office, *An Analysis of the Sources of War Finance . . .*, Cmd. 6520, p. 2.

[5] Estimate of Lord Keynes.

abouts reflected the serious British position. A large part of the gold and dollar balances belonging to foreigners—allowing for minimum reserves against central bank liabilities—($3–$4 billion in gold and foreign exchange held by Latin America alone) may be used to demand goods in this country.[1] Many are starved for our supplies and, fearing unfilled orders, will ask for more than is needed. In short, the foreign situation will require watching. Early in 1945, Justice Byrnes set up a new committee headed by Mr. Crowley of the FEA to scrutinize exports.

In some respects the inflationary pressures associated with foreign demand may, in the early period, exert greater pressures than domestic demands.[2] Total wartime individual savings have been estimated as high as $140 billion. In part, these belong to business, however. Furthermore, a significant proportion of these savings represents repayment of debt: consumer credit, mortgage, etc. It is not likely that, in order to buy consumption goods, the trend toward repayment of debt will be reversed in the near future by the amount that was outstanding in 1941.

There is no unanimity of opinion that a large part of these savings will be used to buy consumption goods. If any serious doubts arise concerning the future employment position, the amounts to be spent will be correspondingly reduced.

Let us, however, assume that $25 billion of these savings will be spent for consumption goods. These dollars represent only one-quarter of the current volume of consumption spending per year and about one-half of the spending in the late thirties. If we compare foreign funds available to be spent here and put them at only $12 billion in the years 1945–1947 (exclusive of amounts obtained through current transactions and inclusive of additional funds made available through UNRRA, lend-lease, Bretton Woods, etc.), we obtain a figure which is four times as large as our *annual* postwar exports. Clearly, the *relative* export pressures resulting from accumulation will be much greater than the pressures of domestic accumulation of purchasing power. (And I emphasize again the word "relative.") Foreign funds are more likely to be spent because deferred demand is larger and the uncertainty in relation to jobs counts for less. *In this analysis, it seems proper to weigh purchasing power in each field against the goods which the cash will be used to buy.*

The question as to where controls should be kept in order to preserve

[1] Seymour E. Harris, *Economic Problems of Latin America*, p. 11.
[2] *Cf.* Chs. XI, XVI.

supplies at home is one that must be determined by those who are conversant with the conditions in each market. Here the OPA will be inclined to be more fearful of the excess of demand over supply than would the WPB, or even the FEA.

The only solution seems to be to weigh the potential supply and demand with care. There are many imponderables, and it is to be expected that experts will disagree. Whether there is a shortage, for example, will depend upon whether prices are high or low, and similarly with incomes. The lower that income is and the higher prices are (with given supplies), the less domestic shortage there will be.

It is also necessary to assess foreign requirements. Large amounts of foreign purchasing power are available; and if the commodities sought by foreigners seem to be scarce, if the foreign buyers are likely to require a substantial proportion, and particularly if the commodity is essential, controls will be required. Much will depend upon the type of commodity. A small deficiency should not require control if it is not an essential commodity, and particularly if the demand is what economists call "elastic."

A word in connection with this should be said about the price problem. Export price control has been very effective in keeping export prices at a reasonable level in relation to our domestic prices. But price control has not been equally effective once the commodities are traded in abroad. Therefore, where there are significant scarcities, the foreign buyer, irrespective of the continuance of export price control, will be able to bid more generously than the domestic buyer. If domestic price controls are retained and enforced, the foreigner will clearly be at an advantage in that he could bid higher prices—that is to say, the diversion to foreign black markets would increase. Export price control would lose in effectiveness.

There is, in short, a danger of an excessive foreign demand. This danger is related to incomes here and abroad, the supply of goods available here and abroad, and the volume of extra purchasing power available here and abroad. *The danger will be greater the higher that incomes are here and the more success we have in maintaining domestic prices at a reasonable level; and the danger will be greater the more success foreign countries have in accumulating gold and dollars and the less success they have in maintaining their own price levels.* Finally, controls of exports *in scarce supply* are consistent with a large volume of exports in 1945-1948 and larger amounts later.

9. CONCLUSION

A lengthy conclusion is not required since several summaries appear in the body of this chapter. I wish, however, to emphasize the following:

1. Just as one control begets another, decontrol in one area weakens other controls and increases the pressure to decontrol elsewhere. In determining decontrol policies, each agency should watch carefully the effects on required control of other agencies. This is especially clear in the relations of WPB and OPA, WPB and FEA, and FEA and OPA. Premature removals by WPB and FEA, for example, might jeopardize the stabilization program.

2. Timing of removal of controls cannot be determined by a neat formula. Much will depend on the relative weight of deflationary and inflationary forces. On these we can only estimate at best.

3. Pricing policies which are adequate for a full-employment economy will not be appropriate in a less than full-employment economy. Although there were serious dangers in an excessive liberality in wartime (and there was much justification for absorption of rising costs and of large profits), the OPA must be careful not to interfere with the incentives which will make it possible to put unemployed factors to work. So long as profits remained as high as in 1942–1944, there were no serious dangers.

4. Foreign nations hold large amounts of purchasing power which may be used to purchase goods on malprovisioned markets. In the early reconversion period, at least, our domestic economy should be protected against excessive demands from abroad. These dangers are intensified by the retention of price control here and any removals abroad.

5. To repeat, the reader should consult the Addendum, "Reconversion Viewed After VJ-Day," for some final and summary remarks on controls.

Chapter XXXI

International Aspects

In Chapter XXX we discussed prices and controls in the reconversion period, briefly touching upon some aspects of the international economic situation in the early postwar. Here our concern is with postwar international economic relations over a longer period. After a brief survey of the past, we take up a discussion of the problems of the future and how to meet them. In this chapter we are interested primarily in the contribution of foreign trade and foreign investment to demand and prices.

1. THE PAST

We are all familiar with the precipitate decline of world trade in the thirties. In United States gold dollars, the decline was from $68.6 billion in 1929 to $27.7 billion in 1938, a fall of 60 per cent. The quantitative decline was much smaller: prices had fallen by 55 per cent, and, therefore, volume was down but 11 per cent. But this reduction in prices was in itself a disaster. Millions of producers of primary products were confronted with a large drop in prices and were, for the most part, unable to shift into more profitable lines. Had they been able to do so, prices would have responded upward. Thus $40 billion of world income vanished. In fact, the gross reduction was even larger, for exporters reacted to falling incomes by curtailing purchases, thus pulling other groups down with them. An offset was any growth of domestic income associated with the decline of imports and increased protectionism. The continued decline of world income indicated, however, that this was by no means enough.

World trade in that period, then, declined both absolutely and in relation to national income. *Decline in the latter accounts for reduction in the former, and the ensuing contraction of trade in turn further reduces income.* Our export trade fell, moreover, relative to the world's export trade.

Whereas this country's share of world imports was 16.8 per cent in 1929, it was but 12.8 per cent in 1933–1938. There are various explanations of our relative decline. The price-raising policies of American agriculture; the scarcity of dollars which was both cause and result; the inability of a democratic country committed to a most-favored-nation clause to hold its own in a world of increasing restrictionism—these are some of the relevant factors.[1]

In the thirties a serious scarcity of dollars seems to have developed, although in the views of some critics the problem antedates the thirties. Whatever the precise date of origin, the problem was clearly more serious in the thirties than in earlier years. *In a world of orderly adjustments, a scarcity of dollars should not persist.* If dollars are temporarily scarce (assume a gold standard—though the analysis could be adapted to a paper standard), foreign countries should lose gold as dollars are purchased, and the United States should gain gold. (The foreign country buys dollars with gold.) Prices should fall abroad and rise here; the rate of interest rise abroad and fall here. We should export less and import more, and we should lend more and borrow less. Foreign countries should sell more and buy less and borrow more and lend less. Their supply of dollars should thus be replenished.

Unfortunately, in response to gold movements, costs and prices may not fall abroad adequately and may not rise here; and capital moves in response to political and economic prospects as well as to changes in the rate of interest. From 1934 to 1940 (inclusive), despite the scarcity of dollars, $7.5 billion of capital (net) moved to this country. Instead of relieving the scarcity of dollars, the flow of capital tended to aggravate it.

In those years, also, the increasing demands for armaments counted more heavily in the determination of trade than did price movements. Any relative rise of prices, insofar as it occurred, was more than offset by the rising demand for our products. *In fact, the general thesis might be presented that the long-run scarcity of dollars is related to a continued relative gain in our international economic position. These gains—continued reduction of costs, improvements of marketing, the relative intensification of foreign de-*

[1] See especially U.S. Department of Commerce, *The United States in the World Economy*, 1943, pp. 1–27, 55; A. Maffry, "Foreign Trade in the Post-war Economy," *S.C.B.*, November, 1944; "Foreign Trade, Capital Movements, and International Reserves," *F.R.B.*, November, 1944, pp. 1037–1048; E. G. Draper and W. Gardner, "Goods and Dollars in World Trade," *ibid.*, pp. 1049–1053; League of Nations, *Review of World Trade*, 1938; NPA, *America's Opportunities in World Trade*, 1944.

mands for our goods, the deterioration of economic and political conditions in Europe and Asia—may well offset the inherent tendencies of prices and interest rates to respond to the scarcity of dollars and gold and exchange movements.[1]

In the war period, the situation was corrected to some extent. Foreign countries and the United Kingdom in particular sold large amounts of foreign assets as a means of meeting war needs. In addition, they were able to obtain dollars through lend-lease. In a period of little more than 4 years the British obtained $13 billion in that way and, by the end of 1944, had disinvested $15 billion through sales of foreign assets and loans. In all, the U.S. Government provided $29 billion of aid through lend-lease by April, 1945.[2] Not only have we thus provided more dollars, but we have also increased our requirements of foreign currency through our purchases in the few remaining markets where supplies might be obtained.

A concise picture of the changes in gold holdings is given in Table 150.

TABLE 150.—GOLD HOLDINGS OF FOREIGN COUNTRIES

(Lines 1–2 = $20.67 per ounce; 4–6 = $35.00 per ounce)

	Billion Dollars
1. Holdings, end of 1928	6.3
2. Gain, January, 1929–January, 1934	2.2
3. Rise, January, 1934—due to change in price to $35 per ounce	5.9
4. Loss, February, 1934–December, 1940	5.6
5. Gain, January, 1941–September, 1944	5.6
6. Amount held end September, 1944	14.4

SOURCE: *F.R.B.*, November, 1944.

Whereas foreign countries held but $6 billion of gold in 1928 and from $7 billion to $8 billion ($21 per ounce) in gold *and dollar exchange*, they held $8.8 billion ($35 per ounce) at the end of 1940 and $17 billion (gold and dollar exchange) in September, 1944. In the years 1929–1934 the gains were small indeed—as compared with total output—and in 1934–1940 there was a net loss of $5.6 billion. From the

[1] See especially *The United States in the World Economy*, pp. 1–12; E. M. Bernstein, "Scarce Currencies and International Monetary Fund," *J.P.E.*, March, 1945; C. P. Kindleberger, "International Monetary Stabilization," in *Postwar Economic Problems* (edited by Seymour E. Harris), McGraw-Hill, 1943; and "A Symposium on Bretton Woods," *R.E.S.*, November, 1944.

A scarcity of dollars may be reflected in losses of gold by foreign countries, in weakness in exchanges (Latin America in the thirties), or in the persistence of deflationary policies (gold bloc in the thirties).

[2] *Nineteenth Report to Congress on Lend-lease Operations, for the Period Ended Mar.* 31, 1945, p. 12; H.M. Stationery Office, *An Analysis of the Sources of War Finance . . .*, Cmd. 6520, 1944, p. 3.

beginning of 1941 through June-July, 1945, foreign countries acquired over $5 billion of gold while United States stock fell by $2— billion. In short, as a result of the war and the large credits made available here, the distribution of gold between the United States and foreign countries had improved. All foreign countries did not by any means share in this improvement.[1]

In the interwar period, countries, embarrassed by an adverse balance of payments, took defensive measures which may be classified as follows: First, some countries, notably the gold bloc and the British before 1931, relied primarily on readjustments in the domestic cost and price structure: reorganization of industry; improvements in techniques; wage cutting; reduction of capital charges; shifts of taxes from costs to surpluses; and trade restrictions. Through recourse to cost and price-cutting measures, these countries hoped to expand exports and stop the outflow of gold and the pressure on the exchanges. On the whole, they had little success.

Second, many countries relied *predominantly* on what have come to be known as "beggar-my-neighbor" remedies. (Those in the first group also had recourse to these measures to some extent.) Agricultural countries, the United Kingdom after 1930 and the United States to some extent, despite the strength of the dollar, had recourse to measures subsumed under this heading.

The relevant attacks were increases in tariffs, introduction of quotas, clearing agreements, exchange depreciation, and exchange control. In general, the effect of these measures is to raise prices at home and depress them on world markets. They are the means of isolating individual economies against the external deflationary forces at work. *Each country thus aims to increase its supplies of gold at the expense of the outside world and under exchange control and exchange depreciation to obtain at least a modicum of independence in the supply of money made available to the economy.* They thus offset the excessive demand for foreign exchange resulting from *relative* monetary expansion through the offer of goods at reduced prices in world markets and through a discouragement of purchases of foreign exchange. Once these measures become quite generally applied, the pressure on national prices, associated with exchange policies, will be upward.[2]

[1] *F.R.B.*, November, 1944, pp. 1037–1045; August, 1945, p. 794.

[2] See H. S. Ellis, *Exchange Control in Central Europe*, 1941, and Seymour E. Harris, *Exchange Depreciation*, 1936.

2. EXPORTS IN THE FUTURE

In this country there is strong sentiment for an expansion of exports in the postwar. Many favor this expansion on the grounds that in the absence of a large export demand, a high level of employment will not be achieved. They are impressed by the large expansion in consumption and private investment required and by the political difficulties of introducing an adequate public investment program. *If there is a gap to be filled and if public investment on an adequate scale is not available, then why not have recourse to exports?* Representatives of the Foreign Economic Administration, the Department of Commerce, and the National Planning Association have supported a large export program for reasons such as suggested here. Although our exports in the thirties were around $2 billion, they envisage postwar export trade at $10 billion. At a high-employment income, for example, imports may be put at $6 billion; an additional $1 billion of imports could be had through tariff reductions; and $3 billion of exports might, over a period of 10 to 20 years, be financed through loans.[1]

It is generally assumed that the rise of exports will yield a corresponding expansion of demand and jobs. In fact, on the assumption that there would have been large amounts of unemployment in the absence of these additional exports, the gains on the multiplier principle may exceed the rise of exports by 100 per cent or thereabouts. There are some offsets, however. Against the rise of exports is to be put the gain in imports. *If exports yield more jobs, imports may be at the expense of domestic employment. Yet even this is not exactly accurate. To some extent, imports are not competitive with domestic products.* They may be complementary (*e.g.*, silk, tin); they may include food products not produced here (*e.g.*, coffee, tea, etc.); and they may be luxury items not in strict competition with United States products (*e.g.*, British linens, Russian skins). Thus, additional imports may not be at the expense of American employment though to some extent they are competitive in that they strive for the favor of the American consumer (*e.g.*, foreign cheeses). We may buy more bananas and less meat; more woolens from Great Britain and less from Vermont.

This stimulus associated with the expansion of exports is held to

[1] *The United States in the World Economy*, pp. 12–25; Testimony by L. Currie, Deputy Administrator of the Foreign Economic Administration, Sept. 28, 1944, before the Sub-Committee of the House on *Postwar Planning* (mimeographed); NPA, *America's Opportunities in World Trade*, pp. 28, 62; Maffry, *op. cit.*

be especially important in the transitional period. Many of our industries are overexpanded. It will take time to bring them down to a peacetime basis and to effect a redistribution of man power geographically and occupationally. An opening up of foreign markets, it is held, will ease the transition. Our peak production in 1943 was over forty times the 1939 production for ships, seven times for aluminum, fifty-eight times for magnesium, seven times for machine tools.[1] Moreover, our export trade more than ever is going to be in industries which are subject to large fluctuations. A serious decline in the output of these industries will react unfavorably on the whole economy. These considerations, as well as the expected large reduction of government expenditures, are advanced as strong reasons for the encouragement of our export trade.

Yet in the longer run, the encouragement of exports through lending will be a mistaken policy unless this country is prepared to increase its imports by an amount that exceeds the rise of exports associated with lending, by the earnings on the capital sent abroad. Otherwise, though the exports may prove to be an important stimulus, they will have been sent abroad gratis, whereas corresponding supplies of goods might have been distributed here. I say "might have been" advisedly. Actually the required policies of domestic public investment encounter stiff political opposition. It may then pay to expand exports even if large defaults follow—this on the assumption that the rise of output substantially exceeds the value of losses.

Abroad there is much opposition to our "exports for employment" policy. The British in particular are worried. Their international position is much weaker than it was in 1939. They have lost around one-half of the income from nonmerchandise exports (securities, shipping, etc.), and they face increased protectionism abroad. In the years 1936–1938 their imports exceeded exports by £300 million. Approximately £100 million were covered by shipping income and £200 million by net investment income and there was also a net deficit of £44 million. At least £150 million of net earnings on these invisible items will be gone at the war's end.[2] In approaching full employment, the British will expose their industries to rising costs and some upward

[1] NPA, *op. cit.*, p. 49.

[2] NPA, *Britain's Trade in the Post-war World*, December, 1941, p. 15; also see U.S. Department of Commerce, *Some Factors in Postwar Export Trade with the British Empire*, September, 1944, pp. 1–23.

pressure on prices at home. This will not improve Great Britain's export position. To her £550 million of prewar exports she will have to add at least £100 million annually to finance some £3,500 million or more of blocked balances, £100 million of additional imports required by the rise of income above prewar levels, and £150 million to offset the loss of earnings on securities, ships, etc. The net rise required will be around two-thirds. To accomplish this, the British are prepared to keep wages and prices down; rely primarily on encouragement of export industries through allocations and other state measures; intensify the rationalization movement until export industries are once more making the necessary contribution; cut domestic industries catering to consumption to a minimum and in general exclude nonessential demand. *Although the British are determined to retain some flexibility in their exchange and monetary arrangements, the main reliance, it is hoped, will be through direct attacks on costs and the development of markets.* If these do not suffice and particularly if the failure to sustain a high level of employment in the United States induces depression abroad and reduced demand for British products, then the British will have to rely on bilateralism, cartel arrangements, exchange depreciation, and careful scrutiny of all demands for foreign exchange. Equilibrium can be attained in a world of high incomes, of a high level of trade, and of relaxation of barriers; or in a world of low incomes and reduced volume of trade and increasing barriers.[1] *One way out is to rely on foreign prosperity and relaxation of trade barriers to build up British trade. Another approach, and one apparently supported by Messrs. Beveridge and Brown, is to rely on scrutiny of imports.*

It will be fortunate for the British if the United States helps restore Europe and provides development loans which will increase world incomes and hence the demand for British goods.[2] In the early postwar years the British will not be prepared for a vigorous renewal of exporting. Once having reestablished their industries on a peacetime basis,

[1] For various views on British attitudes see the British White Paper on *Employment Policy*, 1944, pp. 4–5, 17–19; A. J. Brown, *Industrialization and Trade*, 1943, pp. 54–71; Sir William Beveridge, "The Government's Employment Policy," *E.J.*, June–September, 1944, pp. 168–169; *Full Employment in a Free Society*, 1944; and *The Economist* (London), currently.

[2] For the current proposals for monetary stabilization and renewal of capital loans, see especially: United Nations Monetary and Financial Conference, *Final Act and Related Documents*, July, 1944; E. A. Goldenweiser and A. Bourneuf, "The Bretton Woods Agreements," *F.R.B.*, September, 1944; R. Nurkse, *International Monetary Stabilisation*, League of Nations, 1944; Irving Trust Co., *International Financial Stabilization*, 1944, especially the essay by Prof. Viner; A. H. Hansen, *America's Role in the World Economy*, 1945; E. L. Dulles, "Bretton Woods Monetary Conference," etc., *Foreign Policy Reports*, Sept. 1, 1944; H.M. Stationery Office,

they await cooperative policies in the United States. These cooperative policies in the United States will be to focus attention on imports, not exports; to rely on domestic investment to fill the gap in spending, rather than upon continued excess of exports and in particular exports subsidized by foreign loans which in substantial part may not be repaid; to relax trade barriers. In the British view, exports to pay for necessary imports are much more essential than exports for full employment. Yet both British exports and ours may rise in a prosperous world. In the long run, however, our imports must rise more than our exports.

3. CONCRETE ATTACKS

We have learned some lessons from the history of the last 25 years. Under relatively prosperous conditions, recourse to trade restrictions is considerably less than under depressed conditions. An indispensable condition for a high level of world trade is a high level of world income. Unless this is achieved, the programs for international collaboration are almost certain to fail. Let us give one instance. Assume that the managers of the International Monetary Fund proposed at Bretton Woods sponsor a depreciation of sterling and (hence) an appreciation of other currencies. This is equivalent, as a rule, to a stimulus to British trade and a deterrent to (say) United States trade. Appreciation through its downward pressure on *domestic* prices [1] of exports and imports and through the ensuing tendency to export less and import more contributes to a decline of demand and output. Whereas at high-income and -employment levels, we may readily acquiesce or even welcome appreciation, under conditions of depression we would be disposed to object strenuously.

Most economists would also agree that although exchange depreciation and exchange control might be justified under given circumstances, the discouragement of recourse to them and in any case the control of their use by an international body would be welcome. Other measures which might be subsumed under the term "bilateralism" also have

Proposals for an International Clearing Union, Cmd. 6437, 1943; Canadian Experts, "Tentative Draft Proposals of Canadian Experts for an Interntaional Clearing Union," *F.R.B.*, January, 1944, pp. 37–41; J. Robinson, "The International Currency Proposals," *E.J.*, June–September, 1943, pp. 161–175; "A Symposium on Bretton Woods," by Messrs. Condliffe, Haberler, Halm, Hansen, Harris, and Lachmann, *R.E.S.*, November, 1944; Essays by Messrs. Haberler, Bernstein, Wallich, and Upgren in *Economic Reconstruction*, *op. cit.*; E. M. Bernstein, "Scarce Currencies and the International Monetary Fund," *J.P.E.*, March, 1945; J. H. Williams, *Postwar Monetary Plans and Other Essays*, Part I, Knopf, 1944.

[1] British prices would be pushed upward.

tended to deter trade. Our experience in the interwar period, then, suggests that exchange depreciation should be subject to scrutiny by an international body; that exchange control, with some exceptions, should be removed as soon as practical; that control of capital movements, in the light of the disturbances caused by them, be encouraged; and that we gradually revert to multilateral systems of trade.

We are not, however, suggesting return to the old gold standard. The world demands the right to determine monetary supplies according to the requirements of the domestic economies. When inflation threatens, it is required that monetary supplies and total demand be reduced; when deflation threatens, the correct policy is to inject additional supplies of money and to stimulate demand. As part of these policies, it may be necessary to appreciate exchanges (*e.g.*, Latin America in 1942–1944) in the former case, and depreciate in the latter case. The difficult problem is to reconcile domestic independence with international stability. The British are prepared to renounce exchange flexibility and controls *at least* to some extent, at a price. In return, they ask for adequate international funds to assure a measure of stability and a high level of trade. If these are achieved, the need for exchange flexibility and controls will be reduced.

"We need a *quantum* of international currency, which is neither determined in an unpredictable and irrelevant manner as, for example, by the technical progress of the gold industry, nor subject to large variations depending on the gold reserve policies of individual countries; but is governed by the actual current requirements of world commerce, and is also capable of deliberate expansion and contraction to offset deflationary and inflationary tendencies in effective world demand.

"More generally, we need a means of reassurance to a troubled world, by which any country whose own affairs are conducted with due prudence is relieved of anxiety for causes which are not of its own making, concerning its ability to meet its international liabilities; and which will, therefore, make unnecessary those methods of restriction and discrimination which countries have adopted hitherto, not on their merits, but as measures of self-protection from disruptive outside forces." [1]

Our advances lie along these lines: A country with an adverse balance of payments should be encouraged to take corrective measures. A temporary deficit may be covered through temporary loans. Under the Bretton Woods Agreements, provision was made for the establishment of an international monetary fund with quotas of $8 billion. Par-

[1] H.M. Stationery Office, *Proposals for an International Clearing Union*, 1943, p. 5.

ticipating countries may borrow from this fund on terms stipulated in the agreements. In this manner, countries are encouraged to support healthy monetary expansion, aware that every deficit which cannot be covered by reserves will not require exchange depreciation or fundamental adjustments at home.

When the deficits are large and sustained, other remedies will be required. It is possible that prices and exchanges are not in equilibrium. British exchange may, for example, be too expensive at British prices relative to world prices. It is possible then that a depreciation which is approved by participating countries will once more restore price and exchange equilibrium and that the pressure on British reserves and exchanges will subside.

If the maladjustments are serious, exchange depreciation may not be enough. It may then be necessary to reduce costs through rationalization; discourage domestic industries and encourage import competing and export industries; reduce wage rates; find new markets and new industries; control the exportation of capital. And so on. Many countries will prefer to borrow or to resort to exchange depreciation, rather than make use of direct attacks such as those mentioned above. Yet it is not clear that exchange depreciation will not frequently do more harm than good. The objective is to reduce prices of a country's exports on world markets; but exchange depreciation brings less favorable terms of trade, and it does not necessarily increase the flow of foreign exchange. Much depends on the attitude of competing countries—they may also ask for permission to depreciate. In that case, the elasticity of demand may not be high—for the price reduction is countered by similar reductions by competitors. Other nations may also raise tariffs against the countries depreciating their exchanges.[1] In short, it is well to make provision for exchange depreciation and to urge its use by countries which are in a relatively weak international position and which otherwise would make excessive use of the international funds made available. But it is well at the same time to remember that depreciation may be only a palliative; surgery may be required.

It is also necessary to renew the flow of capital from the wealthy nations to the impoverished ones. Exports of capital may be required to ease the transition for expanded industries in this country and for our economy as a whole. They are required even more to provide a signifi-

[1] *Cf.* G. Haberler in *Economic Reconstruction*, Seymour E. Harris, Editor, pp. 319–335; see especially pp. 332*ff.*

cant part of the $40 to $70 billion of capital for reconstruction in Europe and $110 to $130 billion for development purposes required in the first postwar decade. This is a crude estimate of the National Planning Association.[1] Unless Europe is reconstructed and backward nations receive help, world incomes will be inadequate to support a high level of trade.

The proposals at Bretton Woods for an international bank for reconstruction and development brought these problems to a focus. As far as possible reliance should be had on private funds. Large amounts from private sources will not, however, be forthcoming unless governmental guarantees are offered. Under the Bretton Woods Agreements, the foreign government or central bank and the International Bank will guarantee the loans.

This procedure has certain advantages over the interwar practices:

1. A guarantee by the foreign governments involved and by the International Bank will tend to reduce the rate of interest and thus make loans more attractive and repudiation less likely.

2. Guarantee by the borrowing government is at least a promise of investigation of the loans as to productiveness and as to its potential yield of foreign exchange. It also carries the presumption that if exchanges are rationed later, exchange required for financing the loan will be given a fair priority.

3. A guarantee by the Bank will reflect scrutiny by the Bank as to productiveness and exchange potential.

4. The amount made available will be restricted to the foreign exchange required. In other words, if a loan of $10 million is demanded and $5 million is needed to buy goods abroad, the borrower will obtain only the $5 million of foreign exchange. Domestic sources will have to provide the other $5 million. If the loan should have an adverse effect on exports—through bidding away of factors of production, for example—this will be taken into account.

5. The participating creditor countries are more likely to take appropriate measures (*e.g.*, reduction of tariffs) to assure repayment of loans than under the system of private lending before the war.

Finally, provisions for orderly readjustment of exchanges, removal of exchange control, renewal of foreign lending, however helpful, will not reestablish international equilibrium unaided. *It is necessary to reduce tariffs; to protect prices of primary products against excessive fluctuations;*

[1] *America's Opportunities in World Trade*, p. 52.

and above all to assure a high level of income and employment in the leading industrial countries. Programs for monetary stabilization and renewal of lending are a starting point. Even these are not easy to carry out. Consider, for example, the appropriate exchange rates in a world of controls and gradual demobilization of control; of capital movements of unknown dimensions; and of chaotic trade conditions. Yet monetary stabilization is much easier to achieve than a program for tariff reform. Those who ask for tariff reform *first* are either insincere in their advocacy of monetary stabilization or naïve. They should consider how little progress in tariff reform has been made since 1930.[1]

Of this we may be sure. We are not likely to experience a high level of income and demand unless we attain a high level of trade. And we shall not succeed in reducing tariff barriers unless we maintain a high level of income. Once income begins to fall, the decline of prices and incomes will be accentuated by the ensuing spread of restrictions. A cumulative decline will then set in which will end only with the adoption of purely nationalistic monetary and nonmonetary policies. Each nation will then determine its monetary supplies according to its own needs and will pay little attention to international considerations. Trade will contract and exchange relations become most unstable.

We shall not have stability, furthermore, unless dollars become more plentiful. Fundamental disequilibrium must then be corrected. *We have to face the fact that a relative improvement of the international economic position of foreign countries vis-à-vis the United States is required.* In part this may be achieved through a rise in the price of dollars relative to foreign currencies; in part through a more rapid development of foreign economies —reduction of costs, diversification of products, stimulation of export industries; and in part by relative rises of prices and a reduction of tariff barriers in this country. The Bretton Woods program will help to bring about relatively more rapid improvement in foreign economies and the appropriate adjustments in exchange rates. *It is imperative that through Bretton Woods and supplementary measures equilibrium be reestablished. If it is not, then we shall have to continue our excessive imports of gold or increase our credits to the outside world.*

[1] W. W. Aldrich, *Some Aspects of American Foreign Economic Policy*, September, 1944.

Chapter XXXII

Regional Aspects

1. INTRODUCTION

So far in Part IV we have discussed the problems of the postwar in terms of over-all supply and demand conditions. This is not enough. *Total demand may be adequate and yet large deficiencies of demand and substantial amounts of unemployment may develop for the products of special industries and in various localities.* These dangers were much increased by the large and uneven expansion in different parts of the country. In the war period, pressures on particular markets increased more than in others: this was reflected in the varying rate of increase in population, employment, income payments, bank deposits, the cost of living (the last in part reflects an increased importance of black-market transactions). Areas that had especially rapid growth as a result of the large expansion in wartime industries are the very ones likely to lose much ground in the postwar. They will suffer especially from downgrading, loss of jobs, deposits, and incomes; and, unless strong measures are taken to move excess populations or to control the distribution of manufacturing facilities (*e.g.*, subsidization of war plants or encouragement of industries in areas of excess employable population), strong deflationary pressures will be felt, resulting in reduced prices and increasing unemployment in these areas. Sir William Beveridge stressed the need of an organized mobility of workers and control of location of industrial plants—if these regional maladjustments are to be corrected.[1]

When over-all demand is deficient throughout the nation, the net effect of maldistribution and immobility will be that the incidence of unemployment throughout the nation is unevenly distributed: it will be concentrated disproportionately in certain areas and on a limited number of individuals; and distribution of the working population in terms of maximum productivity will to this extent be impaired.

[1] See Sir William Beveridge, *Full Employment in a Free Society*, pp. 166–175, Norton, 1944.

When, on the other hand, over-all demand is more than high enough to assure full employment, the effect of maldistribution is unfilled vacancies in some areas and unemployment in others.

2. WAR MIGRATION

Chart 114 reveals some aspects of the war shifts in population. For the country as a whole, total population from Apr. 1, 1940, to Nov. 1, 1943, rose by 5.6 millions. Of this total, 5.3 millions are explained by excess of births over deaths and 300,000 by immigration.

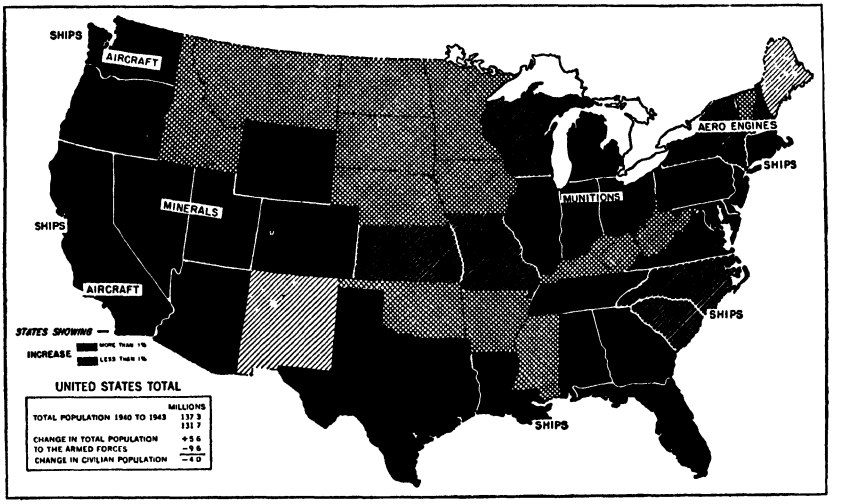

CHART 114.—War shift in population, 1940–1943. (*Source: U. S. Bureau of Labor Statistics.*)

Civilian migration inward was 3.7 millions; outward, 3.4 millions. The largest gains thus reported were California, 1.4 million; Michigan, Washington, Maryland, Ohio, District of Columbia—all between 200,000 and 300,000. The largest losses were suffered by agricultural states: Oklahoma, 309,000; Kentucky, 263,000; North Carolina, 263,000; Arkansas, 225,000. New York lost 223,000 and Georgia, 113,000.[1] From April, 1940, to November, 1943, the wartime population change was 5.6 million, whereas the average prewar population change over 43 months in the 1930–1940 decade was 3.2 million. Wartime excess growth was, therefore, 2.4 million. California absorbed 1,150,000 of this abnormal rise; Michigan, 364,000; Ohio, 356,000; Washington, 240,000.

[1] *State Variations in War Migration and Post-war Demobilization*, BLS Serial *R* 1691, September, 1944, especially pp. 1–13.

Again agricultural states frequently gained less than during an equal period in the thirties. New York, not primarily agricultural, gained only 65,000, as compared to a corresponding peacetime rise of 321,000.

From these statistics the Bureau of Labor Statistics draws some interesting conclusions: What is the extent of demobilization (relative to numbers employed in 1940) for individual states on the assumptions that (1) 8.8 millions will be demobilized from the armed forces and (2) 5.4 million workers will have to be demobilized at least temporarily from 12 munition industries ("comprising all or part of 12 major manufacturing-industry groups that have been greatly expanded during the war, and that are now dependent in very large part upon a war-induced demand"). A healthy reconversion timed to replace war demands would, of course, reduce the amount of required demobilization. Yet there would be serious differences regionally between numbers to be demobilized and numbers of new jobs opening up.

The percentage of numbers to be demobilized to the numbers employed in April, 1940, is estimated at 31.5 per cent for the country. The states with 40 per cent or more are Washington (47.0), Connecticut (45.7), Michigan (43.8), California (42.9), Indiana (41.6), Nevada (41.0), Oregon (40.2), and Ohio (40.0). The minimum is 17.2 per cent for South Dakota; the percentage for New York is 28.4 per cent.

Other agencies also present figures of migration. According to the Department of Commerce, 20 states account for an increase in the percentage of their nonagricultural employment to the total of 3.6 per cent from 1939 to May, 1944. The largest rises were in California (1.0 per cent), Texas (0.5 per cent), and Ohio (0.4 per cent); the largest losses, New York (1.2 per cent) and Massachusetts and Pennsylvania (each 0.3 per cent).[1] According to the Committee for Congested Production Areas, the rise in total residential population from 1940 to 1944 was 111 per cent in the San Diego area, 91 per cent in the Hampton Roads area, and from 10 to 68 per cent in the other eight congested areas. In many instances, the rise of the Negro population was especially alarming—I say alarming because if total demand is not high, the incidence of unemployment will be especially felt by the Negro workers. In the Detroit-Willow Run area, for example, the white population expanded by 5 per cent and the Negro population by 47 per cent. In many of these areas, large proportions of migrant

[1] E. C. Bratt, "Wartime Changes in Regional Concentration," *S.C.B.*, March, 1945, pp. 14–17.

workers had come a long distance. (Of the San Diego migrants, 74 per cent had come a long distance; of the Detroit-Willow Run migrants, 61 per cent.) If jobs open up elsewhere, the migrants may move, especially if financial help is available. Many have, however, expressed a desire to remain. (Eighty per cent preferred to remain in the Seattle area.) [1]

Large migrations in war will not be completely reversed in peace. A significant proportion of the migrant population that has gone to California, Washington, Connecticut, Michigan, and Ohio will want to remain. Wartime plants will have to be retained in these areas (often through subsidies) or new plants directed into them. Otherwise large amounts of unemployment may result even under conditions of satisfactory over-all demand.

Already political pressure is being exerted to support industry in the newly industrialized areas and to shut down war plants in the old areas. The McCarron Committee, for example, urges that industries be retained in the war-boom areas of 17 Western states so that 3 million people who moved into these areas have the means of livelihood; and the committee contends that any gains in income would be reflected in increased demand for eastern products; that the 11 Eastern states, which in 1939 accounted for 65 per cent of the nation's manufacturing although their 66 industrial areas accounted for but 2 per cent of the nation's area, should not be allowed to expand further at the expense of the rest of the country. According to this committee, these Eastern states acquired $9 billion of war plants, $7 billion of which represent public money; and the plants are relatively easy to reconvert. The West, on the other hand, according to the committee, acquired costly plants with a relatively low degree of convertibility. In short, the argument is for tipping the scales in favor of the new industrialization of the West.[2]

3. SPECIAL INDICES

A. INCOME PAYMENTS. The wartime rise of income payments in the United States was indeed very uneven. Chart 115 gives the results

[1] Committee for Congested Production Areas, *Observations on the Sample Censuses in Ten Congested Production Areas*, December, 1944, especially, pp. 5–11. *Cf.* Senate Res. 102 on *Post-war Economic Policy and Planning*, Senate Doc. 106, October, 1943, pp. 7, 82, 140; and E. D. Goldfield, "The Wartime Labor Force in Industrial Areas," *Review of Economic Statistics*, August, 1945.

[2] Senate Special Committee *To Investigate the Centralization of Heavy Industry in the United States*, Oct. 7, 1944, pp. 1–6.

for the years 1941 to 1943. The largest gains were in the South and Far West, the smallest in the Northeast. Incomes in Arizona and Florida, for example, were up by 97 and 95 per cent, New Hampshire and New York, 23 and 30 per cent, respectively. The smallest per capita increases were to be found in New England and the Middle Atlantic states, the largest in the Northwest and Southeast. In 1939, New England's share of total income payments was 8.12 per cent; but in

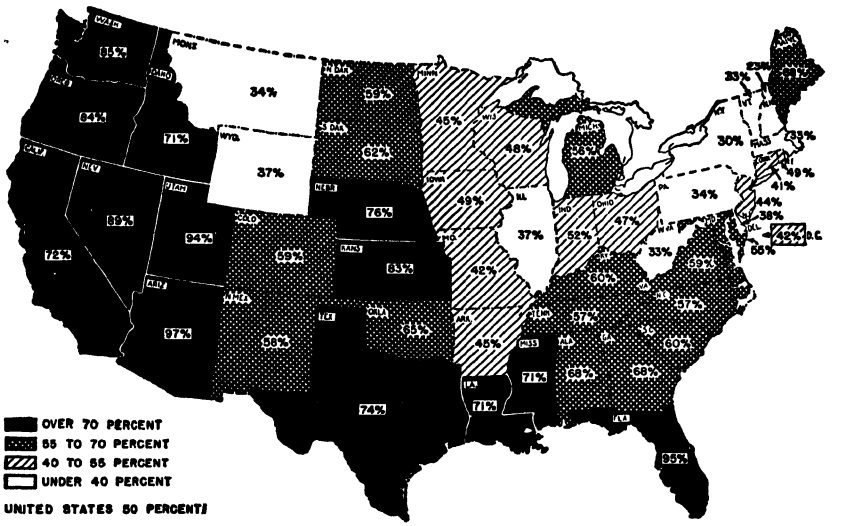

CHART 115.—Percentage increase in total income payments, 1941 to 1943, by states. (*Source: U. S. Department of Commerce.*)

1943 only 7.38 per cent; corresponding figures for the Middle Atlantic region were 32.27 and 27.51 per cent; for the Far West, 9.53 and 12.02 per cent.[1]

Of particular interest are the regional gains for each important kind of income *as a proportion to total income payments.* These will indicate where the deflationary pressures will be especially burdensome in the transition period. For New England and the Middle Atlantic states, the large gains were in manufacturing for war. Salaries and wages in these industries were up from 10.1 and 7.7 per cent of total income payments in 1939 to 25.5 and 19.8 per cent in 1943, respectively. In the Southeast, the larger gains were in government payments: a rise from 9.4 to 21.5 per cent for the same period. Similarly, in the Southwest, the gains in

[1] Figures based on C. F. Schwartz, "State Income Payments in 1943," *S.C.B.*, August, 1944, pp. 12–20.

government payments were from 9.5 to 20.2 per cent of total income; though the *relative* gains there in manufacturing for war were very large (1.8 to 9.0 per cent), the *absolute* gains were only about two-thirds as large as for salaries and wages in government. For the Central states the improvement was mainly in manufacturing for war: salaries and wages in these industries (again 1939 to 1943) were up from 14.0 to 28.1 per cent. (A substantial gain was also recorded in farming.) In the Northwest, farming registered the largest absolute gain (13.3 to 25.2 per cent) and war manufacturing the largest relative gains (1.6 to 6.7 per cent). In the Far West, the increase for manufacturing wages and salaries was phenomenal: from 3.7 per cent in 1939 to 20.9 per cent in 1943; and government's contributions rose from 9.7 to 14.6 per cent.

With a decline in farm prices and incomes, the deflationary pressures will be felt especially in the Northwest and Central states; with a decline in government payments, the weight of deflation will be borne especially by the Southeast and the Far West; and with the cutbacks in war contracts, the greatest losses will be incurred in the Far West, Central states, New England, and the Middle Atlantic. The largest over-all deflationary pressures will be borne in the Far West and the South. This discussion is in relative terms. It need scarcely be added that deflation of government expenditures, farm prices, and cutbacks will have adverse effects throughout the country.

B. WAGES AND REGIONAL DEFLATION. In the postwar, manufacturing is likely to contribute a smaller part of our national income; and the so-called "war industries" will especially suffer. Areas which profited from war business will experience large declines in their income. The average annual wage in manufacturing war industry was $1,524 in 1939 and $2,745 in 1943, the rise approximating 80 per cent, whereas in 1943 wages in nonwar manufacturing industries were but $1,804, the rise over $1,250 being less than 50 per cent.[1] Furthermore, the average wage in manufacturing was, on the whole, higher in the sections where total expansion of war industries was large. The highest wage rates in the spring-summer of 1943 in selected manufacturing occupations were paid in the following: Detroit, 131; Toledo, 127; Portland, 117; Seattle, 116; San Francisco, 114; Pittsburgh, 113.[2] In short, wage deflation will be large in areas manufacturing for war because the loss of employment will be felt especially in war industries in which wages and pay rolls are high. Furthermore, wages are

[1] *S.C.B.*, August, 1944, p. 15.

[2] 100 = average for all urban centers.

especially high in areas where war expansion has been large. The numbers employed will greatly decline; and the relative number of high-paying jobs will be reduced.[1]

4. THE GENERAL PICTURE

Table 151 yields an excellent picture for the period 1939–1943 of the varying rate of changes in important variables for different parts

TABLE 151.— SUMMARY OF REGIONAL CHANGES, 1939–1943

Region	Civilian population *	Employment				Income payments	Bank debits	Electric energy consumption	Business population †
		Total	Non-agricultural		Agricultural				
			Total	Manufacturing					
	Percentage change (increase except as otherwise indicated)								
United States	−2.4	17.5	25.0	44.5	−3.2	61.5	56.8	45.4	−7.6
New England	−2.9	21.6	23.9	38.3	−1.6	53.3	47.6	34.1	−7.9
Middle Atlantic	−4.0	18.0	19.6	38.3	−1.6	43.6	46.0	35.8	−7.1
East North Central	−1.9	20.5	25.5	43.4	−2.5	60.9	61.4	45.7	−5.6
West North Central	−8.0	10.6	17.8	48.9	0.3	69.0	51.4	30.4	−9.8
South Atlantic	1.0	17.3	30.8	34.6	−5.5	73.9	66.7	57.3	−5.3
East South Central	−4.8	9.7	30.6	48.1	−6.8	83.1	71.5	101.5	−6.4
West South Central	−3.2	10.7	25.4	47.0	−4.3	78.1	55.4	39.6	−11.7
Mountain	−3.0	14.8	21.7	51.5	2.1	68.9	55.1	42.9	−11.4
Pacific	7.3	31.6	38.5	105.2	1.9	80.9	62.5	48.6	−7.9
	Rank according to percentage change								
New England	4	2	6	7	4	8	8	8	5
Middle Atlantic	7	4	8	8	5	9	9	7	4
East North Central	3	3	4	6	6	7	4	4	2
West North Central	9	8	9	3	3	5	7	9	7
South Atlantic	2	5	2	9	8	4	2	2	1
East South Central	8	9	3	4	9	1	1	1	3
West South Central	6	7	5	5	7	3	5	6	9
Mountain	5	6	7	2	1	6	6	5	8
Pacific	1	1	1	1	2	2	3	3	6

SOURCE: Bureau of Foreign and Domestic Commerce, U.S. Department of Commerce, *Regional Shifts in Population, Production, and Markets*, 1939–1943, November, 1943.

* Change from April, 1940, to March, 1943.

† Change from November, 1941, to July, 1943.

[1] *BLS Bull.* 793, *Intercity Variations in Wage Levels*, August, 1944, p. 7.

of the country. It will be observed that New England's gains were, in comparison, especially low on most counts, while the Pacific states did especially well. For example, income payments were up 62 per cent for the country, 53 per cent for New England, and 81 per cent for the Pacific states; manufacturing employment, 44 per cent for the country, 38 per cent for New England, and 105 per cent for the Pacific states.

5. DEPOSIT GROWTH

An excellent measure of relative growth in different parts of the country (and to some extent of inflationary developments) and of later deflationary potentials is given by the statistics of deposits. The general pattern is not unlike that for population and income movements; for the largest gains again are in the South and West and the smallest in the Northeast. Compare, for example, the growth in deposit and currency holdings by Federal Reserve districts, as indicated in Table 152.

TABLE 152. - GROWTH IN DEPOSITS AND CURRENCY HOLDINGS BY FIVE FEDERAL RESERVE DISTRICTS AND FOR THE COUNTRY, PERCENTAGE INCREASES, DEC. 30, 1939–DEC. 30, 1944

	Demand deposits, adjusted	Time deposits	Federal Reserve notes in circulation
Boston	90	49	235
New York	71	54	282
Chicago	143	92	267
Dallas	202	46	551
San Francisco	248	81	596
Country	124	62	338

SOURCE: *F.R.B.*, February, 1945, p. 102.

Wartime expansion of banking deposits from Dec. 31, 1941, to June 30, 1944, is given in Chart 116. Compare the rise of 30 per cent in Vermont with 151 per cent in Florida, or 136 per cent in Oregon. These regional rises in deposits reflect relative growth of population and the varying gains resulting from government payments, income from war contracts, and higher farm prices and output. They also reflect the varying ratio of taxes to earnings, on the one hand, and the varying ratio of disbursements for government securities, repayments

of debts, and the like, on the other. The distribution of government deposits is also an important factor. Despite heavy taxes in the wealthy Northeastern states, the growth of deposits seems to have been greater in relation to the rise of income payments than for California, for example. In part, the explanation must be the large influxes of

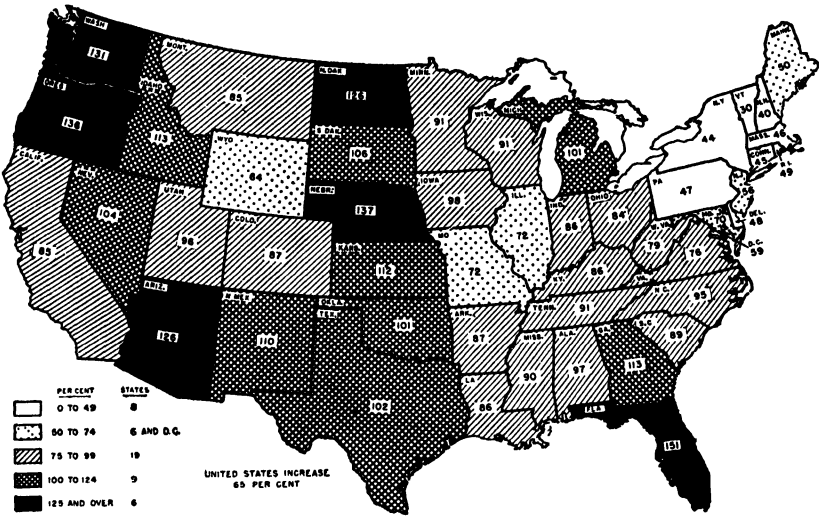

CHART 116.—Wartime deposit expansion by states. (*Source: Federal Reserve Board.*)

government deposits in the large Northeastern states: total government deposits had risen by $18 billion from December, 1941, to June, 1944.

6. CONCLUSION

We may conclude that our postwar problem is not merely one of the over-all demand-and-supply situation. Uneven rates of expansion of incomes, deposits, population, and prices suggest varying degrees of demobilization, and of both inflationary and deflationary pressures in the transition and the longer postwar period. The Far West and the South, having experienced extreme rates of expansion, are especially vulnerable; and the regions—the Far West, Michigan, Ohio, etc.—which attracted large numbers of migratory workers may suffer large doses of unemployment for many years, and even under relatively favorable demand conditions. It will be necessary to increase the mobility of workers and also to encourage the movement of capital into the very areas where demand is deficient and unemployment large.

Conclusions

This volume requires no lengthy conclusion. Summaries are presented in most chapters and frequently in sections. Chapters I and II include numerous conclusions especially relevant for Parts I, II, III.

1. Now, in 1945, the great wartime inflation envisaged by many in 1940, 1941, and even in 1942 is fortunately still unapparent. What were the reasons for our relatively stable wartime prices? The most important reason that we have not had a wartime, galloping inflation is undoubtedly the large expansion of output, this expansion being explained by (1) the rise of numbers on the labor market; (2) the lengthening of the working week; (3) the construction of approximately $20 billion of new plant; (4) the conservation of scarce materials, the switch to imported materials to replace scarce ones; (5) increased productivity (and especially in agriculture and in war industry). These are the most important factors contributing to increased expansion of output, *i.e.*, supplies. We know that the larger our supplies are—other things being equal—the lower our prices are.

2. Was the rise of supplies as great as has been insisted upon by official organs? According to the official figures, gross national product (GNP) was up by 125 per cent in 1944 over 1939. On the basis of the official deflation index, this represents an increase of GNP in *real* terms of between 85 and 90 per cent. Some economists, notably Dr. Kuznets, are inclined to put the rise of GNP substantially lower. They emphasize in particular the inefficient use of the factors of production by war industries and the high prices paid for these factors by many industries in order to secure them. In other words, according to these economists, the apparent rise in output was to a much larger extent due to a rise of prices rather than to a rise of output, the official figures notwithstanding. The official figures indicate a rise in output of 90 per cent; Dr. Kuznets would probably not put it at more than 70 per cent.

3. The reader should not forget, moreover, that the rise of supplies was largely, if not almost exclusively, in our war output. Whereas the prices of war supplies may have gone down substantially as a result

of the expanding output of war materials, the same cannot be said for civilian goods. Here the diversion of factors from civilian to war output had a very serious effect on the supply of civilian goods. The main increases in supply, therefore, were clearly in the noncivilian areas and the rise of supply should not be given important weight, therefore, as an explanation of the small rise of prices for civilian goods.

4. A significant though not the most important factor in keeping wartime prices down has been the deprivation of resources required by nonessential industries to maintain or expand capital. The net effect has been a very small amount of net capital formation for nonwar purposes and a very large reduction in the total supply of capital available for nonwar purposes. Our nonwar plant has steadily deteriorated in recent years. So far as we failed to keep our nonwar plant up and prevent normal expansion, more resources were made available either for war or for the output of consumption goods. Prices were, therefore, lower than they otherwise would have been.

5. In this country we have relied primarily on a rise of output and only to a relatively small degree on resources diverted from capital uses. In contrast, the British have not relied nearly so much on a rise of output and have depended much more than we have on reduction of consumption and on the use of resources that otherwise would have gone into nonessential capital uses. The British have, moreover, been able to obtain large supplies through sales of capital assets abroad, and through new borrowings, lend-lease, and the like. From 1939 to 1944, the rise of GNP by $110 billion here made possible an expansion of war expenditures by $85 billion and a rise of consumption by $25 billion. Actually consumption rose $36 billion, the remainder being accounted for largely by a reduction of private investment of about $9 billion. In the British case, however, the recourse to capital was much greater and, whereas at prewar prices our consumption had risen about 15 per cent (1939 prices), British consumption had fallen about 20 per cent. In Great Britain the rise of government expenditures and consumption (in current sterling) was substantially in excess of the rise of output, the difference being made up largely through substantial savings on capital formation and resources obtained from abroad.

6. Whereas on the supply side more goods were made available, we must remember that on the demand side higher incomes, which are used to buy goods, were also made available. This rise of income is

associated with more members on the labor market, longer hours, higher productivity, and the like, and secondarily with increased rewards for a given amount of time or effort. Wage rates, for example, were higher and farmers received higher prices per unit of output. The largest expansion was of course in wages and salaries although here the rise in man-hours, upgrading, the increase in overtime, productivity, and the like were together much more important than the increase in the basic wage rate.

7. Supply and demand then were kept in equilibrium at reasonable prices. The wartime increase in the cost of living was, according to official index numbers, only around 25 per cent and, even if we allow for deficiencies in our index numbers, the rise was indeed surprisingly moderate. In part, the unexpected rise of savings and in part the large increase of taxation explain the failure of prices to rise more. Controls of both supply and demand and direct price controls, moreover, made an important contribution. The rise of personal taxes from around $3 billion before the war to $19 billion in 1944 and the rise of personal savings from around 10 per cent of national income before the war to about 25 per cent in 1944 were certainly decisive considerations. In 1944 personal savings were estimated at no less than $39 billion. In part this rise may be explained by the unavailability of goods and in part by the increased savings that automatically go with rising income.

8. As compared with World War I, the rise of prices in World War II was much smaller relatively and the rise of output much larger. We have therefore had a very large *monetary* inflation and a relatively small *price* inflation. Whereas in World War I prices rose much more than money, in this war the rise in the supply of adjusted demand deposits and currency has been of the order of five times the rise of prices. Furthermore, in World War II (through 1944) the rise of GNP was very large—the percentage increase was four times the rise in the cost of living and three to four times the rise in wholesale prices. This would seem to indicate that the monetary expansion which accompanies sales of bonds to banks has contributed toward the required expansion of output.

9. Monetary expansion brought declining rates of interest, monetary ease, and general liquidity in spite of an increase in the amount of borrowing of more than $200 billion. That the expansion of money brought an increase in demand for government securities, thus keeping their prices high, and yet did not bring a corresponding rise of com-

modity prices is explained by the factors enumerated above. These large supplies of money are, however, a threat to postwar stability and should be watched carefully.

10. We have a legacy of high liquidity left by the war. In the short run, large inflationary pressures may result, particularly if controls are relaxed too soon and if reconversion is delayed unnecessarily. Relaxation of controls of demand, prices, exports, and wages all will tend to increase the inflationary pressures in the immediate period ahead. What is more, the relaxation of controls by the War Production Board, for example, makes it much more difficult to impose effective price and export controls. It is therefore imperative that governmental agencies integrate their demobilization of controls just as they strove to integrate their mobilization of controls. Any significant relaxation of price control may start once more the upward spiral of higher prices, higher wages, higher farm prices, and so on. These are inflationary pressures that must be taken into account.

11. On the whole, however, the author leans toward the side which holds that the greater dangers for our country lie in the shoals of deflation. In the longer run, especially, this is true. Even in the next few years some very serious deflationary pressures may prevail, though at the same time that deflationary pressures are felt, specific pockets of inflation may exist. Even immediately after VJ-day there has been a substantial reduction of pay rolls and therefore of GNP. Although this deflationary factor will be offset to some extent by payments under the Social Security Act, the Servicemen's Readjustment Act, and the like, and a reduction of taxes, the net effect may well be deflationary. A slow reconversion may have a serious effect on total spending and particularly on the spending of accumulated savings. Once the people become fearful of their jobs, they may very well not only fail to spend their accumulated savings but may hold on to their current income as much as possible. These deflationary forces did not appear after Germany's defeat because cutbacks were not large.

12. It is, in fact, after VJ-day that the important deflationary factors begin to be felt. Wages and salaries may fall as much as $30 billion and the total reduction of GNP (in *dollars*) may be substantially more, say, 20 to 25 per cent. (In real terms the decline should be much less.) Should conversion be slow, should the termination of contracts not yield adequate financial resources, should foreign credits not be made available in time, should the social-security program not be

extended to war workers, should we not make a greater progress than we have made so far in our public investment program, should credit not be made available in adequate amounts, and should refunds of taxes and payment on war contracts not be made expeditiously, then a very serious deflation may occur. This deflation may last 6 months to a year and may take the form of reduced employment and spending. Then for the next 1–3 years strong inflationary factors, as well as general deflationary pressures, should be watched (*cf.*, Addendum).

13. In the longer run the deflationary pressures are likely to be greater. We must never lose sight of the $75 billion or thereabouts annual reduction in governmental expenditures. Although it is not necessary to replace the entire amount, it is necessary, in order to have a high level of employment, to make up the largest part. A high level of employment in the postwar will require an increase in consumption in current dollars of 100 per cent over the immediate prewar amount and in terms of 1939 dollars of more than 50 per cent; and our capital expenditures will have to rise several hundred per cent above the level of the 1930's.

14. We shall, therefore, have to revise our tax program and depend less on taxes that discourage consumption and investment. We also need a more flexible price policy on the part of business, a reduction of trade barriers which would yield more exports and ultimately even larger relative rises in imports. Even with equality of exports and imports at higher levels, more jobs will be available because imports are complementary to as well as competitive with exports.

15. Any deficiencies of spending that remain either will have to be corrected through an increase of public spending on investment, or consumption, or we shall have to resign ourselves to a high level of unemployment.[1]

16. The deficiency of spending may be made up, as I have indicated, through increased public investment. This investment may be financed through borrowing from banks, through the absorption of idle savings, or through an increase of taxation. On the whole, financing through loan expenditures is likely to be more practical than financing through a rise of taxes. Sir William Beveridge has shown that a net

[1] A large majority of the 17 prize essays submitted in the Pabst Postwar Employment Contest interpreted the employment problem primarily as that of finding adequate offsets to savings. Thirteen of the winners urged compensatory stimulation of construction by Federal guarantees or loans or outright compensatory public investment policies. E. B. Smullyan, "Seventeen Post-war Plans—The Pabst Awards," *A.E.R.*, March, 1945, pp. 120–127.

addition to spending through a public investment program will require a considerably larger amount in taxes than in loans. This follows because the imposition of taxes tends to reduce spending from private sources; whereas loan expenditures are largely superimposed on private demand. The favorable effects on the latter are, moreover, multiplied in successive cycles of expenditures, whereas the unfavorable effects of increased taxes also are then aggravated in successive cycles. This unfavorable effect of a rise in taxes can be reduced, however, if the rise is not made largely in the field of excise and consumption taxes.

17. We should also adjust our spending and our taxation according to the requirements of the whole economy. When private spending is at a high level, public spending should be reduced and taxes increased, and vice versa when private spending is at a low level. Such programs can easily be introduced through adjustments in our income taxation and especially in our pay-roll taxation. In depression some economists would rely primarily on increases in public investments (Keynes); others would rely largely on tax reductions (Lerner); others propose public investment and consumption paid for by public funds and/or tax increases (Beveridge). These economists would all agree that more taxes should be imposed on surpluses and less on consumption—and more in prosperous and less in depression times.

18. This leads us to the problem of public debt: if public spending and public investment rise, then the public debt will also rise. It is not likely that a substantial part of the $5 to $10 billion (annually on the average) of public investment that might be required, if deflation besets us, will be financed through increased taxation. How much public debt the country can stand depends first and foremost upon our national income and the kind of tax system that we have. Mr. Crowther has estimated, for example, that in the year 2000 we shall have an income, on very conservative assumptions, of 5½ times the income of the thirties. In other words, our income, exclusive of interest on public debt, should be about $300 billion. This income will not be achieved, however, if we have large spells of unemployment which steadily pull us down. In fact, we may argue that we shall have this income of $300 billion only if we are prepared to pursue a compensatory fiscal policy which involves more public spending when private spending declines. Public spending will then contribute toward the maintenance of a high income, not only because of the total effect on private spending but also because we assume that the public investments will yield income

directly which will be a direct offset against the increased debt charges. It is easy to show that even at an income of $200 billion, instead of the conservative estimate of $300 billion, we can afford to increase our debt on the average of $5 or $10 billion a year. The additional debt charge would then be only $100 or $200 million a year, whereas our income should rise by $2 or $3 billion a year. Against the rise of debt charges, moreover, there will be the earnings on public investment. We should also be prepared to pay off debt in periods of expansion and rising prices. No program of full employment will work unless measures are taken to prevent the inflationary effects which may otherwise accompany a full-employment program; and the way to deal with this problem is through increased taxes and debt reduction in periods of relatively full employment and rising income.

19. The large expansion of monetary supplies and savings indicates to many economists great inflationary dangers. That approximately $45 billion of the $65 billion increase in liquid assets of individuals over 3 years of war accrued to those, according to the Federal Reserve Board, with incomes from $2,000 to $5,000, also supports this general conclusion. On the other hand, we must take into account the fact that at higher incomes, larger amounts of cash are required; also at higher incomes and lower rates of interest the public tends to prefer liquid to illiquid assets—*i.e.*, to keep a larger part of their total resources in the form of cash or bank deposits. For these reasons and also because public investment should involve substitution of purchasing power for inactive money to a greater extent than additions to the monetary stock, a rising public debt may not constitute so great an inflationary threat as is often assumed.

20. In this volume we conclude that, in general, business will have adequate funds during the transition, and therefore deflationary pressures should not result from a deficiency of business funds. This conclusion follows from an examination of the total demands on business in the early postwar period and of the available supplies of liquid assets. In particular, it should be noted that the requirement of capital will not be large. A dollar of capital goes a long way, and, in addition, we have to take into account the large rise of capital assets during the war period. Furthermore, there is a considerable amount of unused banking credit. It is easy to envisage, in terms of current income and the current state of indebtedness to the banks, a rise of bank loans of at least $20 billion. The capital market is, moreover, relatively un-

tapped. Nevertheless, individual industries and businesses may be in some difficulty; and it is important that the government cooperate through rapid payment of debts on war contracts and tax refunds, and that the banking and capital market make the largest possible contribution.

21. It is clear that even at relatively high levels of GNP, substantial amounts of unemployment may occur. In fact, even at the peak several million may be unemployed, and at the trough of the depression unemployment may then well be twice as great. How much unemployment there will be will depend in part upon the number of hours of work and also upon the numbers, ordinarily not members of the labor market, who decide to remain. A substantial contribution to the unemployment problem may be had through a voluntary reduction of hours and the efflux of large numbers from the labor market. In the transition period the large reduction of wages and salaries, particularly after VJ-day, may be a significant factor in cutting spending and bringing about a depression. A very rapid and successful reconversion will be required and, even if it is attained, the disappearance of $30 billion of wages may have a substantial effect in bringing about a cumulative decline. Insofar as prices fall *pari passu* with the reduced pay rolls, the real decline is reduced. A large decline in total pay rolls and spending may be harmful, however, in that total output is not taken off the market or is taken off at reduced and unfavorable prices. It is, therefore, very important that wage rates should not be reduced and, in fact, should at least keep up with rising productivity which is possible at high levels of output.

22. We should emphasize the following aspects of the international situation: Most countries of the world are determined to isolate themselves against deflationary forces that originate from abroad. In order to do this they are prepared to manufacture money in adequate amounts to maintain their price levels and relatively high levels of employment. If they succeed in these policies, one of the most important causes of deflation, *i.e.*, external forces, will have been removed. They will be helped in this particular policy if this country provides larger supplies of dollars, and particularly in a transition period during which they prepare to readjust to a peacetime economy and improve their export position. In other words, free monetary policies on the part of other countries will encounter difficulties unless the perennial problem of the scarcity of dollars is solved through increased imports on our part

and temporary loans and ultimately through increased exports on the part of other countries. A more favorable exchange-rate relationship with the dollar may also help these countries. What is required above all is a strengthening of the international position of other countries and a *relative*, not absolute, weakening of our position.

23. An adequate total demand is certainly the most crucial problem in the postwar period. It is clear, for example, that most of the estimates of consumption in the postwar period and even of investments, which are required for a high level of employment, are fairly optimistic, given the relationships of the years preceding World War II. Somehow or other through special measures the propensity to consume and to invest must be increased. Yet even if we have adequate total demand, we may have many unfilled jobs and widespread unemployment at one and the same time—a result in part from the unusual distribution of man power, occupationally and regionally, remaining from the war. In the last few years, the rise of incomes, deposits, population, etc., has been most uneven over the country. Unless the government takes special measures to move workers in accordance with the requirements for their services, large amounts of unemployment will develop almost irrespective of the level of demand. The government must also be prepared, where it becomes very difficult or impossible to move workers into the appropriate areas, to subsidize plants or to encourage the movement of industry into the areas where there are large surpluses of man power. In the absence of such measures, this country may well be confronted with a problem of depressed areas, which has plagued the British since World War I.

24. The country faces a serious transition from war to peace. It is imperative that reconversion to nonwar output should be successful, for, if it is not, the results may be disastrous. What happens in this brief period may determine whether capitalism survives. It is appropriate here, then, to summarize the new legislation and a few of the main issues of the transition.

By the early part of 1945, four significant measures had been passed by Congress dealing with the transition period. First, there was the Servicemen's Readjustment Act which provides for the orderly absorption of the veteran into private life. *Inter alia*, it provides him with some cash to cover expenses of his transition to civilian life. He is also provided with educational aids and some help to tide him over periods of unemployment.

Public Law 395, the Contract Settlement Act of July 1, 1944, provides for immediate settlement of contracts and generous provision for interim financing, as well as the expediting of the removal of government property from plants. This legislation will make it easier for business to obtain the necessary liquid funds to carry on after work on their war contracts is finished.

Public Law 457 of Oct. 3, 1944, the Surplus Property Act of 1944, provides for the orderly disposition of public property estimated at from $50 billion to $100 billion. Commodities are not to be sold in a manner to disrupt the market. It is assumed that in periods of deflation the sale of surplus property and commodities will be discouraged and that in periods of inflation the release of government property and supplies would tend to counteract inflationary forces. Provision for absorbing supplies through stock piling should also reduce the deflationary effects of the disposal of public property.

Finally, Public Law 458 of Oct. 3, 1944, the War Mobilization and Reconversion Act of 1944, is an attempt to integrate our reconversion policies. The broad general policies are laid down in respect to the termination of contracts and the release of supplies and materials for civilian use. Furthermore, an attempt is made to integrate or put under the general supervision of the Director of Demobilization and Reconversion the Office of Contract Settlement, the Surplus Property Board, and the Retraining and Reemployment Administration.

In general, the transitional problems are those of keeping up demand and also of preventing the inflationary pressures from becoming excessive. It is probable that deflationary pressure in the transition period can be averted if adequate programs of public works and social security are introduced, if a speedy reconversion is effected, and if commodities are not disposed of indiscriminately by the government. Excessive wage reduction should, moreover, not be tolerated, and controls should not be continued if they interfere *seriously* with the orderly flow of the factors of production. It is also necessary to keep the threat of inflation in mind and, therefore, controls should be retained as long as, in essential markets, there is any danger of an excess of demand over supply at current prices.[1]

[1] For excellent summaries of the problems involved see B. M. Baruch and J. M. Hancock, *Report on War and Postwar Adjustment Policies*, Feb. 15, 1944; Hearings on House Res. 408: *Postwar Economic Policy and Planning*, Part 2, 1944, pp. 467–473; NRPB, *Postwar Plan and Program*, February, 1943, pp. 1–12.

25. We must also deal with the long-run problem. Here the question is how far the country is prepared to go to assure a high level of employment. In the year-end report of the War Contract Subcommittee to the Committee on Military Affairs, pursuant to Senate Resolution 198, the subcommittee proposed a full-employment bill, popularly known as the "60-million-job bill." Similar proposals were also made by Sir William Beveridge in his *Full Employment in a Free Society*. In this country, the issue seems to be largely as to how far this country should go in the direction of public investment when a lack of private spending threatens to bring about a large amount of unemployment. In Great Britain the issue seems to be more largely as to how far the government should go in the socialization of industry and the control of the movements of labor and capital in order to assure full employment. Sir William Beveridge, for example, argued that a program of public investment will be inadequate, especially since even at the peak of employment there have been large amounts of unemployment in the last 50 years and since public investments are not adequately flexible. He would, therefore, not only provide large amounts of public investment but would rely primarily on consumption sponsored by public agencies and also upon the direction of labor into the proper industries and upon the direction of capital investment both regionally and occupationally. In short, his argument is that, though the adequacy of total demand (or the socialization of demand) is the most important consideration, it is also necessary to make certain that labor and capital are where they can be fully employed. Otherwise adequate total demand may be accompanied by unfilled vacancies in some areas and large amounts of unemployment in the others. In the Murray Bill it was suggested that, first, measures be taken to stimulate private expenditures. Failing to get adequate private expenditures then, the government should be prepared with a program for public investment and other spending which will assure the necessary jobs.[1]

[1] See especially Sir William Beveridge, *Full Employment in a Free Society*, 1944, especially Parts I and IV; H.M. Stationery Office, *Employment Policy*, 1944; Year-end Report of War Contracts Subcommittee to the Committee on Military Affairs, *Legislation for Reconversion and Full Employment*, Dec. 18, 1944, pp. 10–19; NPA, *Public Thinking on Postwar Problems*, October, 1943; E. A. Goldenweiser, "Postwar Problems and Policies," *F.R.B.*, February, 1945, pp. 112–121.

Addendum

Reconversion Viewed After VJ-day

1. THE OCCASION FOR THIS ADDENDUM

This volume has been in preparation since 1943. Most of it was written long before VE-day and VJ-day, and the manuscript was sent to the printer a few days before victory in Europe. The sudden end of the war with Japan came while we were in the midst of reading galleys, and necessitated many revisions.

Reconversion viewed after total victory (even though the last chapter of reconversion is still to be written) is important for our study of inflation: we require an over-all survey of the interval between VE-day and VJ-day and of the early reconversion period (period 3, after VJ-day).

2. VE-DAY TO VJ-DAY

In general the developments from May to August, 1945, followed the trend started in 1944. Money continued to increase. Incomes rose somewhat. Savings continued to mount. Prices, nevertheless, remained relatively stable.

Table 153, for example, presents a statistical comparison of changes for the first half of 1944 and the first half of 1945. Net national income,

TABLE 153.—SIGNIFICANT ECONOMIC VARIABLES, 1944–1945
(In billions of dollars, annual rate)

	First half of 1944	First half of 1945
Gross national product	197.4	206.0*
War expenditures	93.2	93.2
Expenditures on consumers' goods and services	95.7	101.0

SOURCE: *S.C.B.*, July, 1945. * Estimate for second half of 1945 is 182.

income payments and personal taxes were all somewhat higher in the first half of 1945 than in 1944. Personal taxes rose from $19 billion to $23 billion (annual rate). Net savings of individuals decreased—from $39.9 billion to $38.5 billion.

For the fiscal year 1945, net financial results for the Treasury were similar to those for the preceding year, as indicated in Table 154. An

TABLE 154.—TREASURY EXPENDITURES, RECEIPTS AND DEFICITS, 1944–1945

(In billions of dollars)

	Fiscal year 1944	Fiscal year 1945
Expenditures.....	93.7	100.4
Net receipts.....	44.1	46.5
Net deficit.....	49.6	53.9

SOURCE: *F.R.B.*, August, 1945.

examination of the distribution of holdings of government securities reveals, moreover, that the banks absorbed close to the same proportion of new issues as in the previous year.[1]

In view of the continued inflationary pressures, a rise in the cost of living of but 1 per cent in the first half of 1945 was moderate indeed. In this period the OPA and WPB worked hard to divert available fabrics into the production of low-priced clothing, for inflationary symptoms were especially evident in the price of clothing.

During the brief one-front-war period—*i.e.*, from May to August, 1945—controls were dropped at a rapid rate. Although because of our military reverses in December, 1944, the WPB had modified its vigorous decontrolling program which it had contemplated in the fall of 1944, nevertheless, once Germany was defeated, plans progressed for rapid demobilization of controls. In the fall of 1944 and the early months of 1945, Congressional and business pressures for removal were felt by government agencies. *Rapid demobilization of controls at that time might have been justified had cutbacks in war contracts been large. Then the release of materials and man power would have resulted in increased flows of supplies which might have matched the renascence of demand, now freed from restraints.* Actually, however, cutbacks were small. Munitions production in the second quarter of 1945 was but 4 per cent less than in the

[1] *Treasury Bulletin*, August, 1945, pp. A-30, 47–48; *F.R.B.*, August, 1945, p. 721.

first quarter. It was estimated in June, 1945, however, that munitions production and non-munitions war expenditures would be, respectively, 20 and 10 per cent less in the fourth quarter of 1945 than in the first quarter. Even at these rates of curtailment, the program to release controls seemed oversanguine.

In May, 1945, the WPB announced a vigorous program for the demobilization of controls. Between VE-day and VJ-day approximately 200 controls were removed. Open ending of CMP for steel, copper, and aluminum was provided—delivery to be made after July 1. (Open ending allowed free bidding for supplies left over after the most essential military and civilian needs were met.) It was proposed at this time, however, to retain limitation orders on production of important consumers' goods, some standardization and simplification orders, and control of distribution of scarce textile fabrics, tin, paper, lumber products, chemicals, etc. Programing, as an aid to production of civilian goods, was slated for abandonment, except under unusual conditions. Preference ratings were to go: the only exceptions were a military rating and the special *AA* (later *CC*) preference ratings for the most essential civilian needs. Most distribution controls were also on the way out. Other controls were to go gradually—*e.g.*, those on imports, exports, and construction. It was agreed, however, that the program might be revised if cutbacks did not attain their expected level. In fact, plans were revised many times before VJ-day, for the cutbacks were much smaller than had been anticipated.

Fortunately in the period between VE-day and VJ-day the OPA and the WLB were not inclined to remove controls rapidly. The former in particular urged the WPB to retain controls of demand and supply—indispensable adjuncts of price control—and influenced the WPB to some extent. In the view of the OPA, the EPCA required the WPB to aid the stabilization programs: without WPB L and M orders, priorities and the CMP, the possibility of effective price control was slim indeed. Moreover, decontrolling by one agency inevitably leads to general decontrolling. If the WPB should remove controls of demand and FEA controls of exports, then the OPA, unwilling to be saddled with a responsibility which it cannot fulfill without the aid of other agencies, would be less disposed to maintain its controls.

Contrary to the expectations of many, fairly rapid removal of controls prior to VJ-day did not have any serious inflationary effects, and for the following reasons: Essential civilian requirements were still

protected by the WPB; and effects of actual demobilization of controls were not felt immediately—*in part because man-power controls and other serious shortages (e.g., components) tended to restrict demand.* It takes time to break the numerous bottlenecks. All civilian industries may be allowed to bid for limited supplies of iron and steel; but some demands will be excluded because labor or textiles, rubber, or some short component is not available. Finally, before the full effects of the demobilization of controls after VE-day were felt, VJ-day had arrived.

3. THE PRESIDENT'S BLUEPRINT FOR RECONVERSION

In an executive order of Aug. 18, 1945, President Truman set the key of reconversion: The broad objectives were "to promote a swift and orderly transition to a peacetime economy of free, independent enterprise with full employment and maximum production in industry and agriculture and to assure the general stability of prices and costs and the maintenance of purchasing power, which are indispensable to the shift of business enterprise from wartime to peacetime production. . . ." [1]

In this executive order, the President proposed to adhere to the EPCA and the Stabilization Act as a means of excluding both inflation and deflation. He asked that modifications in control over wages, prices, materials, and facilities be made if they should prove necessary as a condition of orderly transaction. The price administration and other stabilization agencies were authorized "to make such adjustments in existing price control as are necessary to remove gross inequities or to correct maladjustments or inequities which would interfere with the effective transition to a peacetime economy." In order to preclude rises in the cost of living, the agencies were to improve and tighten price controls in important fields.

They were also "to move as rapidly as possible without endangering the stability of the economy toward the removal of price, wage, production, and other controls. . . ."

An important concession was made to labor in President Truman's executive order. It was provided that the appropriate agencies could allow wage increases voluntarily entered into which would neither involve the government in higher contract prices nor be used as a basis

[1] The President's executive order followed the broad outlines of the report of Aug. 15, 1945, by the director of OWMR to the President, *From War to Peace: A Challenge.*

for seeking an increase in price ceilings or for resisting justifiable reductions in price ceilings.[1]

A blueprint for the WPB was also provided: "It shall use all of its authorized powers to expand the production of materials which are in short supply; limit the manufacture of products for which materials or facilities are insufficient; control the accumulation of inventories so as to avoid speculative hoarding and unbalanced distribution which would curtail total production; grant priority assistance to break bottlenecks which would impede the reconversion process; facilitate the fulfillment of relief and other essential export programs and allocate scarce materials or facilities necessary for the production of low-priced items essential to the continued success of the stabilization program."

In a long message to Congress on Sept. 5, 1945, President Truman presented the policy of his administration more fully than in his executive order of Aug. 18. In this message and in the supplementary statement by the OWMR appended to the message, the Administration proposed a comprehensive program both for the transition and the longer run postwar period.

In general, the same principles as announced on Aug. 18, 1945, were to prevail: orderly decontrolling of the economy, protection of consumers through a stabilization program buttressed by WPB controls, reconversion supported by active participation of the government. In this message the President was perhaps a little more emphatic concerning inflationary dangers, and a little more outspoken in his demand that the WPB give the stabilization authorities all possible aid, than in the executive order of Aug. 18.

The government proposed a rapid termination of contracts for the transition. Within a few days after VJ-day the Army and Navy had canceled $25 billion of contracts. As an offset to the unexpectedly rapid cutbacks, the government proposed (1) to settle expeditiously $40 billion of contracts awaiting settlement; (2) to advance credit on unpaid claims (for the purpose of expediting reconversion in general); (3) to provide 13 million noncovered workers with transitional unemployment insurance and increase benefits and duration of benefits for most of the 40 millions covered; (4) to cut taxes to some extent; (5) to encourage rises in wage rates; and (6) to facilitate the sales of government-owned factories and equipment. Most of these measures would

[1] The President, a few days earlier, had directed WLB to approve the type of wage increases discussed in this paragraph.

tend to fill part of the void left by a reduction of Federal expenditures. (It was estimated that munitions production by December, 1945, would fall 80 per cent below July, 1945.) The objective was to increase spending even as cutbacks were reducing outlays, and thus to mitigate the deflationary effects of reduced Federal spending.

In this early period of reconversion the government was determined also to preclude inflation. Once reconversion was effected, the net pressures on prices might well be upward. The release of Federal supplies would tend to keep prices down, as would retention of various controls not yet ripe for removal. The OPA was also to force absorption of cost increases on distributors and to tighten price control in crucial areas. These measures, it was hoped, would more than offset the effects of termination of almost $2 billion (annual rate) of food subsidies and the support price policies for food, to be implemented on behalf of farmers.

The government also made specific proposals for the longer run: *e.g.*, its support of a full-employment program—and one to be validated by a sizable public-investment policy. Among the specific parts of the investment plan, the government mentioned in particular a potential program of between 1 and 1½ million homes annually for 10 years; a $3 billion road program over 3 years; and plans for expenditures to improve rivers, for slum clearance, airports, and state and local government projects. In all of these the Federal government was to participate. In addition the message stated that plans for a comprehensive social-security and educational program were in the final stage.

4. CONTROL POLICY AFTER VJ-DAY

VJ-day was the signal for the scrapping of controls in earnest. On Aug. 20, 1945, with but one stroke 210 of the 340 controls still in effect had been removed by the WPB. Restrictions on the output of most durable consumers' goods were lifted, and the restriction on automobiles was removed a few days later. By early September, only 160 WPB orders and schedules were in force as compared with 650 at the war's peak.

The government was also quick to remove many rationing controls. WPB policy was well summarized in the news release of Aug. 21, 1945.[1] "In a series of sweeping moves to facilitate the reconversion of industry

[1] *WPB Release* 8903, Aug. 21, 1945.

and speed the flow of a wide variety of peacetime products into the hands of consumers, while still avoiding price inflation, preemption of scarce supplies, or a buyers' scramble, the WPB has dropped 210 more individual controls over industry. . . ."

We have so far discussed WPB policy. But at least one other agency was not so disposed to scrap controls quickly. Despite the rapid removal of related controls by other war agencies, the OPA adhered to a vigorous price-control policy. For more than a year before VJ-day it had been working on an orderly reconversion policy.[1] It was deterred neither by protests nor by the hesitation of other agencies (*e.g.*, WPB and FEA) to support its program through the retention of related controls; nor was it held back by the large excesses of purchasing power available, which of course were a constant threat.

The OPA could no longer count heavily on support from controls of demand or improvement of supply through conservation and simplification orders. A rapid expansion of civilian output and the release of surplus military supplies might tend to keep prices down near the ceiling levels. A release of 9 million men from the armed services in a period of 10 months, and of many more millions from war industries, was expected to relieve the man-power shortage in civilian industries. In other cases, wage and price adjustments might bring a better distribution of factors of production and thus induce increased production of scarce commodities. Soon after VJ-day it was announced, for example, that the War Department was cutting its procurement from a total of $2.4 billion a month to $435 million a month. Gasoline purchases were to drop 44 per cent; textile items, 75 per cent; Army cancellations were to eliminate 99 per cent of its steel and 98 per cent of its copper and aluminum consumption, 82 per cent of its consumption of cotton textiles, 75 per cent of its leather and lumber.[2]

These reductions in demand, the release of government stocks, and an early renewal of production would indeed help keep prices down. Yet serious shortages would still plague the country for a year or more; of the many components required for construction, crude rubber, tin, paper pulp, coal were the most important.

[1] The essentials of reconversion pricing policy were discussed in Ch. XXX.

[2] Figures from OWMR, *From War to Peace: A Challenge*, August, 1945, and OWMR *Report of Sept. 6*, 1945.

5. OPA PRICING POLICY IN THE RECONVERSION PERIOD

In Chapter XXX we discussed to some extent the principles of pricing policies for the reconversion period. With reconversion well-launched soon after VJ-day, the broad outlines of reconversion and reconversion pricing became more apparent than they were when that chapter was written. Let us note first the following principles.

1. When there is full employment, price concessions tend to divert resources from one industry to another or from one firm to another—but not to expand output. (These diversions are indeed limited by controls.)

When there is a significant amount of unemployment (say 5 million as estimated for the end of 1945, and 8 million or more for the spring of 1946), then a rise of prices may be effective in expanding output. But at this point one must watch the effect on scarce components and raw materials. With price concessions the favored products may draw scarce factors away from others—it is therefore desired that so long as scarcities prevail, generous treatment be accorded to more essential industries or products rather than to nonessential industries.

2. With increased unemployment and the gradual disappearance of scarce factors, the case for liberal pricing improves. To some degree the rise of unemployment brings its own cure; prices tend to drop below ceilings.

But in many cases price action will be required. The OPA will have to set prices or revise them upward. *And the regional approach will be especially effective and appropriate.* As we saw in Chapter XXXII, the rates of movement of income and population have been exceedingly uneven. In the course of the war incomes rose 3 and 4 times as much in some states as in others. With large cutbacks some states (*e.g.*, Michigan, Connecticut, and California) will suffer. With the reduction of military training other states (*e.g.*, Texas and Florida—the location of many camps) will also be hard hit. With any significant decline of farm incomes Kansas, Wisconsin, etc., will suffer. *Large pockets of unemployment will develop despite inflationary pressures over large parts of the country.*

3. In these circumstances, it is incumbent upon the OPA to see to it that price policy is sufficiently flexible so that high wages the country over or high prices of raw materials in the face of fairly rigid prices do not act as a depressant. We need more and more regional pricing as demobilization strikes one area while leaving another untouched.

4. Price control is related to the changing economic picture in 1945.

a. First and foremost there are cutbacks, demobilization, and unemployment. These require flexible pricing, special provisions for reconversion pricing (see below), and a sufficient degree of precision on future price policy to make it possible for business to make commitments.

b. Second, there is the demobilization of controls related to price control. So long as supply-and-demand controls play a decisive part, the government largely determines what is to be produced and even how much. As demobilization of controls proceeds, this situation changes. Then pricing once more begins to play its historic role as the determinant of the flow of man power, material, and capital. It will be the OPA, not the WPB, which will affect the use of scarce materials, the objects produced, etc., not so much as a matter of policy but rather as an inevitable accompaniment of policy. That is why the agency responsible for production becomes more interested than ever in price control and prices even as its controls and those of the FEA and WMC are removed. Appropriate price movements then will help to find employment for unemployed resources, to move factors into the reconversion industries, and to move them into areas of unemployment.

The EPCA provides that the WPB "within the limits of its authority and jurisdiction is to work toward a stabilization of prices, fair and equitable prices, fair and equitable wages, and cost of production." It is indisputable that the OPA's greatest successes in price control have been in markets where price control has been tethered to WPB controls. To avoid inflationary price rises, the OPA may therefore be the less inclined to relax on price controls although other controls are removed. Every relaxation becomes doubly dangerous when the inflationary effects may not be damped by related controls which hold demand in check.

As for the details of reconversion pricing, little need be added to what was said in Chapter XXX. Reconversion pricing applies unfortunately to the resumption of production only of goods whose wartime production was a small part of prewar production: automobiles, refrigerators, etc. Ideally, reconversion pricing should deal not only with items coming back into production but with all goods and services. All price ceilings should be reviewed in terms of the objectives of 1945–1946. *Price regulations which were issued when employment was full and when the sole danger was inflation are not appropriate for an economy which faces the twin dangers of unemployment and deflation.* Detracting further from the

usefulness of these regulations is the fact that they were generally based on a historical experience currently much less relevant than when originally issued.

In general, in reconversion pricing each industry was allowed a price equal to its 1941 costs plus legal increases in raw-material prices and basic wage rates. The producer was then to receive at least the ceiling price. If this formula did not yield the current ceiling price, he might under adjustment provisions obtain his profit margin of 1936–1939, or the profit margin of the industry, or some percentage of the latter. Provisions varied, however, as among industries and according to the size of firms. In automobiles, for example, where no industry price regulation was provided, each manufacturer was entitled to a price equal to 1941 costs plus the legal increase in raw-material prices and basic wage rates. If the resulting prices were below ceiling prices in effect, the manufacturers might add one-half of the industry's 1936–1939 profit margin.[1]

It is not necessary to discuss the pros and cons of OPA's generosity.[2] Its avowed policy is not to interfere with reconversion and not to allow inflation to develop. Perhaps its policy is less than generous in view of the relaxation of wage controls. But whether its policy is niggardly will depend first on the volume of output attained (a large volume yields both high profits and low prices). In his message to Congress, President Truman emphasized the need for low prices and high volume—thus seeming to support the OPA policy which had been under attack.

6. WHAT IS WRONG WITH RECONVERSION POLICY?

Demobilization of controls proceeded at a rapid rate in the month following VJ-day, with relatively few controls left after September, 1945. Where supplies were adequate or promised to be so in the near future, or even where supplies were short but with serious effects unlikely, the WPB was disposed to terminate controls. In view of existing scarcities and great demands, one wonders whether the WPB was wise to terminate controls so quickly. Certainly the scarcities of numerous construction items, for example, would indicate that many controls in the building industry may well have been removed too soon. In many cases where scarcities threatened to materialize, the only protection given potential consumers against excessive demands was export con-

[1] See OPA, *S.O.* 119, issued July 18, 1945.
[2] *Cf.* Ch. XXX.

trol. Yet when export is only a small part of total demand, export control is obviously not enough.

All control agencies did not seem disposed to heed the President's warning against premature removal of controls, first made in his VJ-day message and repeated and underlined in his message to Congress. It is not easy even for the President to make an operating agency do what it is not disposed to do.

Aside from the retention of many old controls, new temporary controls were required which were not forthcoming. (Temporarily it would be helpful, for example, to control distribution of durable consumer goods.) According to a WPB survey, the public was prepared to buy 5.8 million mechanical refrigerators, as of April, 1945; and demand was rising at the rate of 2 millions per year. Corresponding figures for radios were 5.1 and 2.4 millions. Yet for 6 months to 3 years after the resumption of production, output of consumer durables, including housing, should be most inadequate in the light of accumulated demand at fairly stable prices, the exact period of deficiency depending on the product and the amounts required to fill pipe lines. Even for the end of 1945, the production rate for many items was estimated below 1939 levels. These figures, indeed, suggest the need of new, transitional controls.

During the period of deficiencies, a large black market is almost certain to develop. Even if manufacturers abide by price ceilings (though quality deterioration and excessive recourse to high-priced models may well occur), when supply is significantly below demand, distributors may pocket the difference between high prices to be had and legal prices. Once supplies at legal prices fall below demand by more than a certain amount, controls break down. Bribes, open or concealed, of middlemen, reduction of services, resale by final(?) consumers are among the techniques that may be used to evade price regulations. *What the manufacturer is denied under ceilings will be obtained by others along the line from manufacturer to consumer.*

The collapse of both Germany and Japan within a short time of each other made reconversion more difficult. The authorities were not well prepared for this contingency. In fact the unpreparedness might be ascribed to the opposition of the military, which before victory had discouraged preparation for reconversion.

One of the unfortunate aspects of reconversion which certainly contributed to delays and lack of integration was the administrative setup.

In view of developments since June, 1945, and notably the failure of WPB to maintain needed controls, the proposals of the Meade committee were almost prophetic: "In preparing for peace, the OWMR should have a strong reconversion division with actual operating functions. . . . But this office has never had a large staff and has functioned mainly as an over-all policy body and referee rather than an operating agency." [1] Despite strong pronouncements against hasty demobilization of controls by President Truman and the OWMR, the operating agency (WPB) continued its policy of rapid demobilization of controls.

7. THE TIME PATTERN OF INFLATION

In the light of the rapid demobilization of controls after VJ-day, (which indeed was demanded by the public, by most businessmen, and by the politicians) what are the price prospects for the years 1945–1948?

First, as to the reconversion period proper, which for most important items other than some for construction may last from September, 1945, to March–June, 1946. Here premature removal of controls may bring about some inflationary pressures in particular markets and notably in consumer durable goods and temporarily in some textiles. The effects should not, however, be serious. Against these pressures are to be weighed the deflationary effects of a reduction of wages by perhaps $25 billion (annual rate), a reduction of gross national product now estimated at $40 billion, and the decline of spending associated with uncertainty. Government deficits for the fiscal year 1946 were estimated late in August, 1945, at $30 billion, a reduction of approximately $20 billion over the fiscal year 1944–1945. The reduction in turn accounted for a much larger decline in GNP.

The main criticism to be leveled against government policy lies in the failure to retain more controls and even introduce several new controls (e.g., distribution of consumer durables) which would undoubtedly prove useful in period 4 *(the catching-up period); and also in the failure to provide adequate help for those who lose wages.* That is to say, the government has not done all it might to maintain fair distribution during the reconversion period.

If inflation is a threat, the greatest dangers lie in the period after reconversion, say beginning about the middle of 1946. With considerable relief in taxes and the public ready to spend a substantial part

[1] Senate Report 110, Part 4, *Investigating the National Defense Program*, Fourth Annual Report, July 30, 1945, pp. 30–31.

of pent-up savings (in particular, a significant part of its $200 billion or more of liquid assets), with restraints on consumer credit removed, with other controls ancillary to price control abandoned, with wage rates tending upward with rising employment (and reconversion largely effected), with the removal of the restraining influences of the Little Steel formula, with an insistent demand for our goods from abroad backed up by $20 billion of cash and large potential loans, and with weak inventory controls in the light of unprecedented inventory demands—with all of these factors conducive to rising prices, a significant price rise seems likely. The OPA, by then either disbanded or weakened, will be unable to hold the inflationary spiral in check. *We may well be confronted with a high-level employment economy without the controls and sanctions imposed by war.* Inventory controls (which did not work well in the war) and a few other controls may still be on the statute books. Who would say that these paper controls will check the tidal wave of inflation after the war?

Against these, two factors will hold inflation down: a reduced GNP, and hence a reduced demand, over 1944–1945, and an unusual amount of excess capacity. *The net result will be many inflationary and speculative pockets—but these may be checked to some extent by the considerations mentioned here.*

Every inflation brings a collapse and the greater the inflation, the more serious will be the ensuing drop in employment, wages, and prices. All the more serious will be our failure to provide an adequate social-security program, a full employment bill with its support of a spending program, a policy of reallocation of industry according to labor availability and/or redistribution of labor. Indeed it is incomprehensible that with the limited success in planning public works, the Colmer Committee on Postwar Economic Planning should propose to put the burden of public investment on states and local governments—a proposal which rules out public investment.

Above all, the economists and other technical advisers were determined that we should not repeat the mistakes of World War I. Yet the pattern is almost identical: a reconversion period, with both inflationary and deflationary factors at work but total demand declining; an inflation period beginning 6 to 9 months later, hastened and accelerated by a premature removal of controls and wage inflation; and then the long pull when we may not be so fortunate in the revitalization of private enterprise as we were in the twenties.

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