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National Income

and Its Composition, 1919-1938

by Simon Kuznets

assisted by Lillian Epstein

and Elizabeth Jenks

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VOLUME I

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Preface

In recent years national income has been widely used to gauge the performance of the country's economic system. Statesmen and economists, politicians and journalists, reformers and cranks, defenders of group interests and advocates of special policies—in short, nearly everyone concerned with the workings of the economy—have at one time or another cited the billion dollar figures to proper or improper ends. They have been used to measure changes in the economy's total accomplishment in relation to factors observers select as strategic; to serve as a quantitative framework within which to judge policies proposed or opposed; to diagnose progress or retrogression; to claim credit or cast blame.

Such bandying about of national income estimates is to be expected in a society interested in the material results of man's activity. Nor is it surprising that national income figures have become more prominent in public discussion in recent years, if only because more trustworthy estimates have been prepared at more frequent intervals. Not the least of other reasons is the pronounced disturbance in the country's economic life caused by wars and the recent great depression and the consequent need for public action in the light of as much economic intelligence as can be mustered.

Their comprehensive character and quantitative definiteness make national income estimates useful as a standard by

which to judge economic processes or policies. Yet several vital aspects of the estimates frequently tend to be overlooked in popular discussion. The natural desire to have a single measure and to read an unequivocal meaning into it often leads to the treatment of national income as the uniquely objective measure of economic achievement rather than as an appraisal based upon criteria that may differ from country to country, group to group, and time to time. A national total facilitates the ascription of independent significance to that vague entity called the national economy and may induce neglect of the patent fact that this entity comprises millions of individuals and firms, and scores of industries, economic groups, and regions whose efforts add up to the national income total. Interest in changes in national income during the current short run pushes into the background the longer term movements and cyclical fluctuations to which the economy has been subject in the observable past, cognizance of which would enable the observer to distinguish persistent from transient changes. Finally, the quantitative definiteness of the estimates makes it easy to forget their dependence upon imperfect data and the consequently wide margins of possible error to which both totals and components are liable.

The main objective of the investigation summarized in this report was to arrive at annual estimates of national income for this country since the 1914–18 war. It was carried out in awareness of the matters just mentioned: that national income is an appraisal based upon criteria that help to differentiate economic and productive activities from others; that segregation of significant components is essential; that analysis of the longer term movements and cyclical fluctuations in national income and its components is desirable; and that because the estimates depend upon necessarily incomplete data a detailed description of sources and methods is indispensable.

The same considerations led us to do more in this report than present estimates of totals or even of their numerous

components. In Chapter 1 we discuss at length the problems involved in defining national income; in Chapter 2, the difficulties inherent in the proper delimitation of significant components; and in Chapter 3 we sketch the bases of the estimates and of the limitations arising from lacunae in the data. Part Two analyzes both longer term changes and fluctuations during business cycles. Part Three explains the derivation of the estimates, their margins of error, and how and why they differ from other estimates. Part Four presents in detail the estimates by industries and types of income, describing the sources and methods used in deriving each total. Part Five assembles some supplementary data outside the scope of the basic totals and components, yet deemed of interest.

Naturally the detail with which these various phases of national income could be discussed and measured was predetermined by the data and the practical exigencies of completing a task with the resources at hand. Consideration of other definitions to which the choice of different criteria of national income gives rise could not be implemented with corresponding estimates. Distributions by significant components had to be restricted to those by industrial source, type of income, and such categories of final use as the capital formation study had established. Analysis of temporal changes in the totals and in their components was handicapped by their annual form and because there are estimates for only two decades (for some estimates, for three). The description of technical features, comparisons with other estimates, and the evaluation of the margins of error, while fairly detailed, are not complete. It would be almost impossible to examine all the feasible methods, push the comparisons to the point of accounting for all the differences, or refine the evaluation of the margins of error beyond the crude measures of informed opinion here ventured. Similarly, the tables and notes in Part Four and the supplementary data in Part Five are not exhaustive. But such limitations are unavoidable. Statistical measures and analysis are always conditioned by the stock of data and the-

oretical tools which, at any given time, falls short of an easily conceived perfectionist ideal.

A critical and patient reader will become aware of the defects in the estimates and in their analysis as he reads; the less critical and impatient will have to take the conclusions and this warning on faith. Both may wonder whether our treatment of one aspect of national income may not negate or render superfluous our analysis of other aspects. For example, in demonstrating that, in all cases including the present, national income is essentially an appraisal concept we concluded that it inevitably reflects the judgment of society at large as to what economic production is, a judgment that admits of several variants even for a given society at a given time. Why analyze temporal changes or worry about the quantitative accuracy of estimates so dependent upon debatable criteria of social judgment? Why, in view of the approximate character and the wide margin of error, go to the trouble of analyzing the estimates in terms of long time movements and cyclical fluctuations and treat them as if they were records of carefully organized and controlled observations?

Such doubts would be justified were the penumbra of conceptual and statistical vagueness not dispelled by delimiting the scope of the estimates and by taking into account the influence of possible errors. Once we have reviewed the various definitions of national income in the light of the criteria that underlie them and chosen one or a group of related criteria, there is no reason why we should not scrutinize and try to interpret the changes in the totals based on them. Obviously, one concept or group of concepts of national income is chosen because changes in the totals estimated on that basis facilitate understanding of economic reality; if the choice is valid, analysis of the results is called for. Likewise, even though our estimates cannot be precise, we should still try to analyze temporal changes. Only by so doing can we probe

the limitations of the estimates and single out their substantive indications.

Our estimates, being for a definite period, may well require reinterpretation when the period is viewed as one panel of a much longer historical canvas. They are also bound to become obsolete as times and criteria of social valuation change, new components emerge, and experience and perspective widen. Indeed, the author cannot but hope that this study and whatever questions it raises may in themselves contribute to improvements in data and analysis that will render it obsolete.

An investigation such as this could not be carried out unless the author had the constant and expert help of people familiar with the sources and procedures. I have been fortunate in being assisted throughout the study by Lillian Epstein and Elizabeth Jenks who have shouldered the burden of assembling the data, making the computations, checking the results and their interpretation in the text, and putting the manuscript through its various versions. Miss Epstein is also responsible for the preparation of the detailed notes in Part Four, which required meticulous care.

The preliminary versions were read by the advisory committee of the National Bureau's research staff. I have especially profited from the comments by Milton Friedman, and received several useful suggestions from Solomon Fabricant. Wesley C. Mitchell contributed greatly to the improvement of Chapter 1 and upon his recommendation, a separate chapter dealing, among other topics, with business savings, was added. Of the Directors of the National Bureau I am indebted for valuable comments to George O. May, W. Leonard Crum, C. Reinold Noyes, and Harold M. Groves. Albert G. Hart of Iowa State College, Raymond Goldsmith of the Securities and Exchange Commission, and John L. Martin, formerly of the Department of Commerce, also made constructive criticisms.

In the preparation of the estimates the National Income

Unit of the United States Department of Commerce has been our generous ally. The discussions at the meetings of the Conference on Research in Income and Wealth served to clarify some of the theoretical issues and supplied some relevant statistical measures beyond the scope of our own investigations. The final manuscript has been patiently edited by Martha Anderson.

To all these individuals and organizations I am sincerely grateful.

Simon Kuznets

July 1, 1941

PART ONE

Concepts, Classifications, and Procedures

CHAPTER 1

Concept of National Income

1 *National Income an Appraisal Notion*

NATIONAL income may be defined as the net value of all economic goods produced by the nation. Each term in this definition—'net value', 'economic goods', 'produced', 'nation'—is circumscribed by a wide area of reference accepted by common agreement and a substantial periphery subject to controversy and treated differently from time to time, country to country, and investigator to investigator.

When any estimate is examined critically, it becomes evident that the maker, wittingly or unwittingly, has used one or more criteria of productivity. The statistician who supposes that he can make a purely objective estimate of national income, not influenced by preconceptions concerning the 'facts', is deluding himself; for whenever he includes one item or excludes another he is implicitly accepting some standard of judgment, his own or that of the compiler of his data. There is no escaping this subjective element in the work, or freeing the results from its effects. In consequence, all national income estimates are appraisals of the end products of the economic system rather than colorless statements of fact; and, like all appraisals, they are predetermined by criteria that are at worst a matter of chance, at best a matter of deliberate choice.

This thesis may be disputed. It may be contended that national income can be so measured as to be an objective record

of the net product of all activities that eventuate on the market, plus some of the non-market goods whose value is measurable: all inclusive, the estimate would involve no selection and, therefore, no criteria based upon some ethical notion of productivity.

But if no criteria of social productivity are used, national income becomes a mechanical total of all net receipts of individuals and business agencies, regardless for what activity or even whether there is any activity. It would include the compensation of robbers, murderers, drug peddlers, and smugglers, differential gains from the transfer of claims, and pure transfers such as gifts and contributions, which, in the absence of a productivity criterion, cannot be distinguished from payments for services. Such a judgmentless estimate would be of little use, since, to measure all market transactions, some gross rather than net total is requisite. It would measure neither the positive contribution of the country's economic system to the needs of its members for purposes of consumption or capital formation nor the sum total of what the inhabitants of the country *think* their income is. Any claim to significance such a total would have would lie in its presumptive usefulness as an appraisal of the contribution of economic activity to the welfare of the country's inhabitants, present and future. Consequently, to include such items as smuggling and robbery would have ethical implications just as truly as trying to exclude everything except 'economic goods'—implications that exist whether the compiler recognizes them or not.

Whatever the criteria, they imply an underlying scheme of values or social philosophy. The part of wisdom is to make this scheme of values explicit and allow it to guide the procedure. An investigator can decide intelligently what items to include and how to treat each only by formulating criteria of productivity and the principles of valuation to be applied. To do without this preliminary and decide each issue as it arises in accordance with 'common sense' is to conceal from himself and others what rules he follows, and to run grave

risks of vitiating his results by inconsistencies. The proper role of common sense is to aid in choosing the fundamental principles of selection and valuation and in deciding just how they can best be applied to imperfect or recalcitrant sections of the data.

For those not intimately acquainted with this type of work it is difficult to realize the degree to which estimates of national income have been and must be affected by implicit or explicit value judgments. The items about which estimators using different criteria reach conflicting conclusions may seem to be of little moment theoretically and to involve magnitudes picayune in comparison with those beyond controversy. But such an impression is misleading. Unless the cases that lie on the borderlines are considered, the very areas that are beyond dispute are obscure; and analysis of the borderline cases themselves usually shows that they are far reaching. Correspondingly, the magnitudes involved increase as the search for a substantive meaning of the estimates becomes more thoroughgoing. The apparent relative unanimity produced by empirical writings on national income is due largely to the estimators' unconscious acceptance of one social philosophy and their natural reluctance to face such fundamental issues as would reveal that estimates are conditioned by controversial criteria.

The demonstration of the conditional character of the national income concept and hence of national income estimates is neither thankless nor purely destructive. It is necessary for a proper interpretation of national income estimates because they are used extensively in controversial issues. It is also a stimulus toward their improvement in two respects, consistency and explicitness. First, all questions of scope must be decided consistently and can be only if the reasons for the decisions are clear. Second, national income estimates must be presented in explicit detail and in several variants. The purposes these variants may serve must be kept in mind when the criteria are set up.

2 Economic Goods

The chief characteristic of goods is that they are sources of satisfaction. Most of such sources are economic in that they are relatively scarce and at the disposal of the active unit (individual, enterprise, nation) in economic life. The goods may assume the tangible form of a commodity, appear in more elusive form as a service separable from its material source, or be perceived as a social or personal arrangement inseparable from the human beings that constitute society. Underlying the variety of their manifestations and the qualitative diversity of physical shape are the scarcity and disposability of these sources of satisfaction, characteristics without which they would not be involved in economic behavior or give rise to social relations that are the concern of economic study.

This description of economic goods indicates their broadest characteristics, but is too wide for a measurable concept of national income. First, it covers many services and arrangements and some commodities that result from the general functioning of individuals in aspects of everyday life not usually associated with economic activity and not considered germane to the understanding of economic reality. Second, it provides no basis for deciding how to treat a commodity, service, or arrangement that is a source of satisfaction to some people and of dissatisfaction to others. We discuss separately the two groups of items that consequently should be considered for exclusion, the first under the head of non-market goods, the second, of non-productive activities.

A NON-MARKET GOODS

An individual spends most of his time producing scarce and disposable sources of satisfaction. In accordance with the above definition, most acts that might be called 'personal', such as washing, shaving, and playing for amusement on the piano would be treated as economic activity and their results as economic goods, since, when judged by the attributes of

satisfaction-yielding, scarcity, and disposability, they do not differ from the same activities carried on for money as services to other people (nursing, barbering, and giving concerts). Every canon of proper definition would be violated if we included almost all active life under economic activity and all its positive results under economic goods.

To draw a line between economic activity and economic goods on the one hand and active life in general and its stream of satisfactions on the other is the more difficult the greater the diversity of social experience for which the distinction is to be valid. It would not be easy to formulate a distinction that would be valid for both the primitive tribes in the wildernesses of Africa and South America and the nations of North America and Western Europe; or for the institutional settings of European society in both the tenth and the twentieth centuries. Fortunately, the practical purposes of our estimates, which are for recent years and a highly developed national economy, enable us to simplify the task by drawing the line between economic activity and active life in general in a way that will fit the experience of recent decades alone and be valid solely for mature economies.

For this range of experience the most distinctive attribute of economic activity, not considered heretofore, is its close connection with the market; and the most conspicuous characteristic of economic goods, not mentioned so far, is that they usually appear on the market. It is the market, with its vast mechanism for the disposition of diverse goods, that reveals the ties binding the separate units in the economic system and segregates economic goods from others. Therefore, we define economic goods as commodities, services, arrangements, etc. that are dealt in on the market; and since the attributes mentioned earlier are implicit in marketability we can dispense with them. Unless an object is a source of satisfaction, relatively scarce, and disposable, it is not bought or sold. Marketability implies these three attributes and adds an important fourth, viz., that the goods are involved in the complex of

social relations that are of especial concern to economic study.

But if the market is considered as a complex of social relations of a certain type, and marketability as the characteristic of goods involved in them, it must be recognized that there are different kinds of market expressive of significantly different underlying social relations. In an attempt to assure meaning for the distinction, and essential homogeneity for the realm of economic life, the definition may be narrowed still further, restricting economic goods to those that appear on markets of one specific type. For example, some investigators confine the concept to results of private industry, excluding the activities of public agencies.

We are now in a position to see clearly the limits within which the national income investigator can choose his definition of economic goods. He can restrict the concept to goods dealt in on markets of the types that seem to him most expressive of the essential features of the economic system under study. For the modern economy these would presumably be the competitive markets of the private business system. Or he can accept the broadest definition and make economic activity almost co-extensive with active, satisfaction-producing life.

These two concepts are not the horns of an either/or dilemma, but rather the limits of a range within which significant stages can be distinguished. Obviously, differences in the scope of the concept of economic goods will produce corresponding differences in the scope of the national income estimate, and no one variant of national income along this range is best for all purposes. The stages in the full range of variants are described in the accompanying tabular arrangement which shows the groups of goods that are to be added progressively to the narrowest concept.

The investigator should recognize this variety of concepts and purposes and so arrange his data that variants of totals can be derived along the entire range from the narrowest to the broadest. But complete coverage of the possible variants is an

VARIANTS OF DEFINITION OF ECONOMIC GOODS

I (narrowest)—goods exchanged for money on private markets

II (I) + (1)—all goods exchanged for money on all markets of the country

III (II) + (2)—all goods exchanged on all markets, whether for money or by barter

IV (III) + (3a) + (3daa) + (3c)—all products of the business and public economy but excluding most products of the family economy

V (I) + (1 + 2 + 3)—all economic goods most broadly defined

ADDITIONAL GROUPS OF GOODS

1 goods sold by public agencies on markets characterized by compulsory powers of public authorities

2 goods entering barter exchange (payments in kind by enterprises to employees or other participants in their activity)

3 goods not appearing on markets
- a products retained by producers for their own consumption (especially important for farmers)
- b services and products of individuals outside the market system, flowing to other individuals (especially services of housewives and other members of households)
- c services of individuals outside the market system to themselves (largely personal self-service which accounts for a great deal of active life outside 'working' hours)
- d services of commodities owned and used by consumers
  - aa residential real estate
  - bb other consumers' durable commodities
  - cc other consumers' goods
- e services of publicly owned commodities to ultimate consumers and business agencies, e.g., roads

ideal that cannot be attained, partly because data are lacking and partly because some groups of goods included in the broader variants are not measurable. As far as we could, we based our estimates on a definition corresponding to Variant IV, omitting item 3e. It includes all goods appearing on the markets of the country (subject to restrictions imposed by other issues), whether exchanged for money or for other goods, plus the retained products of activities most of which result in marketable goods, plus the imputed return from a type of consumer good whose services are in large degree separable from the commodity itself and are bought and sold on markets.

The other items under 3 cannot be estimated adequately on a continuous basis, although in Chapter 9 we indicate the approximate magnitudes of most items mentioned. On the other hand, we do attempt to break down the national income total so that each item added in passing from the narrowest concept to the broadest measured can be subtracted, thus making it possible to measure variants based on somewhat less inclusive definitions of economic goods.

The national total just described may seem at first to be an arbitrary stopping point between the two extremes. But it is more than that. It is essentially an appraisal of the final net product of the business and public economies of the country, two of the three important social institutions that contribute to the production of economic goods; and excludes completely the product of the third—the family. This sweeping statement is true with the relatively minor exceptions that some interpretations would classify the services of houses to owners who inhabit them as products of the family rather than the business economy; and that free services of publicly owned commodities to ultimate consumers are not included.

Exclusion of the products of the family economy, characteristic of virtually all national income estimates, seriously limits their validity as measures of all scarce and disposable goods produced by the nation. The line of division between the business and the family economy differs from country to country, and for the same country from time to time. The temporal differences are especially important for our estimates, since they occur not only over long periods but also, given violent cyclical fluctuations, over short. A severe depression with its attendant unemployment may force many individuals to return to household tasks that in prosperity are performed by hired labor or by manufacturing enterprises; and an opposite shift may take place during prosperity. Over longer periods distinct secular shifts occur in the relative contributions of the business and the family economy to the total of economic goods, most broadly defined. One must, therefore, guard

against the common tendency to consider national income totals as all inclusive summaries of the scarce and disposable sources of satisfaction produced by the nation. Such summaries would become practicable only if the data improved substantially or if the family disappeared entirely as a producer of goods.

B NON-PRODUCTIVE ACTIVITIES

The assumption implicit in our discussion so far, that all money and barter transactions on markets involve goods and hence should be included in national income, is far from true. While all goods that pass through markets are economic, not all the *quid pro quos* changing hands on markets are necessarily goods; and not all money and barter transactions involve *quid pro quos*. The exclusion of these marketable non-goods and of transfers raises one of the most complex problems in defining national income.

Since we aim to ascertain, as accurately as we can, the contribution of economic activities to the consumption of the inhabitants of the country and to their stock of capital goods, our estimates must exclude results of market transactions that do not add to the flow of goods at their disposal. The application of this criterion of productivity leads to excluding from national income the results of transfer transactions when carried on for philanthropic (contributions, etc.), business (capital gains), or mixed motives (gambling, etc.); and the monetary equivalents of activities that may directly and explicitly be recognized as unproductive (theft, etc.).

No theoretical difficulties stand in the way of excluding from national income the results of such transactions as gifts, contributions, and relief payments. It is of their essence that no productive service is rendered by the recipient, even though he may so expend the proceeds of the gift, contribution, or relief payment as to induce the production of new goods. True, the donor may derive satisfaction from making the gift, contribution, etc., and the willingness of the recipient to accept the

transfer may be viewed as a source of this new satisfaction. But our aim in measuring national income is not to gauge the flow of satisfactions from all sources, but rather to record the production of tangible and observable sources of satisfaction attained by the use of scarce and disposable resources—among which willingness to receive gifts is obviously not one. Contributions, gifts, and similar transfers should, therefore, be treated as a redistribution of goods produced currently or in the past, rather than as the production of new goods. Proceeds from gambling of various sorts, in which goods already produced are redistributed, the gains of some individuals being offset by the losses of others and the net gains not representing any services rendered by the gainers to the losers or to society at large, should be treated similarly.

Gains and losses on capital, i.e., on assets of various types, may be actually realized or merely imputed. At least realized gains and losses on sales of assets are often included in national income because individuals tend to think of national income as an exact analogue to their incomes; and both individuals and taxation laws in this country consider gains on sales of assets as *bona fide* income. Yet capital gains and losses are not increments to or drafts upon the heap of goods produced by the economic system for consumption or for stock destined for future use, and they should be excluded.

Most broadly conceived, capital gains and losses result from changes in the value of a given capital asset, whether or not due to its physical transformation. These changes may, in turn, reflect changes in the general price level, caused by changes in the supply of the monetary media and of all assets; or they may be specific to a given group of assets or even a single asset, caused by changes either in demand for the asset itself or in the number of effective units in it. Obviously, an increase or decrease in the price of a capital asset, caused by a general change in the price level arising from monetary inflation or deflation, is not evidence of any production or productive consumption of goods; therefore, the resulting gain or loss should

not be included in national income. Nor is a change in the price of a given asset due to a shift in demand evidence of production or consumption although it may mean an accretion to or depletion of the country's stock of wealth. If for some reason consumers lose interest in maple furniture and acquire a passionate liking for mahogany, the consequent losses and gains in value do not in themselves represent any extraordinary consumption of maple furniture or new production of mahogany. In other words, autonomous changes in consumers' tastes, i.e., changes not brought about by the expenditures of enterprises, are not part of economic activity and should be excluded. Fully aware that we thereby exclude sources of changes in the value of wealth that lie beyond the production process proper, we decided to confine national income to the net product of economic activity of production processes broadly conceived.

Similar reasoning applies when the number of effective units in an asset changes either because of previous investment or disinvestment or because of discovery or other accidental causes outside the regular production process. The rise in the value of a farm due to the expenditure of preceding years' income to increase the herd and add machinery has already been included in national income for these years, and to include the capital gain once more when it is realized or recognized as accrued would be double counting. The rise in the value of a corporation due to the ploughing back of profits in preceding years has already been included in national income for these years and it would be duplication to include realized or unrealized capital gains by holders of this corporation's securities. Any real investment made in the course of a fortunate discovery that enhances the value of a given asset has already been recorded under preceding years' income; and so far as the appreciation in value actually exceeds this previous investment, it cannot be considered a part of continuous economic activity. It may best be treated as an accidental shift in technical conditions of production, similar to

the autonomous shift in consumers' tastes. Likewise, capital losses due to regular and forecastable functions of productive operation that can be offset by depreciation, insurance premiums, etc. are taken account of in calculating the net income for each current year of operation. And any losses sustained above that amount because of floods, hurricanes, and other acts of God can best be treated as accidental shifts in conditions of production, outside economic activity proper. Here again, as in the case of autonomous changes in consumers' demand, we limit national income to results of productive activity broadly defined; and exclude exogenous, accidental changes on both the demand and supply sides, changes that nevertheless affect the value of wealth at the disposal of the inhabitants of the country.

There is general agreement, we believe, that gains and losses on capital assets arising from the previous disposition of income (i.e., previous investment and disinvestment) should not again be included in national income; also, that in measuring the real contents of national income, gains and losses on capital assets arising from general shifts in price levels should be excluded. The issue then reduces itself to the treatment of changes in the value of capital assets that arise from autonomous changes in consumers' tastes and in conditions of production, autonomous meaning in both cases outside the processes of economic production (extraction, fabrication, transportation, trade, direct services of various types). The concept of production could be extended to include changes in consumers' tastes and such extraordinary events as great discoveries, floods, and hurricanes. But we prefer to confine it to those numerous production processes in which there is some pattern of regularity and some effective control by individual producers and hence some economic rationality in their behavior. The narrower definition yields estimates that can more easily be interpreted in terms of a contribution by the economic system and removes possible fluctuations in national

income estimates from year to year that would be introduced by external, ungovernable, disturbing factors.[1]

While gifts, contributions, and relief payments are not tokens of productive services rendered by their recipients, and appreciation and depreciation of assets likewise cannot be included under national income as we define it, the activities that facilitate the administration of relief or charity and the realization of gains and losses from sales of assets are productive, unless characterized otherwise on grounds different from the ones adduced. It may seem absurd to declare a given activity unproductive and an activity intended to facilitate it, productive. But this absurdity is merely apparent. If individuals derive satisfaction from gambling and from other methods of transferring money without a *quid pro quo* in terms of goods, these activities are unproductive in the sense that the monetary gains realized by the lucky members of the group do not measure any goods produced by them. But so far as gambling and similar pursuits are pleasurable, and the balance of satisfaction they render is positive, the provision of facilities for them must be considered productive and included under national income. Similar reasoning applies to the administration of charity or relief, as well as to any receipts representing gains by a broker on the sale of assets.

We pass now to the more difficult case of market transactions involving objects that are sources of satisfaction to some members of society but of dissatisfaction to others. Few goods, no matter how universally their usefulness is recognized, escape being sources of dissatisfaction to some members of society; and the issue, therefore, affects a major proportion of all objects that are exchanged on the market. We speak glibly of marketable commodities, services, etc. as positive magnitudes, partly because of a ready acceptance of willingness-to-pay as the ultimate test of what economic goods are, and of a

[1] Analysis at this point bears almost as much upon the meaning of 'produced' as of 'economic goods', but it is impossible to discuss productivity without at the same time elucidating production.

tendency to read rationality into the arrangements of a social order to which we are accustomed; partly because of the interchangeability of marketable objects and the individualistic argument that no matter how useless or even harmful a specific object may seem to us, so long as it fetches a price it can be exchanged for a useful one. Neither view can be followed in arriving at a national income concept valid for the social system as a whole.

The problem might conceivably be treated in either of two ways. The first, theoretically more desirable but impossible in practice, would be to weigh for each object (commodity, service, arrangement, etc.) both the satisfactions and the dissatisfactions it renders; and then include in national income only the net balance. Could this be done, some objects might appear in the final addition with a negative sign, thereby reducing the positive balances contributed by others. But neither social institutions nor scientific disciplines have as yet evolved a calculus by which the various products of economic activity can be measured as sources of satisfaction or dissatisfaction to all members of a society. The market mechanism does not provide such evaluation. The price an object fetches on the market is determined in general by costs on the supply side, and preferences, backed by means of purchase, on the demand side. The parties affected indirectly by the object do not usually participate in the transaction, and except when society intervenes legally, have no effect on it.

We must, therefore, adopt the second method, namely, consider whether, from the viewpoint of society at large, the net balance of satisfactions and dissatisfactions the object as an economic good gives is positive or negative or neutral. It is thus the sign, rather than both the sign and the size, of the net balance that is decisive. If the sign is positive, the object is declared to be an economic good and its full value included in national income; conversely, its value is excluded if the satisfactions yielded are more than outweighed by the dissatisfactions, or if no element of satisfaction is perceptible.

But how does one decide whether an object bought and sold on the market yields a positive balance of satisfaction? Upon what basis are some activities that fetch a price on the market and a fairly substantial price at that, considered unproductive by important groups in our society? Upon what basis do we often go even further and grade productive activities according to some more or less common scale of the satisfaction their products render?

The variety of answers to these questions is well evidenced by the diversity of ways in which productivity has been defined by economists since the days of the Classical School and by the substantial list of activities that have been classified as unproductive by national income investigators for various countries and at various times. Differences in viewpoint, determined largely by differences in social organization and by class or group interests, affect national income estimates markedly. Except for activities directly concerned with the production of the commodities that constitute necessities of life, all economic activities have probably at some time or other, by one investigator or another, been treated as unproductive.

Here again, as in the case of non-market goods, the national income investigator can lighten the burden of definition by so arranging his data that both productive and non-productive activities are measured. Users of the estimates can then derive various totals in accordance with their own notions of productivity. But this procedure does not obviate the necessity of clarifying notions of productivity, since they must serve as guides to classifying the components of the most inclusive national income total. Moreover, practical considerations force the investigator to adopt, consciously or unconsciously, some criterion of productivity to guide his efforts to measure the parts that are germane to national income as a concept of net product and keep him from wasting efforts on measuring activities whose productive character is doubtful.

In general, two types of decision concerning the criterion of productivity can be made. One is to accept the notions that

have been expressed overtly by the body social in prohibiting some activities and encouraging others: illegal activities would be classified as unproductive; and any activities that are both legal and marketable would be classified as productive and their products included under national income. The other type of decision would entail the formulation of criteria of productivity with merely partial or no reference to the overt notions of society as expressed in its laws.

Either decision means approaches so complex that an investigator who conscientiously tried to carry out all their implications would never arrive at a national income estimate. The first, to take as the framework of one's concept the overt opinion of the body social as expressed in its legal statutes, seems to have the advantage of utilizing a recorded set of rules, especially definite with respect to items and activities that should be excluded as unproductive. But even brief and amateur consideration of the meaning of legality and illegality would immediately reveal a host of difficulties. Illegality ranges all the way from barring itinerant shoe shining or keeping a dog without a license to killing your neighbor. Quite frequently activities that seem equivalent in both substance and economic meaning are prohibited if performed in one way and permitted if performed in another. If the concept of illegality is to be taken literally, many economic activities accepted by the body social as productive would have to be declared unproductive. If, however, we try to distinguish among degrees of illegality by the severity of the penalty or some other feature, we become bewildered in a maze of equivocations and are likely to emerge with results that will be both arbitrary and subject to erratic changes from time to time or country to country.

The second decision, to set up substantive criteria of productivity with little or no reference to the consensus of the body social, is even more difficult. It may be easy to single out a few activities of so clearly an unproductive character that they would be classified as such by any set of criteria. But it is

doubtful that objective standards of satisfaction can be worked out that would allow us to classify properly the thousand and one activities whose results appear on the market; and even were it possible, such standards might not be acceptable to society at large, nor might national income estimates built on them be acceptable appraisals of the past performance of the economic system or bases for more intelligent consideration of public policy.

The ideal solution would be to attempt both approaches: to study in detail how the legal system expresses the judgment of society concerning the productive character of activities; to explore the various bases of objective and widely acceptable substantive criteria of productivity; and to implement these analyses by statistical measures of productive and unproductive activities thus distinguished. But such a solution is far beyond the scope of our investigation. With the data and time we had, we thought it most practicable to follow the first type of decision, i.e., to base the criterion of productivity upon the judgment of the body social as expressed in laws. This application does not mean that we classified all illegal activities as unproductive. We rejected as unproductive only those few activities—theft, robbery, organized private murder, forbidden drug peddling, and the like—whose detrimental character is obvious enough to preclude any doubt that it was the basis for the legal prohibition. A rather broadly inclusive concept of national income results: it excludes few activities and includes many that may seem from any long range viewpoint of social utility to be not only non-productive but actually harmful.

This aspect of our decision must be clearly borne in mind. The criterion of productivity followed in our estimates, chosen in line with current social opinion, classifies as productive activities that, for a society organized differently from the United States in this century, might well be considered worthless and even harmful. It swells national income with items that represent what many citizens condemn as a misuse of

energy and the inadequacies of the existing social structure. It includes dreadnoughts, bombing planes, poison gas, and patent medicines because they are rated economic goods in our country today. Obviously, national income estimates based upon formal criteria of productivity retain meaning only so long and so far as the legal structure of a society reflects fairly accurately the opinions of the body social and so long as these opinions correspond, however crudely, to standards of satisfaction that can be established objectively. They are the results of a compromise that any critic who has time and data can supplement or replace by criteria of productivity that go far beyond the notion represented by the attributes of marketability and legality. It may well be that social standards will be so modified as to reduce our present estimates to absurdity. If so, all we can claim is that they have historical validity.

To summarize: our estimates cover primarily the product of the business and public economies. Of the goods not appearing on the market they include only those retained by producers for their own consumption, payments in kind to employees, and imputed rent on owner-occupied houses. On the other hand, of the net money receipts by individuals from ordinary market transactions or other sources the following are excluded: (a) receipts from pure transfers, such as relief payments, contributions, gifts, and gambling debts; (b) gains or losses on already existing assets, whether actually realized on their sale or accrued because of changed valuation; (c) products of illegal activities, such as smuggling, racketeering, bootlegging, and drug peddling.

Only the *direct* value of these receipts is omitted: net monetary receipts from transfers or non-productive marketable activities and, in the case of non-market goods, imputed values. Even though racketeering is not productive, and the income originating in it is excluded, we cannot eliminate the indirect effects, e.g., racketeers' demand for steel. Likewise, gains from sales of assets, as well as the activity of the family economy

outside the market, affect market activity, and hence the goods included in national income. Since the business, public, and family economies are closely interrelated with the various parts of the market mechanism, the indirect consequences of the excluded activities on activities whose products are properly included in national income are far reaching and it would be exceedingly difficult to eliminate them. But elimination of the indirect effects of the excluded activities on the areas covered, though a challenging task, is not indispensable. For what we measure is the net product of the economic system, regardless of its causal factors. Important as estimates of capital gains and losses and products of illegal activities may be in explaining how the national income came to be what it is, an estimate that omits them is useful; and when explanation is attempted, such factors as are comprised under the family economy, transfers of claims, or illegal activities, will have to be considered together with many others not mentioned here.

3 Economic Value

In discussing the inclusion and exclusion of certain groups of items, we touched indirectly upon how the items included among economic goods and hence in national income are to be combined. The diversity of physical shapes economic goods display and of wants they serve compels us to express them in terms of a common unit that will reveal their economic significance and allow them to be added and subtracted in various combinations. This measurable aspect, common to all economic goods and revealing their economic significance, we designate 'economic value'.

The yardstick of economic value is fashioned on the market place. It is in markets that economic goods are brought together and their relative importance gauged for purposes of sale and purchase; that the members of the community vote, in terms of the common currency unit, upon the relative value to them of various commodities, services, and arrangements.

In fact, to identify economic value with market price is, at least as the first step, the one possible solution of the problem. Nevertheless, market prices are a somewhat defective yardstick. Though unable to remedy its defects, we discuss them here to give a better understanding of the totals and subtotals derived with its help.

A GOODS NOT APPEARING ON THE MARKET

Strictly speaking, there are no prices for non-market goods. How then should the value of goods that do not appear on the market be measured? The usual answer is that almost all non-market goods have their counterparts on the market and that they should be assigned the prices their counterparts fetch. For example, the value of payments in kind to employees is to be measured at the market prices of the goods distributed; the value of housewives' services, at prices paid domestic servants.

Though the only practicable one, this solution overlooks an important element making for lack of comparability between non-market goods and seemingly identical market goods. The purchaser of the latter ordinarily has considerable freedom of choice and opportunity to change his mind; the recipient of the former usually does not. For example, a household can choose among many types of servant, hire on trial, and dismiss as often as it is so inclined; a gentleman would not treat his wife so summarily. An employee receiving payments in kind as part of his wages may put a low valuation upon them and might not purchase them if he had to buy them at their market price. Were he to receive cash instead, he might be willing to accept less than the equivalent of the market price. Thus by assigning the full price of their market counterparts to non-market goods we may overvalue them. A similar conclusion would apply to almost all other non-market goods whose counterparts appear on the free markets of the business economy. The only items to which it does not apply are products retained by producers for their own consumption.

Moreover, prices of market goods, whether or not counterparts of non-market goods, are affected by the fact that of a given volume of goods produced, all is not put on the market to compete with market products. We should perhaps evaluate both non-market goods and all others at prices we think they would fetch if all goods were offered for sale. The amount of money remaining the same, the addition to the goods on the supply side would lower the prices of all goods. But, other conditions being equal, the decline in market prices might be greater for those goods a large share of which do not ordinarily appear on the market. If this reasoning is valid, then the application of existing market prices to non-market goods overvalues them on two counts: first, because of the distinct probability that they are of lower quality than the market goods with which they are *at all* comparable; second, because withholding them from the market may have served to maintain the prices of their *exact* counterparts at a level, relative to the prices of all other goods, higher than it might otherwise have been.

In addition to goods withheld from the market, a considerable quantity is in production and does not appear on the market by the end of the period for which national income is estimated. Some may never appear on the market in the exact form in which they are completed by their producers (e.g., a machine built by an enterprise for its own use); others will appear shortly after their completion (e.g., goods in process). Such uncompleted production must, nevertheless, be recorded and evaluated. In the absence of current market prices for them, the only basis for measurement is outlays incurred, i.e., essentially past market prices of the components of these uncompleted products.

Evaluating uncompleted products at cost and completed products at current market prices introduces an element of incomparability. In general, costs are less sensitive to changing conditions than current market prices; and the price set upon uncompleted goods evaluated on a cost basis may be quite

different from the price actually realized when they are completed and sold. This element of incomparability is minor if the value of uncompleted goods is small relative to that of completed and marketed goods. But the shorter the interval for which national income is estimated, the greater the ratio of uncompleted to completed goods tends to be; and the larger the element of incomparability introduced by using the two bases of evaluation.

B PECULIARITIES OF THE MARKET MECHANISM

But how valid is market price as a measure of the value even of marketed goods? Does the price a commodity or service fetches reflect faithfully its importance relative to other commodities and services, when judged from the viewpoint of society at large? Though markets are the sole mechanism by which goods are compared for purposes of exchange, and hence market prices are the sole directly available measure of the relative economic importance of diverse goods, they may distort economic value judged by any substantive criterion. Indeed, closer scrutiny of the market mechanism reveals numerous peculiarities that indicate that market prices do not accurately measure how well goods and services satisfy the needs of the body social. We describe these peculiarities briefly, primarily in order that the necessity of using market prices to evaluate the components of national income may not be misunderstood.

1) It is axiomatic that economic goods derive their values from the contributions they are deemed capable of making directly or indirectly to the satisfaction of present or future needs. Yet, because no practical calculus of satisfaction has been devised, we cannot appraise 'the net value of all economic goods produced' in terms of this fundamental criterion; instead we must use price as the criterion. We realize that we thereby accept the institutionalized valuations of a society in which market demand reflects human needs only so far as they are backed by purchasing power. No one supposes that the

distribution of income parallels the distribution of wants or satisfactions. At one end of the scale are people whose incomes are insufficient to buy adequate food, clothing, and shelter; at the other end are people whose incomes suffice to satisfy not merely the imperious necessities of life, but also the innumerable less intense wants men conceive when they are well fed, well clothed, and well housed. Therefore we cannot claim that our estimates of national income, based as they must be upon market valuations, evaluate goods as means of satisfying directly or indirectly the present or future needs of the population.

Within the limits of their purchasing power consumers exercise their buying rights in accordance with their preferences and what they think their needs are. Just as one may be critical of the effects on market valuation of an uneven distribution of purchasing power, so one may doubt the wisdom of consumers in their choice of goods and services. From the standpoint of objectively established tests and criteria of what people should demand and how they should apportion their resources, the behavior of consumers may seem irrational.[2] It may be argued, therefore, that whatever the effect of consumers' purchases on market valuation, it does not lead to estimates that reveal accurately how well various goods satisfy social needs objectively and scientifically determined.

But if we accept society's classification of activities as productive and unproductive, we must accept the market mechanism as it functions: with the exercise of unevenly distributed purchasing power and of free if irrational choices (limited for only a very few commodities, such as poisonous drugs) by ultimate consumers. We make the statement here to emphasize

2 This statement, as well as some of the discussion in Section 2 B above, implies that objective standards of needs are possible. This possibility could scarcely be denied for some of the more elemental needs of sustaining and reproducing life, but, of course, is more remote for other needs and wants. The reference to such objective standards and tests should not be interpreted as an assertion that they exist now, that they can be so formulated as to be studied in detail, or that they should be imposed upon society.

how a viewpoint penetrates the entire network of definition and procedures; and again call attention to other viewpoints and the differences in quantitative results they are likely to cause.

2) Under conditions of effective competition, prices are set at the intersection of the supply curve with the demand curve; i.e., where the quantity of products turned out is as great as will be purchased by people wanting them and able to pay a price neither smaller nor greater than the marginal cost. With the development of significant departures from competitive conditions, there are corresponding changes in the mechanism of market prices. A distinctive feature of monopolistic conditions on the supply side is that an individual producer can alter prices for his product by putting a larger or smaller volume of goods on the market. More specifically and simply, he can restrict the total output of his product and charge a higher price per unit. If all other conditions remain the same, the monopolist's price is likely to be above marginal cost to him and also above marginal competitive cost.

There is another closely related feature of monopolistic behavior. Unlike a competitive producer, a monopolist can charge discriminatory prices, i.e., demand and obtain different prices for goods of one and the same kind from would-be purchasers of different classes. This substitution of several prices for the single price of a competitive market does not often invalidate the statement made above that, in general, monopolized goods are valued on the market at prices substantially higher than they would have fetched under competitive conditions;[3] but 'prices' must be a weighted average of all the monopolist's prices for the product, not any single price charged by him. In addition, the varying degree to which monopolists can charge different customers different rates becomes in itself a factor in setting the weighted prices of

[3] In some cases, however, it may reverse the result and lead to an average price lower than that charged for a competitive product.

monopolized products at certain levels above their competitive counterparts.

It may be argued that 'economic value' is measured properly only in competitive markets, for only here are real costs and returns (qualified by the distribution of purchasing power) allowed full play; that the existence of monopolies distorts price relationships and introduces an element of incomparability between goods sold on competitive and on monopolistic markets. And were one to meet the requirement of homogeneity of the competitive structure of markets, it would be exceedingly difficult to correct for this peculiarity of market prices, for competitive or monopolistic prices would have to be constructed in areas where they do not exist, causing a realignment throughout the price system.

The real question, however, is whether, recognizing this peculiarity of market prices as a limitation of the market mechanism when viewed as a way of determining values in some ideal system, we should not also admit it as part and parcel of a functioning society, which accepts it. Whether or not the investigator as an individual considers this aspect of the price structure beneficial, he must accept prices as they function, including their structural imperfections, if he bases his estimates upon the accepted notions of society. This is, perhaps, all the more true since monopolistic features have been directly attacked by society, which exercises whatever power it sees fit in governing price and other policies. In a sense, monopoly prices, although not determined by exactly the same processes as competitive prices and having a somewhat different meaning, do represent the valuation that society allows to be assigned a given category of goods or activities.

3) Almost all market transactions take place with the help of money, the exchange of one good for another being split into two separate acts of sale for and purchase with money. In comparisons at a given time, the possibility that money itself is an independent factor in determining market prices remains elusive: a universally accepted and all pervading

medium of exchange, money seems at any instant to be merely the unit of accounting, a transparent veil through which the relations among diverse goods can be seen but which in itself has no effect on these relations. When changes over time are considered, this impression proves erroneous. Market values, all expressed in terms of money, can fluctuate because of fluctuations in monetary conditions, even if the supply of goods remains constant. And money, understood in the broad sense as all means of payment in market transactions, is itself subject to several independent influences though they may on second or third remove originate in the circulation of goods.

The most immediate effect of monetary fluctuations on market prices is to make market value totals unreliable guides to temporal changes in the quantity of goods on the market. The instability of the unit by which market value is measured at different times is an obvious defect of current prices, and one for which statistical and economic analysis has most arduously attempted to adjust.

But there is another and much less obvious effect of fluctuations in money. The shift in the level of market prices they cause does not affect the prices of various goods either simultaneously or equally. Since fluctuations in money, as well as other disturbances, are not infrequent, relations between market prices are continually being modified by differences in the time and amplitude of the reaction. Consequently in temporal comparisons price changes caused by fluctuations in the value of money are not uniform among economic goods; and any attempt to adjust for fluctuations in the value of money is, therefore, much more difficult than if we could assume a uniform rise or decline of all prices.

The devices used to evaluate the real contents of monetary transactions vary in complexity and accuracy. The most common is to measure fluctuations in the value of money or in the general price level. Prices at successive points of time are recorded for one and the same group of economic goods. An index constructed from the observable fluctuations in

them is assumed to measure fluctuations in the general price level or in the value of money. With its help, totals of market values in current prices are adjusted for fluctuations in prices.[4]

The numerous practical difficulties that arise in compiling price indexes need not be discussed here. We note merely that the all inclusive character of national income totals makes especially difficult the compilation of indexes that reflect changes in the prices of all goods entering them. Of more immediate interest is a difficulty central to the entire procedure: the conflict between the requirement that the index cover prices of the goods included in national income and the impossibility of meeting the requirement, owing to qualitative changes in the goods.

As noted above, the prices of diverse goods react with different intensity and timing to current or prospective changes in monetary conditions. If, therefore, the index is to measure fluctuations in prices common to all goods and hence ascribable to fluctuations in money, it cannot be computed for merely a part of the price universe. The assumption that prices of goods not included in the index move in the same direction and to the same extent as the prices included is dangerous. Such a selective coverage would be justified only if we could classify goods according to the responsiveness of their prices to fluctuations in money. The goods from each class included in the index could then be assigned a weight determined by the importance of the class as a whole. Since a reasonably complete classification of this type is not available, a price index cannot be satisfactory unless it has relatively complete coverage.

But prices can be compared at successive points of time only if goods of identical type appear on the market. Yet changes in technology and in the tastes of ultimate consumers spell qualitative changes over time. As some commodities (e.g., buggies, certain types of attire) disappear, new ones (auto-

[4] Another device is to construct indexes of output. The problems are analogous to those for indexes of the general price level.

mobiles, radios, etc.) appear; and some are so subject to qualitative changes that, while called by the same name, the unit of 1921 is hardly the same as that of 1941 (e.g., certain types of industrial machinery). Thus, even for commodities, prices comparable for a substantial period exist solely for goods that undergo merely minor qualitative changes and that are in active market circulation throughout the period. Among services it is still more difficult to establish qualitative homogeneity; qualitative changes are rather likely, and shifts into and out of markets frequent.

A further difficulty arises even for those goods for which comparable prices exist for a period. All are in active circulation during the period but the relative quantities in which they are produced and appear on the market, needed as weights in combining the prices into a general index, are not constant. Which set of quantities is to be used? If those of year 1 are used, then the measure of price changes assumes as basic the goods-basket in year 1; similarly for years 2, 3, etc. Since one and only one set of quantities can be used in an index, the measure of changes in the price level is always based upon some past, present, or intermediate basket of goods whose validity is confined to the point of time to which it refers.

In sum, even if all possible price data are at hand and no effort is spared, the measurement of temporal changes in prices and hence the possibility of establishing comparability in 'heterotemporal' comparisons is qualified by the limitation of prices to a body of goods appearing on the market throughout the period and by the necessity of choosing a single set of quantities as weights. The difficulty is practical: the choice is between presenting national income estimates solely in terms of current, fluctuating market prices, and attempting a necessarily imperfect correction for movements common to all prices and thus ascribable to fluctuations in the value of money. When changes in the general price level are appreciable, it is obviously better to make even an imperfect adjustment than to leave national income totals affected by fluctuations that

express changes in neither the quantity of goods nor the substantively defined value per unit.

C VALUATION OF GOVERNMENTAL SERVICES

If governmental activities are treated as unproductive, as they have been by many national income investigators in the more distant past, no problem of valuation arises: by definition, the value of governmental services is zero. Such a treatment is manifestly invalid: governmental activities contribute too much to the satisfaction of needs and are too closely interwoven with the entire network of market relations for their role as economic and productive pursuits to be ignored.[5] But on what basis are they to be evaluated?

One basis, to treat value of governmental services as meas-

[5] It could hardly be denied that the services of the post office, judiciary, etc. represent productive activities and contribute to the satisfaction of the needs of society at large. Doubts, however, have often been expressed concerning the validity of including the services of police or armed forces in national income; and many estimators have explicitly excluded payments of interest on government debt created by wars, on the assumption that no productive services correspond to them and that they are, therefore, mere transfers.

One can easily see the reason for such treatment if an investigator adopts criteria of productivity in the light of which he can modify judgments expressed by an overt act of the body social. However, only the acceptance of criteria of productivity different from those applied by society at large would justify this treatment. Since the estimators or analysts who advocate it usually profess to accept the dictates of the market place, the exclusion of services of governmental agencies such as police or armed forces and of interest payments on government debt seems inconsistent. If the activities of the private police used by many large corporations are productive, why not those of municipal police? And if of domestic police, why not of international police, i.e., the armed forces of the nation? If capital invested in industrial plants is productive, why not capital sunk in the preservation of the country's economic system or in securing to it economic privileges that affect the welfare of all enterprises or inhabitants? The objection that private enterprises cease paying interest on capital when it ceases to be productive, that they retire the debt or cancel it through default is not valid; governmental agencies act in like manner, though with a greater lag. Indeed, there is considerable parallelism between governments and private corporations in their expenditures on policing, economic warfare, their financial structure, and their policies with respect to debt.

ured by payments to governments by enterprises and individuals, is similar to that applied to other goods entering national income. The implication is either that, as on the private markets of the economy, individuals and enterprises pay the amounts governmental services are specifically worth to each of them; or that while neither individuals nor enterprises determine singly and individually how much governmental services are worth to them, society at large, through its established agencies for the expression of public opinion, does determine the total value of governmental services and sets the payment for them accordingly.

This treatment is questionable. The market on which governments sell their services is, with a few important exceptions, one where the suppliers (i.e., governments) have the power to fix an obligatory payment (in the form of taxes, fees, assessments, etc.). On the markets where the prices of other goods are determined, on the contrary, the potential purchaser is free to buy or abstain from buying. Consequently, can the payments governments exact be regarded as prices measuring the economic value of their services to society at large? Are the prices comparable to prices set on private markets? The strongest doubt concerns the tax paid by a given individual or business firm. Does it measure accurately the value of the services rendered by government to this particular payer?

It has been suggested that instead of evaluating governmental services at payments made to governments it would be better to use the cost principle. The implication is that the conditions under which governments buy and use production factors such as labor and materials are more similar to those of private markets than those under which they sell services or determine the payment to be made.

The choice between the two principles is largely between two evils, for neither is adequate. Costs adjust themselves more slowly to changing economic conditions than payments; moreover, an enterprise may sustain a net gain or loss, either inadvertently or as a matter of policy. Both are disadvantages of the

cost principle as applied to governmental activities; in addition, since all other goods are evaluated, as far as possible, at current market prices, the application of the cost principle to governmental services introduces an element of incomparability among the components of national income. On the other hand, the payment-price approach to governmental services is arbitrary because of the enforcement power of governmental agencies and because the relations between governments and citizens are hardly characterized by the same spirit of calculation and economic rationality that prevails in private markets.

Two considerations tip the balance in favor of the payment-price basis of evaluation. First, the difference between the results of the two bases would obviously be great chiefly for short periods, when governments may sustain large deficits or surpluses not offset by equivalent additions to or drafts upon tangible assets. But for short term changes the lag in costs and their insensitivity to changes in the market situation are especially conspicuous defects. Since the purpose of studying short term changes is to ascertain how the economic system responds to varying conditions, it seems preferable to use a valuation basis that is more sensitive to changing conditions.

Second, in estimating national income we need not be concerned whether a principle of valuation is efficient as applied to discrete units of goods and services passing through the market. We should judge its efficiency in measuring total national income and its significant components. For example, we should ask ourselves whether the payment-price is a valid basis when we consider the price paid by society at large for all governmental services,[6] not whether it is valid when applied to the prices (taxes) paid by Mr. Jones or Mr. Smith. When thus viewed in application to the whole complex of governmental services, the payment-price approach gives more reasonable results and has certain other advantages over the cost basis.

[6] Or more correctly, prices paid by ultimate consumers as a whole separately from those paid by all enterprises; see Section 4.

The piling up of deficits during depressions, which allows the market value of governmental services to fall below the cost value, is obviously in response to the changed market situation, and may be interpreted as reflecting a lower current valuation placed by society on governmental services. The case seems to be parallel to that of business corporations whose costs also tend to exceed returns during depressions, indicating that the valuation placed by society upon their products has declined compared with that implied in the past outlay. The difference is that whereas services of corporations are evaluated by the large body of consumers acting separately through private and free markets, the services of governments are evaluated by political agencies whose basic function is to express the consensus of opinion of the body social. But this difference does not seem to justify the adoption of the cost principle of valuation.

For these reasons, in our estimates governmental services are valued by the payment-price approach. But since the difference between the two approaches lies in an item estimated separately, viz., net savings of governmental agencies, anyone so inclined can substitute the cost approach.

4 Distinction between Net and Gross

We have defined national income as the *net* value of all goods produced by the nation during a given time unit. The emphasis on net and the need of distinguishing between gross and net values become clear from two observations. First, national income measures the results of economic activity cumulated over a finite period, rather than the state of the economic system at any one time. Second, the production of economic goods, both within separate enterprises and for the economic system as a whole, involves the use and consumption of already existing goods, products of time units preceding the one whose products are being measured or of this time unit itself. Since the full value of any good includes the value of other goods absorbed in its production, it would not do to count in national

income the full value of A as well as the value of B consumed in the process of producing A.

The distinction between gross and net is clearest in the case of a single enterprise. In performing its productive functions during a given period, an enterprise almost inevitably consumes products of past periods and of other enterprises. Its specific contribution to the value of goods made available during the current period for purposes of consumption and addition to stock is the value of its products *over and above* the value of products of past periods and of other enterprises consumed in the production process. Thus the *net* value of the enterprise's product is the full or *gross* value minus the value consumed by it, i.e., the cost of commodities and of services of other enterprises used up in the production process. The factors in a given enterprise that give rise to the excess of the gross value of product over the value of products consumed can be identified: they are labor, services of managerial and entrepreneurial personnel and of capital. The net value of product is thus the value of production specifically attributable to labor, capital, and entrepreneurial ability engaged in the enterprise.

This description can be extended to the national economy as a whole. The sum of the net values of products turned out by the enterprises that comprise the economic system is the net total that constitutes national income; and the sum of the full values of products of the various enterprises yields a gross national product total. The difference between national income and this gross national product is the value of products of enterprises consumed in the productive activity of all enterprises that comprise the national economy. In other words, net national product or national income is the value of product specifically attributable to labor, capital, and entrepreneurial ability.

Two types of difficulty arise in following this definition. The first concerns the meaning and scope of 'enterprise' and 'consumption'. The relation of net to gross varies with the defini-

tion of these terms because of differences in items deducted from gross to obtain net. Again the problem is one of inclusion and exclusion, similar to that encountered in Section 2 in the discussion of the concept of economic goods, except that here inclusion and exclusion apply to deduction items and have an opposite effect on national income. The second difficulty arises when the items subject to deduction have already been defined: it is not always feasible to estimate their value in a way consonant with the evaluation of total product.

A INTERMEDIATE AND ULTIMATE CONSUMPTION

The meaning of the term enterprise is far from unique and specific. An economic enterprise in general, including such non-profit organizations as governmental agencies, may be described as a unit set up for production processes that result in economic goods. What then prevents us from classifying each wage earner as a separate economic enterprise whose primary purpose is to render labor services at the highest possible price? If this were done, the net value of products turned out by a factory would have to exclude wages paid to wage earners, since such payments would represent the value of consumed products of other enterprises. Instead we would have to add the net value of products of the various enterprises called wage earners. This net value would equal not the full amount of wages received (the *gross* value of the product of these wage-earning enterprises), but wages minus the cost of products wage-earning enterprises buy from other enterprises and consume in the process of producing labor power (food, clothing, and other means of maintenance and reproduction). Consequently, this extension of the concept of enterprise would materially reduce both the net value of goods produced by the economic system and national income.

Similar reasoning can be applied to other elements now commonly included in national income. Each salary earner, entrepreneur, holder of a managerial and executive position can be conceived of as an independent enterprise; the com-

pensation for the products of each should be deducted from the gross value of products of the business or other unit in which each is employed, and from the total receipts of each should be subtracted the cost of maintaining and reproducing his capacity of rendering services of various types. Even for purely property income a case can be made for subtracting from total payments received the cost of maintaining a degree of abstinence and farsightedness indispensable for savings and investments. This extension of the concept of enterprise widens the scope of intermediate consumption, i.e., consumption of goods for the purpose of producing other goods, at the expense of ultimate consumption, i.e., consumption for carrying on life in its broadest aspects; and reduces the net national product or national income to that exceedingly minor magnitude that may be considered as *not* involved in the replacement of all goods, human capacity included, consumed in the process of economic production.

No purely analytical or empirical consideration can invalidate this extension of the concept of enterprise: it is largely a terminological question. But were this extension made and national income given the narrow scope and meaning, it would no longer reflect prevailing notions of the distinction between economic activity and life in general; and we should become more concerned with estimating the type of gross national product that corresponds to what we now call national income. Essentially we are interested in the type of national income we estimate because it corresponds broadly to current social philosophy, evolved from the basic assumptions of the modern social structure. We do not look upon human beings as enterprises, as units for the production of other goods; consequently, we do not view the raising and education of the younger generation or the sustenance of the working population as intermediate consumption destined to produce or sustain so many machines for performing labor, management, entrepreneurial, or capital-saving functions. It is this idea of economic goods existing for men, rather than men for eco-

nomic goods, that gives point to the concept of ultimate consumption and special interest to national income as usually defined. In this definition intermediate consumption is confined to the consumption, in the production process carried on by business and public enterprises, as the term is usually understood, of commodities and of services of other enterprises.

It may be contended that the attribution of primacy to the ultimate consumer is an idealization and that the corresponding national income concept suffers from the incongruity of combining the *net* return from the use of capital with the total or *gross* return from the direct use of human services. We do not deny the incongruity; its corollary is that we estimate national income on the assumption that the capital of business and public enterprises is kept intact, but do not apply such a criterion to capital represented by human capacity. To repeat, the one justification for formulating the national income concept in this way is the general notion that it should measure the positive contribution of the economic system to the satisfaction of present and future needs of the nation as a body of ultimate consumers; and this notion of ultimate consumption is essentially derivable only from the view that goods exist for men, not men for goods. It is immaterial whether this view is realistic in the sense of being embodied in all the institutions of modern economic society; that it is not, many observers have declared. The point is that national income is an appraisal notion of this type and our task is to reveal its implications.

Other concepts of national income are of course not thereby barred; various types of gross and net national product may be as useful as 'national income' as we define it. It would be of great utility to measure the entire range of possible totals, beginning with the gross national product in which duplication is most extensive and ending with the narrowest net national product representing the broadest interpretation of the term 'enterprise'. If subtrahend and minuend are estimated sepa-

rately, as they naturally would be in a whole series of totals ranging from the 'grossest' to the 'nettest', we would have a most illuminating picture of the working of the economic system. Among our estimates, for the parts of the economy for which data are available, are estimates of the gross value of product. And if in measuring net national product, we define intermediate consumption as the consumption by business and public enterprises, as the term is usually understood, of commodities and of services of other enterprises, it is because with the data and time at our disposal, we, in common with other investigators, consider this particular concept best suited to the basic criterion of appraisal, viz., provision of goods for the satisfaction of ultimate consumers of the present and future.

Application of these concepts of enterprise and intermediate consumption shows that some intermediate consumption by enterprises takes the form of consumption by individuals. But, when we try to differentiate between ultimate consumption as the basis of life in its broadest aspects and consumption forced upon individuals by the performance of specific productive functions, and hence eligible for classification as intermediate consumption, we are faced with analytical difficulties arising from the close interrelation in individuals' lives of occupation and other factors and from the impossibility of disentangling the purely economic elements in the organic pattern of life. Both tax laws and common sense treat the traveling expenses of salesmen as business expenses and intermediate consumption; but what about the expenses of commuting, which the tax laws do not recognize as deductible? Should the cost of work clothing or the differential cost of clothing demanded by occupational status be considered a 'business' expense and deducted in establishing the net national product? What of the expenses of special types of education? of special medical care needed to offset the incidence of specific occupations?

For lack of data (which is, in turn, due partly to the analytical difficulties just mentioned), we deduct practically no occu-

pational expenses. Entrepreneurs constitute the sole important exception, but even for them only outlays reported under business expenses are deducted. Direct outlays on intermediate consumption, usually designated 'occupational expenses', are largest, both absolutely and relatively, for individuals engaged in rendering direct labor or other services; and are negligible for individuals in their capacity as savers and investors. Disregard of occupational expenses makes the service income items in national income 'gross' compared with the property income items in two respects: (1) the maintenance and reproduction of human capital is not allowed for; (2) even the outlays by service income earners incurred in specific connection with their productive functions are not deducted.

A much simpler problem of inclusion and exclusion hinges upon the meaning of 'consumption' when we speak of deducting intermediate consumption in deriving the net value product. By 'consumption' we typically mean a decline in the value of a good sustained in the process of utilization. This process of utilization associated with intermediate consumption is usually the process of production, of turning out the gross value product. But obviously, goods belonging to enterprises may lose value through events that cannot be interpreted as representing the process of production or of intermediate consumption: declines in value that may reflect sudden changes on the demand side or in the physical conditions of production, as well as changes in price levels, general or specific. Sudden shifts in consumers' tastes, fires, strikes, riots, wars, earthquakes and other acts of God may cause material declines in the value of goods ordinarily utilized by enterprises in the production process. Intermediate consumption includes only those declines that represent the ordinary and calculable hazards of active participation in the production process. Other changes, even though they have substantial effect on the economic welfare of individual enterprises, are not part of the continuous and organized process of production. And just as we exclude

from national income gains in capital value arising from such events, so we exclude from intermediate consumption any declines in value caused by them.

B ESTIMATING INTERMEDIATE CONSUMPTION

Once the distinction between intermediate and ultimate consumption and the meaning of the latter term have been established, national income can be computed by subtracting the magnitude representing intermediate consumption from the full or gross value of goods produced. This derivation of the *net* value of the national product by subtraction is not avoided even if the net values are given directly in the data, for in that case the subtraction has been done by the agencies providing the data, and we would still have to test the procedure by which intermediate consumption and the full value of products have been estimated by them. Of the specific questions that may arise in estimating the value of intermediate consumption we discuss two: (a) the consumption of durable products and of materials; (b) the measurement of those governmental services that represent intermediate consumption.

a) When the process of intermediate consumption involves the complete physical disappearance of the good, or, more accurately, such substantial transformation that we cease to recognize the good, its full value measures the magnitude of the consumption. But when the physical transformation in the process of utilization takes long, there is no quantitative evidence of consumption for relatively short intervals. All fixed, durable capital goods are in this category; and one of the first difficulties encountered in estimating national income for an interval as short as a year is to get annual values of the intermediate consumption of such goods.

What fraction of the durable capital good is consumed during the given period? The signs that would indicate that this or that fraction of a machine's total useful life or capacity has been absorbed are few. There are few reliable data even on

total useful life and capacity.[7] Consequently, estimates by business enterprises of current consumption of durable capital are exceedingly crude, and many enterprises to which no immediate advantage would accrue from making them, do not. The investigator must accept these estimates, crude as they are, for he cannot hope to improve upon the practice of business units vitally concerned with a proper determination of the costs of their activity. But he must himself estimate durable capital consumption for the other parts of the business and public economy, even though entrepreneurs and public agencies themselves do not. To prevent distortion of the national income total and its distribution, estimates of intermediate consumption must be complete.

The fractions of durable capital goods consumed during a given period having been established and those for non-durable goods being known to equal 1, to what values should these fractions be applied in estimating intermediate consumption? Since it is to be deducted from the total value of products to yield the net, it should be as far as possible in terms of the yardstick used for the full value of completed products—the current market price, with whatever modifications needed to adjust for changes over time or to cover uncompleted production.

This conclusion is so obvious as to seem axiomatic. Yet it is not the practice followed by business enterprises and other producing agencies that estimate intermediate consumption. They usually calculate the consumption of durable capital as a fraction of the original cost of acquisition, except when it has been reappraised or revalued. Materials carried in inventories are usually charged at either original cost or market price, whichever is lower. For both groups of goods, substantial changes in price levels may bring about considerable disparities between the estimates of intermediate consumption ac-

[7] Indeed, it may be argued that any allowance of a fraction for a given year involves a forecast of the future, a forecast of the expected decline in capital value. Data for such forecasts are necessarily few.

tually made by business and other enterprises and the estimates that would be obtained by valuation based on current market prices. We attempt to adjust items in national income that reflect the prevalent practices of enterprises for the effect of departures from the principle of valuing all items at the prices they currently fetch on the market.

b) In estimating intermediate consumption it is assumed that outlays can be directly connected with the gross value of product originating, in that the former were incurred by the enterprise in order to obtain the latter. This assumption is manifestly valid for most outlays: a firm consumes durable capital equipment, raw materials, services of other enterprises, in order to produce gross and net income; and refrains from outlays that are not likely to increase gross, and consequently perhaps net, profit. But this is true solely of the intermediate consumption over which the enterprise has discretion, in the sense of opportunity to incur or refrain from the outlay.

Here, as in the valuation of governmental services, the exercise of governmental control over enterprises renders dubious assumptions readily accepted for private market activities. It may be argued that governments can and do levy taxes on enterprises greater than the value of their services to enterprises; and that consequently some income payments flow *via* governmental channels from enterprises to ultimate income recipients. If this is true, we cannot treat payments by enterprises to governments as a measure of intermediate consumption: they would be larger than intermediate consumption of governmental services and net national product would be undervalued if they were deducted. Obviously, the opposite may also be true: enterprises may pay governments less than the value of the services rendered them by governments; these payments may, therefore, understate the intermediate consumption of governmental services and net national product would be overvalued if they were deducted.

This argument implies that distinct groups of governmental services (e.g., those rendered enterprises as distinct from those

rendered ultimate consumers) should be valued on a basis other than the payments made for them. Such valuation is not incompatible with valuing total governmental services on the basis of payments. It may be argued that society at large determines the *total* value of governmental services by determining how much will be paid for them, but that the apportionment of services and payments among specific groups of recipients and payers need not follow the principle of identity of value rendered and payment exacted. Both administrative and social policy considerations may require that enterprises be subject to greater or smaller assessments than they would be on the basis of services received, no matter how valued.

If governmental services to enterprises are separated from those to ultimate consumers, then, even if *total* governmental services are assumed equal to payments by enterprises and individuals, intermediate consumption might still be unequal to payments by enterprises. It might be claimed that the cost (or any other aspect called x) of various services indicates their relative value (implying that any difference between total cost (or x) and total payment value may be apportioned among various items in constant proportion to cost (or x) incurred); and that on this basis, payments by enterprises to governments contain a hidden transfer to ultimate consumers, or fail to reveal a hidden draft upon ultimate consumers by enterprises. In practice, this would mean the segregation of governmental services to enterprises from those to ultimate consumers; and the determination of the value of the two groups by apportioning total value (i.e., total payments) according to costs or any other basis. If intermediate consumption so determined is less than payments by enterprises, national income is increased; if it is greater, national income is reduced.

However, this treatment implies that we can separate governmental services to enterprises and to ultimate consumers. For some governmental activities such as information service to business concerns, on the one hand, and provision of public

parks, on the other, we can, but for most essential governmental activities the line of demarcation between services to enterprises and to ultimate consumers is faint. For example, it would be exceedingly difficult to apportion between enterprises and individuals the services of the army and navy, the legislature, the public utility divisions of governments (streets, roads, etc.), activities designed to meet the needs of the community at large. And even many governmental services that seem at first to be directly of benefit to either enterprises or individuals cannot easily be classified under one or the other head. Relief payments are presumably services to individuals, but they also help to preserve the labor supply, a service to enterprises. Research into quality standards is presumably of direct utility to enterprises, but it also benefits ultimate consumers.

The difficulties of differentiating between services to individuals and to enterprises make any apportionment of governmental activities arbitrary. Any estimate of intermediate consumption of governmental services would in turn be arbitrary. Under the circumstances it seemed best to adopt the most easily obtainable: taxes and other payments by enterprises to governments. Manifestly a compromise, it may distort total national income and the proportion of industrial components. But it seemed the most expedient in view of the inadequacy of data on governmental outlays and the analytical difficulty of separating governmental services to enterprises and to individuals.[8]

[8] Since the total value of all governmental services is measured by payments to governments by individuals and business enterprises, and since the value of governmental services to business enterprises is measured by payments of the latter to governments, the value of governmental services to individuals is measured by payments by individuals to governments. This equivalence is assumed for the broad groups *in toto;* not, of course, for payments by and services to any specific individual or business enterprise.

Thus our national income total includes all payments by enterprises to individuals. In estimating income flow to individuals, taxes paid by them, being payments for services rendered, are not subtracted any more than are payments for bread or medical services.

5 *The Meaning of 'Produced'*

The meaning of 'produced' and 'production' has been discussed at several points. We could not define the concepts of productivity and intermediate consumption properly without defining production. For example, we had to exclude changes in capital value whenever they seemed to be caused by factors outside the regular processes we associate with production—extracting, transforming, transporting, and distributing commodities and rendering services. But we have not yet discussed the validity of defining national income as the value of goods *produced,* rather than as the value of these goods at some stage in their circulation in the economic system. Nor have we established the time at which goods may be considered to be 'produced'.

A 'PRODUCED', 'PAID OUT', 'SPENT', 'CONSUMED'

Is it the value of goods *produced* that leads to the most valid appraisal of the positive contents of economic activity? Since the final aim is to satisfy the wants of ultimate consumers, we might perhaps more properly center attention on ultimate consumption. Instead of defining national income as the value of goods produced, we should perhaps define it as the value of goods consumed by ultimate consumers.

Between the completion of production and ultimate consumption two intervening stages can be distinguished. The first is that of disbursements by producing enterprises to ultimate consumers, largely in compensation for productive services rendered by them or their capital. Most of the total money value of goods produced during a year is distributed in payments to ultimate consumers, and these payments constitute the principal, although not the only, means of purchase at their disposal. The second stage is that at which ultimate consumers spend the money. For any given period the total of such expenditures on the purchase of finished goods is not necessarily equal to the payments received from the producing

establishments or to the value of products actually consumed by ultimate consumers.[9]

We may describe national income as the net value of goods produced, or as total payments by producing enterprises to individuals largely in return for the productive services of the latter or of their property, or as total outlay by ultimate consumers on finished goods, or as the total value of goods consumed by the nation's ultimate consumers. For any reasonably short period, no two of the four totals will be the same; and between some pairs of totals the differences are substantial for any period. While the choice is largely terminological, the way in which national income is defined affects the total and its variability over time.

Several choices are possible. First, national income may be used as a generic term to designate all or any of the four totals, the totals being differentiated by a qualifying adjective. We may speak of 'national income produced', 'national income paid out', 'national income spent', and 'national income consumed'. While this usage has the advantage of stressing the essential multiplicity of possible totals corresponding to the variety of uses to which they may be put, it has obvious disadvantages. It tends to create confusion, for in seeking to appraise the results of economic activity there is a natural and justifiable tendency to look for a single total of general acceptability and validity. Moreover, it is awkward to speak of national income 'paid out' or 'spent': the term 'income' indicates an inflow; expenditures or payments, an outflow.

It is therefore preferable to confine 'national income' to one total, the net value of goods produced. The first and foremost reason is that it is a more comprehensive concept than any of the other three: what enterprises produce is the only source from which, in the long and often in the short run, ultimate consumers derive the means of payment they spend or save. In our economic system the net value of goods pro-

9 These four stages are analytical, not chronological. At any given time goods are being produced, disbursements made, incomes spent, and goods consumed.

duced is usually, though not in every year, greater than payments to individuals; and still greater than consumers' outlay for goods or ultimate consumption. The practical advantage of designating the statistically larger total as national income is that it increases the probability that the other totals, which are components, will be estimated. In addition, it is the meaning of the term most consonant with usage in both economic literature and everyday discourse.

Nevertheless, the utility of the other totals and the advantage of estimating them are obvious. Aggregate payments to individuals, consumers' expenditures or outlay, and the total value of products actually consumed by individuals and households are all essential in interpreting national income as the measure of goods made available for ultimate consumption, present or future. As far as we can, we estimate not only the net value of goods produced but also aggregate payments to individuals and consumers' outlay; and only the absence of reliable continuous series prevents us from measuring the total value of goods consumed by individuals and households.

B THE TIMING OF PRODUCTION

For any period for which income is estimated, some production processes are incomplete and goods are maturing whose production was initiated during a preceding period. When may a good be considered to be 'produced'? In our decision, due weight must be given to the necessity of establishing net values primarily on the basis of current market prices.

One of two lines of treatment may be followed in dealing with uncompleted production or results of production processes initiated in preceding periods. The first is to consider a good as produced only when it actually appears on the market and there fetches the current price that reveals its economic value. All the prior processes of physical transformation are treated as preparatory to 'production', not as in themselves constituting production. National income would then exclude

all uncompleted production, i.e., the output of commodities and services that had not yet reached the market.

This treatment has the advantage that the principle of valuation based on current market prices can be consistently applied, except to goods retained by producers for their own consumption. However, the disadvantages more than counterbalance this advantage. The production process, which for many goods takes place over a considerable period, is telescoped into a single point of time—when the goods appear on the market. The procedure neglects substantial additions to or drafts upon stock completed or in process during a given year as well as the large differences that may exist between the value of such uncompleted production or production for stock and the value of production brought over from preceding years. Finally, as long as we do not confine national income to consumers' outlay or ultimate consumption but include also investment and savings, it would obviously be highly inconsistent to use a narrow concept of production in which sale on the market is the distinctive mark of completion.

The other line of treatment has already been suggested: to admit the results of production processes before the products appear on the market; to measure uncompleted production on the best basis feasible, that of costs incurred; and to exclude from any given year's value production that was going on during a preceding year but was not yet completed, and was taken into account then. Although this treatment necessarily increases the area in which a principle other than current market price is applied, it seems better to record net production during a given interval, even though its parts are somewhat incommensurable, than to neglect a part of a given year's production and include parts of production of preceding years.

Whether this treatment can be applied in statistical practice depends largely on when producing enterprises themselves recognize that production is completed. If their accounts are kept on an accrual basis and record an increase in the value of

stock as further work is done and costs are incurred on uncompleted production, we can include uncompleted production at cost. If the enterprises themselves do not acknowledge the existence of production until the good appears on the market, an estimate of all production, whether or not the good is on the market, is virtually impossible. The practices of business enterprises differ. The accrual basis is usual when the production process is relatively long and there is distinct physical evidence of transformation in the goods as a result of the production process (e.g., construction); the cash market basis, when the process is relatively short and there is little physical evidence of accrual of value (e.g., trade). National income estimates represent a mixture of the two treatments, a point to be kept in mind especially in interpreting estimates as indicators of short term changes in the value of the net product of economic activity.

The treatment adopted for timing the production of goods should be applied also to the timing of intermediate consumption in ascertaining the *net* values involved. Since goods that are completed within the year are evaluated at prices current when they appear on the market, their gross or full value should be reduced by intermediate consumption evaluated at the prices of goods consumed current at the time the final product appears on the market. And since uncompleted production is evaluated at cost, the associated intermediate consumption should also be evaluated at cost. The combination of the current market price and cost methods of valuation and the mixture of the two treatments in the timing of production should affect in equal degree the gross value of both goods produced and intermediate consumption sustained in producing them.

6 National Economy as Object of Measurement

The adjective 'national' used to characterize income estimates for various countries is not quite accurate. A nation may be defined as a group endowed with a common history, language, and cultural heritage, and a consciousness of kind, but not

necessarily possessed of a country with a sovereign government. All so-called national income estimates refer, however, not to the total income of national groups but to the total income of countries, each constituting a sovereign state. Some of these state units comprise more than one nation (e.g., pre-1918 Austria-Hungary); others represent only part of a national group (e.g., Great Britain). The corresponding estimates of income should perhaps rather be designated as 'statewide'. But the present terminology is too deeply intrenched to be susceptible to easy change.

The definition raises immediately the larger question of the utility and validity of striking off income totals for economic activities circumscribed by the boundaries of a sovereign state. Why choose state units at all? Since they do not always constitute self-contained economic systems, the unit chosen is not necessarily a natural one, i.e., one that would be defined by a student delimiting an economic region. A great deal of arbitrariness and historical accident, and a marked absence of historical continuity, may characterize the territorial composition of any given sovereign state. True, every sovereign state attempts to inculcate a feeling of unity and continuity in its citizens. But should economic science further such attempts by accepting these doctrines at their face value, couching all its discourse in terms of statewide economies, and making its basic estimates in terms of national totals, i.e., totals for the relatively artificial boundaries of states? Why should we segregate a particular group of individuals and enterprises, subsumed under the state, for the purpose of adding the net product of their activity and of their property; and especially why should we accept the judgments of this particular group of people concerning productivity and economic value?

It may well be contended that our *national* totals suffer from two limitations. First, they are artificial because they combine products and activities of groups that lack cohesion and homogeneity. One could argue that it might be more effective to study income totals by occupational-industrial groups, no mat-

ter in what country they reside. We would then be dealing with world farm income, world industry income, etc. Second, national totals include products that may be considered goods from the standpoint of each state unit separately but not from the standpoint of the world as a whole. It might be argued justifiably that such products as poison gas, tanks, and other armaments would be excluded from any estimates made from a viewpoint other than that of a single state unit.

While neither limitation can be denied, the effect of both can be overcome, at least partly. The effect of the first can be reduced by dividing the national totals into regional or other components and by supplementing totals for a given country with totals for other countries. The second can be partly overcome by segregating the net results of activities that, while appearing productive from the viewpoint of the given nation, are decidedly unproductive from the viewpoint of the world as a whole. Both these refinements and extensions of measurement are difficult, and we attempted neither. But the need for them should be recognized as the one way in which the undesirable limitations and implications of *national* income estimates can be removed.

On the other hand, it cannot be denied that state organization influences economic activity, canalizing it in certain directions; that the authority of the state often lends considerable independence and autonomy to the economic life within its borders; and that states impress upon their inhabitants a consciousness of kind that stimulates a desire to appraise the results of economic activity within their boundaries. It is of the essence of the state that it sets itself up as the sovereign authority, and hence the authority to guide and manage economic destinies; and since national income estimates, as well as other quantities in economic measurement, are indispensable guides to such policy, they should be for units corresponding to the areas within which state power can be exercised. Income totals are for national units because so much of our economic and social activity and of our thinking runs in these terms.

But granted that statewide estimates of income are of considerable utility, more specific questions arise in determining the precise scope of national income as the net product of a statewide economic system. The territorial principle of location of productive agencies or the political principle of state allegiance of individuals or institutions owning them may be applied. National income could be defined as the net value of products of productive agencies located within the territorial boundaries of a country, or as the net value of productive agencies owned by the citizens of that country, or in terms of some intermediate concept.

The variety of possible choices may be illustrated by the accompanying classification of productive agencies by their location, and the location and political allegiance of their owners. The strictly political definition would include I-1 and II-1, i.e., all agencies owned by the subjects of the given state. A somewhat more realistic but still political definition, determined by the possibility of reaching the income during any given year for purposes of taxation, would comprise (I-1) + (I-2) + (II-1a) + (II-2a); or the same total without I-2b. The strictly territorial concept would include all items under I, but none under II. Finally, if one conceives of the nation as a group of people residing within a given country, national income is (I-1a) + (I-2a) + (II-1a) + (II-2a).

I PRODUCTIVE AGENCIES LOCATED WITHIN THE BOUNDARIES OF A STATE
- 1 Owned by subjects of given state residing
  - a within
  - b outside
- 2 Owned by aliens residing
  - a within
  - b outside

II PRODUCTIVE AGENCIES LOCATED OUTSIDE THE BOUNDARIES OF A STATE
- 1 Owned by subjects of given state residing
  - a within
  - b outside
- 2 Owned by aliens residing
  - a within
  - b outside

The variety of choice is due largely to ambiguity concerning the limits of sovereign powers with respect to economic activity. Moreover, with the changing tenor of international relations and fluctuations in the level of international honesty

and goodwill, these limits shift from time to time. For those decades in which international economic obligations were still respected by most nations, it was valid to exclude from the national income for a given country the yield of productive agencies located within its boundaries but owned by non-resident aliens; and to include the yield of productive agencies located outside the country but owned by its residents. In recent years, when many states bar almost completely any outward flow of funds and make it impossible to maintain payments on international obligations, a definition based on a more strictly territorial principle is perhaps the only valid one.

Intended to reflect the kind of international relations that prevailed during most of the nineteenth and into the twentieth century, our estimates follow a combination of the territorial and political principles. They include the products of productive agencies located within the country and owned by its residents, (I-1a) + (I-2a); and those of productive agencies located outside the country but owned by its residents, (II-1a) + (II-2a). We define a nation as the group of individuals domiciled within the country's territorial boundaries, and estimate national income in terms of this group.

We cannot always estimate accurately the national income total suggested, since most data, especially in this country, are for productive agencies located within the country's boundaries but do not show ownership. Also, as already indicated, changes in the rules of international intercourse will invalidate within a short time any basis chosen for the determination of scope. Therefore, so far as possible, we present our estimates in such a way as to segregate those elements which account for the differences among some of the several variants of 'nation' and 'national' total.

7 *Summary*

In attempting to define national income as the net value of all goods produced by the nation, we had in turn to define

'economic goods', 'economic value', 'net' and 'gross' value, 'production', and 'nation'. We noted the criteria or assumptions that could be used to answer some of the fundamental questions raised by these terms and indicated how these answers lead to the inclusion or exclusion of certain items, to the selection of the basis of measurement, and to the drawing of temporal and spatial limits of the totals. Here we summarize first our conclusions, then give the broader assumptions and their implications.

Limiting national income to results of economic and productive pursuits forced us to exclude many satisfaction-yielding activities, primarily those conducted within the family, that may be considered part of life in general rather than economic activity proper. Included are results of pursuits whose products appear on markets. The only non-monetary items included are goods retained by producers for their own consumption, payments in kind by enterprises to ultimate consumers, and imputed income on owner-occupied houses. Results of some activities carried on for monetary returns are excluded as unproductive: gains in the value of assets not due to the production process; and receipts from gambling and pursuits definitely prohibited by society as harmful. Finally, pure transfers (contributions, relief payments, etc.) are excluded as duplications.

Goods that appear on the market are valued at market prices; goods that do not actually appear on the market (retained by producers for their own consumption, imputed rent, etc.) at the prices of their marketed counterparts; and governmental services at the total payments made for them by individuals and enterprises respectively. Uncompleted goods are valued at cost. Market prices are of course a far from perfect measure of how well goods satisfy society's needs. But they are the sole practicable basis if the estimator is to follow the consensus of social opinion. The one adjustment of market prices intended and made is for temporal changes in the general level of prices or in the value of the monetary unit.

In accordance with common usage, 'enterprise' was defined to comprise private and public producing units (including governments) and to exclude individuals, except in their capacity as entrepreneurs. Net value produced in a country was defined and measured as the difference between the full or gross value of all products and the value of commodities and of services of enterprises consumed in the production process (intermediate consumption). No occupational expenses of individuals could be deducted except the expenses entrepreneurs entered under their production costs. Intermediate consumption of governmental services is measured by payments to governments by business enterprises. All intermediate consumption is valued, as far as possible, on the basis of market prices current at the time the final product (from whose gross value intermediate consumption is deducted) is completed.

Production was confined to the regular processes of extraction, transformation, transportation, and distribution of commodities and rendering services. Mere changes in capital value due to changes in monetary conditions or to extraordinary events that cannot be anticipated or regarded as calculable hazards of productive activity were not considered part of production, and hence were not included under gross value or intermediate consumption. 'National income' was confined to the most comprehensive total, that of net value *produced,* and production was estimated, as far as possible, for all phases of the continuous flow from raw materials to finished products. Hence national income for any year includes goods not as yet on the market (uncompleted production, estimated at cost) as well as goods, parts of which were produced in the preceding period (value for current year to include only the production that took place during that year).

In setting spatial boundaries to national income, we included the income of residents of this country, from both their personal activity and their property, whether located here or abroad. Property income originating in enterprises located here but owned abroad is excluded.

Many of our decisions are not binding upon the user of our estimates, i.e., with the details presented he can derive estimates corresponding to somewhat different definitions. We give estimates of aggregate payments to individuals and of consumers' outlay as well as of national income. Governmental services can be evaluated on a cost or a payment-price basis. Income originating in enterprises located within the boundaries of this country, excluding income transfers abroad or receipts from abroad, can be estimated. But other controversial items are estimated on only one basis since any other would be impossible or too costly of time in the present state of data. We give no continuous estimates of excluded items (housewives' services, etc.) or alternative estimates of intermediate consumption, allowing for expenses of labor. No basis of valuation other than market prices is used.

While the procedures summarized above are due to a mixture of theoretical considerations and practical limitations, we stress the basic analytical assumptions that underlie them and the bearing of these assumptions upon the interpretation of our estimates. In defining national income the fundamental distinctions between: (a) economic and other activities, (b) productive and unproductive activities, and (c) regular processes of production and extraneous factors imply fundamental notions concerning the meaning of economic productivity—notions that represent a social philosophy. These notions may seem axiomatic, but they are essentially assumptions, not observations; and they are not in the nature of scientific statements subject to test.

In formulating these notions we attempted in general to hold consistently to two theses. The first is that needs of ultimate consumers provide the touchstone by which the results of economic activity are to be judged; that 'productive' designates the positive contents of economic activity viewed in terms of the satisfaction of recognized needs of ultimate consumers, present and future. Accordingly we assumed that goods are for men and that the members of the body social cannot be

treated as tools for the production of other goods; and consequently recognized wide areas in which ultimate consumption occurs, in which activities that are not productive are compensated by monetary gains, and in which activities that are not economic produce satisfaction.

The second thesis is that in judging relevance to needs, the overt expression of social judgment, the standards followed by society in its economic institutions are to be accepted as a guide. For this reason we excluded only such activities as are considered harmful or not productive by society, and adopted the market price basis of valuation. This decision does not mean that we, as investigators, could find a clear-cut and detailed consensus of opinion in the light of which specific questions could be answered. It means merely that in the broad decisions of inclusion, exclusion, and valuation, the generally accepted notions of society as expressed in its social institutions were followed.

Other positions could be taken with respect to both theses. The definition of 'economic' and 'productive' could be broadened to include all activities yielding satisfaction to any one individual, or narrowed in accordance with some more restrictive criteria of productivity that prevailed among the early economists of the Physiocratic and Classical Schools. It might be possible, though difficult, to set up criteria of the needs of society distinct from the criteria based on the market place, and revalue all products of economic activity accordingly. Both concept and estimates would differ substantially from ours. Any validity that may be claimed for our concept and estimate depends upon acceptance of the assumptions underlying the definition. And as already admitted, such validity is only historical, in the sense that it attempts to reflect the prevailing viewpoint on the contents of economic activity.

What is the utility of such national income estimates? Grounded as they are upon arbitrary notions of productivity and of the difference between economic and non-economic that

cannot be applied consistently, can they serve economic analysis? Are they suitable for any other purposes?

First, precisely because the estimates are based upon fundamental criteria that are widely accepted, they fulfill what we conceive as their basic purpose: to appraise the workings of the economic system. Much, if not most discussion, planning, and social strife are in the interest of making economic activity yield the largest positive contribution in terms of the criteria our national income concept uses, viz., to satisfy the needs of ultimate consumers at present and in the immediate future. The social utility of expressing quantitatively the current successes attained by these efforts is beyond question.

Second, if national income constitutes an appraisal of the results of economic activity, is it not useful in economic analysis? One basic aim of economics is to study the factors that make for changes in the net product of economic activity and analyze the ways in which it is distributed, consumed, and reproduced. An estimate of national income for a substantial period and based upon a consistent application of one and the same set of criteria can be of high utility.

Stated differently, the criteria on which a national income estimate as an appraisal notion is based are in fair consonance not only with the prevailing social attitude but also with the criteria that economics finds useful in the selective recording of the objects it studies. The estimates serve directly as guide posts in both scientific and everyday treatment of economic problems. And although we cannot always adhere strictly to our principles, approximations are better than no guides.

But for both scientific and lay analysis global estimates, single totals without subdivisions, are not sufficient, even if they cover substantial periods or several countries. As indicated repeatedly, the controversial issues of definition call for estimates in several variants corresponding to different solutions, variants that are components of the most comprehensive total. In addition, other subdivisions and classifications are needed to interpret changes in totals or differences among estimates

for different countries. We must know in what branches of the productive system national income originates; how its monetary equivalents are distributed; and what the apportionment is between savings and ultimate consumption of various types. A national income total is like an amalgam of metals in unknown quantities that must be analyzed before meaningful statements can be made concerning its composition or changes in it.

Now that we have explored the outside boundaries of the national income total in terms of the concept, we turn to its internal composition.

CHAPTER 2

Distribution of National Income

A NATIONAL income total for a given country and period can be apportioned among smaller spatial units or shorter periods. For example, national income for the United States can be apportioned according to its origin in the various states or in still smaller territorial units. An annual total can be apportioned among quarters or months to give a more sensitive record of temporal changes. But we are not concerned with such distributions, largely because our estimates are for the country as a whole and annual. Our interest lies instead in distributions that reflect substantive rather than formal characteristics. To what uses is the monetary equivalent of national income put; by what industries is the net national product turned out; what are the attributes of the various factors in the production process and the qualities of goods comprising national income?

Three main types of distribution based on these characteristics are attempted in our estimates: (1) among withholdings, disbursements, and consumers' outlay; (2) by industrial origin; (3) by type of income or payment, representing compensation for various kinds of productive service. They are discussed here in order to clarify the meaning of the constituents of each classification; to indicate the difficulties encountered in defining these classifications precisely; and to explain how exigencies force us to depart at some points from the allocations that would best serve the purpose underlying the classification.

1 *Among Withholdings, Disbursements, and Consumers' Outlay*

In the preceding chapter (Sec. 5 A) we mentioned that between the completion of the production process, whose net yield constitutes national income, and the end of the process of ultimate consumption, there are two intermediate phases at which we can measure aggregate payments to individuals and consumers' outlay. Treating these two and ultimate consumption as parts of national income, we arrange in the accompanying tabulation the complementary categories which, together with payments, outlay, or consumption, add up to national income. The order on the left side is dichotomous for each of the four larger magnitudes; on the right side it is sequential, showing the number of categories (over two) into which national income can be divided.

I National Income

1 Aggregate payments to individuals

2 Net savings of corporations and governments

II Aggregate Payments to Individuals and Savings of Entrepreneurs

1 Consumers' outlay

2 Net savings of individuals and entrepreneurs

III Aggregate Payments to Individuals

1 Consumers' outlay

2 Net savings of individuals

IV Consumers' Outlay

1 Ultimate consumption

2 Net changes in consumers' inventories

National Income

1 Net savings of corporations and governments

2 Net savings of individuals and entrepreneurs

3 Consumers' outlay

National Income

1 Net savings of all enterprises

2 Net savings of individuals

3 Consumers' outlay

National Income

1 Net savings of all enterprises

2 Net savings of individuals

3 Net changes in consumers' inventories

4 Ultimate consumption

A INCOME PAYMENTS AND SAVINGS OF ENTERPRISES

Enterprises do not necessarily disburse to individuals amounts equal to the net product originating during the year. A business corporation may not pay to individuals in wages, salaries, dividends, interest, etc. a sum exactly equal to the difference between the gross value of its product and the value of goods consumed in turning out this product. In prosperous years corporations often disburse less than this difference, retaining some positive net savings; in poor years they often disburse more, sustaining negative net savings. Any enterprise whose activity is included in national income may have different amounts of net income originating and total payments to individuals.

The distinction seems simple, but its application is not. How should we treat payments to individuals that cannot be interpreted as compensation for their services or the services of their property utilized in current production? Obviously, such payments may be of two types: (1) Enterprises may make payments which, while not in compensation for services to *current* production, may yet be in payment for *past* services (or sometimes even *future*). A clear case is that of pensions paid by business firms to their retired employees. (2) Enterprises may make payments whose connection with past, present, or future production is tenuous; e.g., contributions by business firms to community chests or other charities, or relief and public assistance payments by governments.

In either type we can include the disbursements under aggregate payments to individuals and estimate the net savings of the disbursing enterprises after the deduction of these disbursements; or exclude them from aggregate payments to individuals and estimate net savings prior to their deduction. Whichever we do, they are included or excluded under national income as they are or are not paid out of the current net value product.

Our practice has been to include such disbursements as pensions, contributions, and relief under aggregate payments

to individuals and estimate net savings of enterprises after their deduction. For pensions and similar payments connected with past or future services, we can readily justify our practice. It is never too easy to say that any payment is necessarily in compensation for services in *current* production (consider dividends paid by a corporation in a year of greatly reduced activity, i.e., payment of a discretionary character for the use of a property that fails to earn a corresponding return); and it is more practicable to allow for discrepancies in timing between payments and current production. But an even better reason for including such disbursements under aggregate payments to individuals is that, unlike other net savings (which ordinarily assume the form of cash, inventory, equipment, or reduction in net indebtedness), they do flow to individuals and are not retained by enterprises; and that we are interested in all payments by enterprises to individuals, so long as the nexus between the two is one of some sharing by individuals in the production processes of the enterprises.

The case for the inclusion of contributions and relief and public assistance payments under aggregate payments to individuals is less clear, although even here some connection may be found with past or future services of individuals in the production process. Yet the alternative, i.e., to include them under net savings of enterprises, would yield more misleading results. Of course, these disbursements could be omitted from both payments to individuals and net savings of enterprises and treated as an inevitable cost of carrying on the production process. But this treatment would be even more misleading since it would understate national income and fail to measure properly disbursements by enterprises to individuals. For these reasons, we included relief and similar payments under aggregate payments to individuals and estimated net savings of enterprises after the corresponding deductions.

Our aggregate payments, consequently, include all disbursements by enterprises to individuals *qua* individuals, and since some represent compensation for current services and others

have merely an indirect relation to them we must classify all in more detail (Sec. 3).

The distinction between income payments and net savings seems clear for business corporations, difficult as it may be to establish statistically. But for governmental agencies and unincorporated firms it is more complicated. The distinction between payments to individuals and net savings of enterprises implies that the gross value of product, minus the cost of goods consumed, can be compared with aggregate payments to individuals *qua* individuals. However, in the case of governmental agencies it may be argued that total receipts do not measure the gross value of product and that the latter should be measured by some other yardstick. If the cost of governmental activity is the yardstick, then net income originating and aggregate payments by governments to individuals must be equal.

In the preceding chapter (Sec. 3 C) we gave our reasons for using the payment-price basis for valuing governmental services. If this decision is accepted, the distinction between payments to individuals and net savings by governments parallels that for business enterprises. We mention it here in order to emphasize that the application of the dichotomy under discussion is dependent upon how governmental services are valued.

In an unincorporated firm the entrepreneur is both the recipient of disbursements from it and the man who decides how much of its net income should be withdrawn and how much should remain as its net savings. Can we differentiate between net income originating and income payments to the entrepreneur? It may be argued that the latter comprise the entire residue of net income originating, after payments to other productive factors have been made; that the entrepreneur whose firm has positive or negative savings is like any other ultimate recipient of income payments who may decide to reinvest part of his income in the enterprise that employs him or to withdraw part of his accumulated savings. If the argument is valid, there is still a significant difference between

entrepreneurial withdrawals for consumption (or investment elsewhere) and the total net income accruing to the entrepreneur in his firm. But the difference is similar to that between total payments to ultimate recipients and consumers' outlay, and should not be treated as if it were similar to the difference between net savings of enterprises and payments to individuals.

Or, it may be argued that savings of unincorporated enterprises are different from savings of individuals as individuals. For the latter, saving is the result of decisions made with reference to a freely disposable income. An individual receives a salary, wage, dividend or withdraws a certain amount from his firm. The payments are usually in the form of freely disposable means; and although the income of every individual is subject to many unavoidable drafts, there is a freedom of disposition that is one of the consequences of a fully developed monetary system and a distinguishing feature of an actual payment received. On the other hand, considered as an addition to the individual entrepreneur's disposable income, the savings, whether positive or negative, of the firm itself are partly an accounting fiction. The savings that appear at the end of the year may be due to an improvement in accounts receivable or inventory position; and it would be difficult to claim that the entrepreneur, after calculating the net income that accrues to him during the year, decided to reinvest part of it in additional accounts receivable or inventories, a decision similar to one made by an individual investing freely disposable funds in stocks or bonds. Net savings of unincorporated firms can, therefore, be viewed as arising from the same mixture of discretion and helplessness as net savings in most business enterprises. Consequently, entrepreneurial net income should be differentiated from entrepreneurial withdrawals, and net savings of unincorporated firms included in net savings of enterprises and excluded from aggregate payments to individuals.

Since it seems to us that the balance of analytical considerations is in favor of treating net savings of unincorporated firms

as savings of enterprises rather than of individuals, we have tried to separate entrepreneurial net savings from withdrawals; although in the present state of the data the measurement of the differences is exceedingly rough and tentative. We give estimates of savings of all enterprises and payments to individuals, excluding entrepreneurial net savings. But since the alternative viewpoint is tenable, we give also estimates corresponding to it and allow for it in the classification above. In this alternative treatment payments to individuals include net savings of unincorporated firms; net savings of enterprises exclude them; and income payments to entrepreneurs are considered to be equal to the total net income of entrepreneurs, including savings of their firms.

B CONSUMERS' OUTLAY AND INDIVIDUALS' NET SAVINGS

Aggregate payments to individuals represent the means of payment the economic system places at the disposal of ultimate consumers, constituting their main, but not sole, source of purchasing power: consumers may draw upon their accumulated assets or use credit to supplement their current income.

Consumers' outlay designates the sum spent by ultimate consumers during the year on finished commodities and services. It can be either smaller or larger than aggregate payments to individuals. Ultimate consumers, singly or *in toto,* can spend less than they receive from producing enterprises, realizing positive net savings and improving their net monetary or claims position; or they can spend more, sustaining negative savings and worsening their net monetary or claims position. Since consumers' outlay measures expenditures on finished consumer goods, and individuals' savings are the main source from which capital formation is financed, we divide aggregate payments to individuals into these two parts.

Two observations should be made about this dichotomy. First, the distinction between consumers' outlay and individuals' savings rests, in the final count, upon the definition of ultimate consumption and finished goods. If we consider edu-

cation as ultimate consumption, then expenses for it become part of consumers' outlay. But if education is treated purely as preparation for economic activity and consequently a species of investment, expenses for it should properly be treated as part of individuals' net savings. The conclusion we reached in the preceding chapter (Sec. 4), that only such consumption is intermediate as represents utilization by business and public enterprises of commodities and of services of other enterprises, is relevant here. In accordance with it, consumers' outlay comprises all expenditures by individuals and households on products of enterprises except those incurred by the former as members of business and public enterprises; individuals' savings are, then, the difference between aggregate payments and consumers' outlay.[1]

The second observation relates to the measurement of both consumers' outlay and individuals' savings when the immediate payment does not cover the full price of the product. If a household buys an automobile or refrigerator on an installment basis, should consumers' outlay for the year include the full value of the purchase or only the amount actually paid during the year? How should purchases on which there was no payment at all during the year, but only a corresponding increase in consumers' debts, be treated?

The questions are similar to those discussed in establishing the timing of production (see Ch. 1, Sec. 5 B). But the argument that production is a continuous process and cannot be treated as occurring only at the instant the product appears on the market cannot be applied to purchasing. It would be unrealistic to assert that purchasing is a continuous process, and that a man who buys a car on an installment basis is engaged in continuous purchasing during the entire period he is making payments. Nor is it realistic to assert that a purchase or outlay takes place at the time the payment is made rather

[1] Since we include net imputed rent from owner-occupied houses in national income, the owner-occupied unit is treated as an enterprise. Purchases of houses represent, therefore, use of savings, not consumers' outlay.

than at the time the good changes hands and the purchaser assumes the obligation to pay. The distinction between consumers' outlay and individuals' savings is consequently a more useful tool in economic analysis if the outlay includes the value of all goods that pass from the effective possession of enterprises to that of ultimate consumers, and if accordingly total individuals' savings are scaled down by the value of obligations that ultimate consumers may have assumed in purchasing goods on credit. This interpretation, modified by exigencies of data, is followed in deriving our estimates.[2]

C ULTIMATE CONSUMPTION AND CHANGES IN CONSUMERS' INVENTORIES

The services of finished goods purchased by ultimate consumers are not absorbed immediately, i.e., they are not immediately and exhaustively applied to the satisfaction of consumers' wants. The interval between the dates of purchase and of the exhaustion of services is relatively brief for perishable goods but substantial for others. If a smaller amount of goods is consumed during the year than is purchased, the stock held by ultimate consumers, viz., consumers' inventories, increases. Or, to the extent that consumers' inventories exist at the beginning of the year, ultimate consumption may exceed consumers' outlay, causing a decline in consumers' inventories.

Obviously, changes in consumers' inventories must be analyzed if the structure of ultimate demand and fluctuations in it are to be understood. Unfortunately, relevant data are few and not easy to obtain. Ultimate consumption and changes in consumers' inventories occur entirely within the household economy; economic study, on the contrary, tends to concentrate on processes observable in the market place.

In dividing consumers' outlay into ultimate consumption and changes in inventories, the major task, if we disregard the almost complete absence of relevant statistical data, is to esti-

[2] Such treatment implies that a return to a business enterprise of goods bought by an ultimate consumer should enter consumers' outlay with a negative sign.

mate the current consumption of durable goods. As in the case of productive enterprises using durable capital equipment, it is difficult to estimate consumption for time units shorter than the entire life of the good. Moreover, ultimate consumers, unlike business enterprises, are not forced by necessities of accounting and taxation procedure to estimate such consumption; and the calculation of current depreciation and obsolescence is often neglected even for such goods as a house or a passenger car, let alone other finished goods that represent a smaller outlay.

Another factor that makes it difficult if not impossible to estimate the current consumption of consumers' durable goods is the luxury quality many of them have, in consequence of which their utilization has a strong flavor of ostentation. In times of stress an ultimate consumer may use his car or house much longer than otherwise and forego the kudos enjoyed by possession of a new one. Since durable equipment used by business enterprises seldom possesses such luxury elements, its consumption is more strictly controlled by the calculation of costs and returns and, as a result, is a more nearly determinable quantity than the consumption of consumers' durable goods.

Nevertheless, consumption and changes in consumers' inventories can now be measured for some commodities, and will become measurable for more as data accumulate. At present the data are too meager for us to estimate consumers' outlay other than as a whole. But there are strong indications that the increasing prominence of durable goods in the expenditure pattern of ultimate consumers will stimulate the measurement of changes in consumers' inventories.

2 *By Industrial Origin*

Industries differ in the raw materials utilized, production processes carried on, and products turned out. Raw materials differ in the degree to which their sources are concentrated territorially; in reproducibility and susceptibility to technical control; in exhaustibility and tendencies toward increasing

costs or diminishing returns; in perishability, quality, and many other technological properties. Production processes differ in the size of the unit that can most advantageously be operated; in the ratio of direct labor and durable capital equipment to raw materials consumed; in the extent to which physical transformation of raw materials takes place; in the temporal continuity of operations; in the relation of vital phases of the process to skill, etc. Completed products of industries differ in their distance from the stage at which they are ready for ultimate consumption; in perishability over time and in durability in the process of use; in the primacy and urgency of the ultimate needs they satisfy; and so on through the various physical characteristics of products distinguishable according to their final use.

Superimposed upon these purely technological characteristics of materials, processes, and products are the peculiarities of social and economic organization, which also differ fundamentally from industry to industry. Some industries have mainly country sites; others are perforce concentrated in big cities. In some industries numerous small unincorporated enterprises predominate; in others, entrepreneurs do not exist and control is concentrated in huge semi-public or public corporations. In some industries competition among enterprises is fairly effective, in others there is no competition. In some industries overhead costs are minor compared with direct costs; in others, the opposite is true. Some industries cater to recipients of large incomes; others depend upon the mass demand of moderate and low income groups.

This combination of differences in technological characteristics and social and economic organization is an important datum in the understanding and measurement of economic phenomena. If measurement is to be helpful in revealing the factors that make for change and the way economic changes take place, study of how industries differ is indispensable: the technological characteristics of materials, processes, and products and the peculiarities of economic organization spell

differences in response during both short and long periods. If an appraisal is involved, as in national income measurement, industrial differences must be kept in mind, for they reveal the areas in which the common yardstick used may have somewhat different meanings, and suggest the group composition of the body social for whose satisfaction national income is used.

A NATIONAL INCOME

The distribution of national income among industries is of the net value originating, not of the total value of an industry's product. For some purposes, such as estimating waste involved in an 'unproductive' industry, this is a disadvantage since we need the gross value. Net income originating in various industries may be interpreted as the contribution of each to the common pool of goods we call national income; or may be considered a measure of the cost to society of the activities carried on by each. Both interpretations are applicable to income originating in any single industry, and care must be taken not to switch, without good reason, from the one interpretation for one industry to the other for another industry.

Interest in ascertaining how much various industries contribute to a given national net product or how much they claim in compensation for their activity stems largely from the differences in their activities. An increase or decrease in national income arising from a corresponding change in the net value originating in agriculture is not open to the same interpretation as an equal change in national income attributable to an increase or decrease in the net value originating in finance.

If an industrial distribution is to provide bases for proper understanding, each category in it must be well defined. Similar productive activities should not be included under different industrial divisions; no divisions should include essentially different activities; the classification should be complete, i.e., not exclude activities of some importance in the economic system; and should contain no false categories that would give

to purely transfer and auxiliary functions the semblance of a separate industry. To establish an industrial classification free from such defects is exceedingly difficult because (1) diverse productive activities are carried on in one operating or business unit; (2) productive activities and purely ownership functions are carried on in one business unit; (3) the productive activities carried on by operating and management units ostensibly belonging to one and the same industry change.

1) One operating unit often carries on diverse productive activities, e.g., both extractive and manufacturing activities or both manufacturing activities and trading functions; or combines the production of commodities, transportation, and power with construction. The activities are significantly disparate. Mining is different from manufacturing in that location and exhaustibility of natural resources are more vital to the former than to the latter. The functions performed by steam railroads and other public utility industries are continuous; construction is seasonal. Manufacturing is concerned with changing the form of commodities; merchandising, with their distribution. Yet within operating units, i.e., within the establishments directly engaged in production, a mixture of these productive activities is common. To allocate the net income originating in the enterprise among the different productive functions is a task obviously beyond the powers of a national income investigator, since it would require exceedingly detailed cost accounting and some arbitrary allocation of joint costs.

Business or management units carry on diverse productive functions even more commonly than operating units. An enterprise, whether incorporated or unincorporated, may comprise several plants, offices, agencies, which are often engaged in production of different types, though usually complementary to one another. Certain components of net income originating in the enterprise—property income, overhead salaries and, of course, net savings—are ordinarily not allocated to the various operating units, but are given for the enterprise as a

whole. Consequently, in distributing them, and hence national income, by industries, we encounter a mixture of productive functions within larger business units even more frequently than within operating units.

2) Enterprises can act not only as producing entities but also as ownership units. A corporation may receive dividends and interest from other business enterprises, and in turn pay dividends and interest to them. Do the payments received represent compensation for goods produced by it or payments to it as an investor, i.e., as a possessor of property and funds it does not itself utilize? If the payment is to the enterprise as a *producer,* the net income to which it gives rise may be considered to originate in the receiving enterprise. But if the payment is to the enterprise purely as an *owner,* the net income to which it gives rise obviously originates in the paying enterprise.

This distinction demands that we answer two questions when we attempt an industrial distribution of a national income total. First, how shall we treat enterprises obviously engaged in productive activity but still deriving part of their gross revenue from ownership, i.e., receiving income on investments? In this case income in the form of dividends and interest originates in the paying enterprise, not in the receiving. Accordingly, in establishing net income originating in a given economic unit we must subtract from its gross receipts not only the cost of goods consumed but also the part of the gross receipts that represents compensation for pure ownership. So far as data are available on inter-enterprise receipts of dividends and interest, we can and do follow this procedure.

Second, how shall we treat enterprises that are largely ownership units and in which the share of productive activity in total income may be relatively small? Savings banks and insurance companies, which are engaged primarily in placing the accumulated savings of individuals at the disposal of industry, are good illustrations. In the process of mobilizing individuals' savings and selecting the place for investment,

they produce net income, i.e., the net value of the services of individuals and capital engaged in them. In addition, they earn net income, part of which may be retained temporarily but the bulk of which goes to policyholders and depositors. Can interest paid to depositors by savings banks and the net savings of the latter be considered as arising in the banking industry? Or the payments to policyholders by insurance companies and the net savings of the latter as arising in the insurance industry? A similar question can be raised about payments to investors by all institutions engaged in placing idle balances at the disposal of productive enterprises.

Unless the industrial distribution of national income is to lose most of its meaning, it cannot be so applied as to attribute net savings and payments to depositors by banks, insurance companies, etc. to the banking and insurance industries. If this is done, what is to bar an interpretation of investment as an industry, and of dividends and interest received by wealthy families (who may have formed a personal corporation) as income originating in the 'investment' industry? We must recognize the possibility that payments may be transferred from one group of enterprises to another, and that a given group of enterprises may be, with respect to some of the income streams passing through them, not much more than an association of individuals in their capacity as investors and ultimate income recipients.

Hence, income originating in such industries as savings banks and insurance is confined to the net value of the services of individuals engaged in them, and excludes payments to depositors and policyholders as well as the net savings of the enterprises. These payments and savings are treated as originating in the industries from whose stocks and bonds the enterprises receive their revenue.[3]

3) The effect of carrying on diverse productive functions

[3] This does not dispose of some technical difficulties introduced by the absence of relevant data or of questions arising in connection with the treatment of rent. The latter are discussed in Section 3 A; the former, in Part Four.

within operating or business units and of combining productive activities with purely ownership functions within one enterprise would be reduced appreciably if they always remained the same. But they are susceptible to change. Changes in technology make for shifts in the relative importance of various types of productive function within one operating unit. Shorter term cyclical fluctuations lead to fluctuations in the distribution of the working personnel and of the active time a single plant devotes to turning out the finished product and auxiliary operations such as repairs and construction; or to production and merchandising. The housing of several operating units within one enterprise is the result and the essence of the process of industrial integration that developed rapidly during the last decades of the nineteenth century and is still proceeding at a fast pace. Inter-enterprise payments of dividends and interest arising from interlocking ownership are another facet of the same process. And the extent to which individuals place their savings with insurance companies, savings banks, and similar institutions is also changing. Since complete adjustment is impossible, the industrial distribution is not precise and the blurred area changes from one period to another.

Moreover, comparisons over time must also take account of the changes that may have occurred in the productive activities classified as belonging to one and the same industry. The functions of retail trade, professional service, government, and many other branches of the productive system are quite different today from what they were fifty years ago. The name remains the same, but activities subsumed under it change, without necessarily reducing or increasing the mixture of types of productive activity.

Any distribution of national income by industrial origin is thus subject to serious qualifications. In the nature of the case, it cannot be accurate for clearly demarcated functional types of productive activity. At best it is a distribution among the institutional categories designated as industries, and its

interpretation must be qualified accordingly. For example, if the estimates show that manufacturing accounts for x and trade for y per cent of national income, this does not mean that x measures accurately the share of activity concerned with transforming commodities, or y the share concerned with the exchange and distribution of commodities among enterprises and between enterprises and households. Some trading functions may be performed by 'manufacturing' and some manufacturing activity by 'trade'. Similarly, an increase in the share of trade and a decrease in the share of manufacturing does not necessarily mean that distributive activity contributes or claims an increasing share of the national product, and manufacturing activity a declining share. It may well be that certain distributive functions formerly carried on by manufacturing enterprises and included under manufacturing have been shifted to wholesalers and retailers, thereby swelling net income originating in trade. Similarly, an increase in the share of income originating in governmental activity does not necessarily mean that either the price or quantity of governmental services proper has increased relatively to the price or quantity of goods provided by the private business system. It may mean merely that governmental agencies have taken over some activities formerly pursued by private business, or have been forced into new activities.

Since the shifts and overlapping are minor in comparison with the persistent and significant differences among categories, these limitations do not render an industrial distribution of national income worthless. The institutions called agriculture, mining, manufacturing, steam railroading, etc., while containing enterprises that combine productive activities of diverse types, are largely dominated by distinctive productive functions. The element of pure trading is minor in manufacturing, as is the element of pure manufacturing in trade. When really significant changes do occur, the institutional categories also shift, i.e., new industries are recognized and old industries dropped. The lack of strict correspondence between the insti-

tutional categories and the strictly functional segregation of types of productive activity is important merely as a qualification that should prevent erroneous interpretations of differences or changes in the estimates.

B SAVINGS OF ENTERPRISES AND AGGREGATE PAYMENTS TO INDIVIDUALS

Net savings of enterprises suggest the amount of funds made available for investment without recourse to banks and the outside money market, or the amount of disinvestment sustained. The amounts have a high prognostic value, since usually enterprises that enjoy large positive net savings demonstrate thereby their favorable market position and are likely to expand their activities in the future; while enterprises sustaining large negative savings will naturally be forced to curtail their activities. What is true of enterprises is, somewhat less directly, true of industries. Therefore, the industrial distribution of net savings of enterprises reveals one of the prime factors making for changes in the relative importance of various industries in the country's total. It is subject to the same qualifications as a distribution of national income by industrial origin.

Somewhat similar reasoning can be applied to suggest why we allocate aggregate payments to individuals by industries. So far as changes in total payments differ from industry to industry, the analysis of aggregate payments must rest upon its distribution among industrial branches. The use of an industrial distribution of aggregate payments is thus coordinate with that of national income, and is also subject to all the limitations discussed above.

A distribution of aggregate payments to individuals by industrial origin may serve also to demarcate groups in the body social. Most of the people who derive their income from agriculture reside in the country and pursue a mode of life quite different from that followed by people attached to other industries and dependent upon income payments originating in

them. Similarly, miners, employees of manufacturing enterprises, people engaged in trade or in professional pursuits, etc. form fairly distinct social groups. Since the pattern of expenditures and savings may well differ for each group, an industrial distribution of payments would assist not only in understanding the background of conflict and cooperation within at least one set of social groups but also in analyzing changes and differences in the division of payments between consumers' outlay and net savings and the apportionment of consumers' outlay among finished goods of various types.

A distribution of income payments by industrial *origin* is, however, merely a rough approximation to what is wanted and fails to conform to two essential conditions. If our interest lies in the income of various social groups differentiated largely by their industrial attachment, we should estimate *total* income payments received by each, and exclude income payments that cannot be interpreted as receipts by members of a group with a given industrial attachment. For example, by estimating income payments originating in agriculture we account for the major part of farmers' current income and segregate the part of aggregate income payments that is received primarily by a social group called farmers. But total income payments originating in agriculture are both too small and too large for our purpose: too small because they cover only payments farmers receive from agriculture and exclude payments farmers receive as compensation either for direct services to other industries or for property invested otherwise than in agriculture; too large because they include payments not only to farmers but also to individuals who have little connection with agriculture and do not depend upon it for their income, e.g., holders of farm mortgages. For any industry the amount of payments originating tends to differ in these two respects from the total income of the group attached to it.

The industrial allocation of property income, dividends, interest, and to some extent rent is especially difficult to interpret in terms of social groups, for the recipients do not actively

participate in the industries that are the sources of this income. When merely a minor portion of the income of individuals or households is derived from property, where it originated does not help in classifying recipients by social groups. When property is the major source, receipts are likely to come from diverse industrial sources, and dependence upon a single industry is probably uncommon.

The industrial distribution of aggregate payments to individuals is more significant when applied solely to payments that represent compensation for direct services. The industrial distributions of wages, salaries, and entrepreneurial income reflect the apportionment of the proceeds of industry to groups differentiated by their industrial attachment. But even this narrowing of the scope of payments to be allocated still leaves the distribution merely an approximation. It is not unusual for an individual to derive income from more than one industry (either from seasonal or part-time jobs or from divers industrial attachments, common among the professions). Such inter-industry combinations are even more common within households or economic families, in which one income earner may be engaged in one industry and another in a different one. And the household as consumer rather than the individual as producer is the unit by which income receipts of social groups are classified.

Despite these limitations, the second meaning of the industrial distribution of aggregate payments to individuals is significant. Payments originating in an industry are a tolerable approximation to the total receipts of people attached to it; and can be derived in large part from the body of data upon which the industrial distribution of national income rests.

3 Of Income Payments by Type

The classification of income payments by type is based largely upon differences in the functions performed by the recipients. Differentiation among these functions is based in turn upon whether the recipient himself engages in the production proc-

ess or participates solely through his property; upon the directness of his participation, if active; upon the extent to which he shares in the management and disposition of the enterprise's activities; upon the character of his property claims. Applying these criteria yields the usual classification of income payments by type—wages, salaries, other income of employees, entrepreneurial withdrawals or net income, dividends, interest, rent, royalties, etc.

A PAYMENTS FOR SERVICES OF INDIVIDUALS AND OF PROPERTY

The most fundamental distinction is perhaps between payments for the services of individuals and of property. The former are based on direct participation in the production process—the commonest form of economic activity, absorbing the major part of active economic agents' attention, imposing a pattern on the life they and their families lead, and demanding at times considerable sacrifice. Participation through investment, the source of property income receipts, does not require similar activity on the part of individuals and is compatible with extensive participation in other activities. To be sure, property investment is sometimes embodied in the individual's training and skill, and the return for the services of individuals contains a substantial element of return for the services of property. Yet the difference between income payments in compensation for direct activity by individuals and for the services of their property holds for a wide range of comparisons.

One type of compensation for individuals' services may be designated labor income; another, entrepreneurial income. The former represents compensation for services rendered by individuals who have little voice in the decisions an enterprise makes and can easily be separated from it. The latter includes compensation for the making of all the responsible decisions in the management of the enterprise.

This tripartite division into labor, entrepreneurial, and property income payments seems at first well represented by

institutional categories of income streams to individuals, i.e., by wages and salaries, entrepreneurial net income or withdrawals, and dividends, interest, and rents and royalties. But further consideration reveals a lack of correspondence.

Entrepreneurial net income, as measured, is what accrues to entrepreneurs after the payment of all production costs. Entrepreneurial withdrawals are the amounts retained by entrepreneurs for their own consumption and for investment outside their firms. These income payments or withdrawals, as they accrue to or are made by groups of entrepreneurs (farmers, miners, retail traders, small construction contractors, etc.) are, from the viewpoint of the functions they represent, a hybrid of all three types. A majority of entrepreneurs perform actual, physical productive functions that, under a different form of business organization, are performed by wage earners or salaried employees. All entrepreneurs exercise managerial discretion and make the decisions vital to the enterprise both internally and in its relations with other enterprises. An overwhelming proportion of entrepreneurs have a net property investment in their enterprise. The relative importance of these three forms of entrepreneurs' participation varies from industry to industry; but dividing entrepreneurial income or withdrawals into labor, entrepreneurial, and property income would be so arbitrary as to serve no useful purpose. What the preponderant element in it is for the country as a whole is hard to say; but since in the group receiving entrepreneurial income farmers, retail merchants, small construction contractors, and professional people predominate, the category is by and large that of service rather than of property income; and perhaps preponderantly that of labor income rather than of entrepreneurial income.

Rent raises a somewhat different question. Net rent paid to individuals is largely for urban real estate, that flowing from farm property and other extractive sources being relatively minor. Recipients of rent typically take a more active part in managing their property than holders of stocks or bonds, who

merely draw dividends or interest. Hence the category is a combination of property and entrepreneurial income. If the element of entrepreneurial activity were substantial enough, a recipient of rent could be classified as an entrepreneur in real estate rather than as an individual recipient of property income originating in whatever industry pays the rent. If this were done, rent would not be classified as a separate type of payment but would become an income stream from one industrial branch in our classification. Alternatively, rent could be treated as purely property income and its origin traced to various industries, among which residential real estate is one. There may also be intermediate treatments. For example, rent from agriculture can be considered property income originating in agriculture, and all other rent, entrepreneurial income from real estate; or all rent can be classified as property income but assigned to real estate.

There is no decisive reason for our choice of the last-mentioned method. Had we the proper data, we could perhaps segregate the net rent that represents purely property income from that which is compensation largely for entrepreneurial activity. Since such data are lacking, it seemed best to treat rent as property income, comparable with dividends and interest. As property income, rent should have been apportioned among the industries in which it originated (similarly to dividends and interest); but for lack of continuous data on rent originating in the various industries (except in agriculture and one or two other branches) all rent had to be assigned to real estate.

There is little information on royalties with which we could segregate, estimate, or classify them definitely as property or entrepreneurial income. They are probably almost entirely a return on property, acquired either through direct monetary outlay or an outlay of labor, although some royalties imply more entrepreneurial activity than is manifested by recipients of dividends and interest. The item is so small that

it can be disregarded and since it cannot be estimated separately on a continuous annual basis, we omit it.

In the total income of employees, how should we treat 'other income' and to what extent are elements of entrepreneurial and property income contained in wages and salaries, particularly the latter? 'Other income' is a miscellaneous category made up of pensions, compensation for injury,[4] and relief payments. The second alone has a close connection with *current* services rendered in the production process. But all three are based upon a substantial connection with active participation in the production process in the past. If we disregard timing, it is reasonable to describe all three as payments to individuals for their services rather than for the services of their property. In this respect they are similar to wages and salaries. Consequently we designate them as 'other income of *employees*' and include them in our estimates under the more comprehensive total, employee compensation.

There is one substantial element of property income in both wages and salaries, and at least two minor ones in salaries. The important factors in higher rates of compensation to some wage earners and salaried employees are their education and training and the scarcity of the natural capacities needed for the service they render relative to demand. The part of wages and salaries derived from higher rates of compensation due to these factors may be considered property income payments, i.e., returns on the investment made in the past in education and training or on the value of a natural resource monopolized by its possessor. The share of wages, and more especially, of salaries, that could be interpreted as property income is often substantial, e.g., among professional employees.

Of the other elements of property income in salaries the first and more obvious is contained in the compensation paid

[4] The one industry for which we show this item is steam railroads, Pullman, and express. Compensation paid to persons other than employees is included, since it could not be segregated. The amount in question is probably relatively small.

for a sinecure obtained by a property investment, rather than for any productive activity or only in minor degree for services rendered. A job is awarded to someone who has made or is making a property investment to the benefit of the groups in control of the appointment. Theoretically, such payments are on a par with charity contributions by enterprises on the one hand, with dividends and interest on the other. Data do not admit of their segregation, but their total is probably not large.

The second additional element of property income in salaries is in the compensation of corporation executives. When the owners of a corporation are also officials, their salaries are identical with entrepreneurial withdrawals; and to the extent that entrepreneurial withdrawals include an element of property income, so do salary payments to the owners of these pseudo-corporate units. This item also cannot be segregated but is probably relatively minor. It is absolutely much larger in big corporations: the executive personnel, though theoretically subordinate to the stockholders, are actually very influential in making decisions and are, to all intents and purposes, the entrepreneurs. The main distinction lies not in their presumed subordination to the controlling bodies, but in the size of the enterprise. Any enterprise that has attained a certain size must rely for its entrepreneurial functions not on an individual and mortal owner, but on a more powerful and self-perpetuating group of executives.

In large enterprises the necessity of apportioning entrepreneurial functions among many people makes for gradations of power among employees, and the point at which a given employee ceases to be an entrepreneur and becomes a subordinate is often not apparent. The part of salaries that represents compensation for entrepreneurial activity, therefore, cannot be calculated precisely, but it can be approximated and we must not forget that salaries, which are often treated as representing labor income, include substantial elements of entrepreneurial income.

Thus the distinction between payments for services and for property cannot be clearly drawn on the basis of the institutionally prevalent types of payment. There are elements of property income in salaries and in entrepreneurial net income or withdrawals; and an element of service income in rent. Yet by and large, wages, all except executive salaries, and most entrepreneurial net income or withdrawals, are preponderantly service income; dividends, interest, and rent are even more preponderantly property income. If compensation for purely entrepreneurial functions is to be distinguished from other service income, elements of it will be found in salaries, rent, and, to a minor extent, even in dividends; but there is no single, institutionally recognized type of payment in which it is quantitatively predominant.

B WAGES AND SALARIES

As already mentioned, salaries include a more substantial element of property and entrepreneurial income than wages. But this difference is too elusive and variable to serve as the basis for the segregation by enterprises of these two types of payment. The salary of a filing clerk or of a typist includes perhaps a smaller element of property and entrepreneurial income than the wages of many a skilled worker.

Of the various bases on which the two might be distinguished—proximity to and directness of participation in the production process; manual and non-manual character of the services rendered; training and education required; method of payment (piece or time); periodicity of payment (hour, day, week, month, year, etc.); size of compensation—none seems adequate by itself. Some employees participating in the auxiliary functions of the enterprise are classified as wage earners (e.g., construction workers in a factory, repair men, watchmen). Some salaried employees seem to perform primarily manual functions (e.g., multigraph machine operators, draftsmen). The education and training required of many skilled wage earners is not substantially less, and is sometimes more,

than that required of recipients of salaries. Many wage earners are paid on a time basis; many salaried employees are virtually on a day and hour payment basis; others (e.g., salesmen) may be on a commission basis.

The answer seems to lie in a combination of these criteria, of which proximity to and directness of participation in the production process and the manual character of operations seem to have most weight. These two factors constitute the basis for other differences between wages and salaries. The manual character of operations explains the fewer prerequisites of education and training that differentiate most wage-earning jobs from most salaried occupations. Directness of participation in the production process explains a piece rate basis of wages in many industries and the payment of wages for time units much shorter than those used for salaries in most industries. Finally, direct manual participation in the production process usually means that wage earners do not engage in administrative and entrepreneurial functions, renders wages largely prime rather than overhead costs, and, demanding as it does few prerequisites of education and training, is a factor making for the lower levels of most wages as compared with salaries.

The distinction between wages and salaries is not worth making in all industries. There is little meaning in it when the production process does not involve much manual labor. For example, banks, insurance companies, educational institutions, professional enterprises, governmental agencies, and even trade, draw no clear-cut line between wages and salaries. The term 'wages' in such industries is confined to the compensation of the few employees who perform manual labor (construction and repair men, charwomen, etc.), and applies to so small a part of total payments to employees that the distinction is not important. Even industries that employ a large amount of manual labor in extracting, transforming, and transporting commodities make the distinction only if, in addition

to employees engaged directly in these processes, there is a substantial group performing administrative, research, supervisory, or entrepreneurial functions. Where, as in agriculture, such a group is absent or exceedingly small because the size of the entrepreneurial unit reduces such functions to a minimum and leads to their performance by the entrepreneurs themselves, the distinction between wages and salaries again is not worth while. For this reason, our estimates segregate wages from salaries for only such industries as mining, manufacturing, construction, and steam railroads.

The distinction between wages and salaries in some industries forces us to segregate these industries, one by one. In others the characteristics of the functions compensated by the combined wage and salary or salary payments vary considerably. The very factors that force the separation of wages and salaries in industries like mining and manufacturing make desirable an industrial allocation of total employee compensation among trade, personal service, government, etc.

It would be illuminating also to have wages classified on the basis of skill and training, occupation in primary or auxiliary functions, method of payment (piece or time), and amount of compensation. Similarly, it would be useful to have salaries divided into their property and entrepreneurial elements; among various types of administrative, supervisory, etc. activities; by basis and level of compensation; and by the degree to which they represent prime or overhead costs. Such classifications, with the possible exception of the segregation of compensation of corporation officers from other salaries, are barred by lack of data. This lack of data is not accidental: the allocations suggested demand a close analysis of employee compensation within each enterprise. Only when the need for such an analysis is forced upon an enterprise by its own development or by the concern of public agencies for the stability of employee compensation (as under social security legislation) are some of the allocations suggested made.

C DIVIDENDS AND INTEREST

The distinction between interest and dividends reflects the character of the obligations assumed by the paying enterprise. The obligations giving rise to interest are rigidly fixed with reference to the repayment of principal (as in savings banks), or to the continuous payment of interest (as in non-redeemable bonds), or to both (as in practically all bonds issued by business enterprises). The payment of dividends reflects no such obligations. Though many business units pursue a policy of maintaining stable dividends in order to remove speculative elements from the purchase or holding of their stocks, they are in a position to vary disbursements when conditions are markedly above or below ordinary levels, and usually do so. By contrast, even when there is no definite obligation to pay interest the existence of an obligation to repay the principal is conducive to a conservative investment policy and to a temporal stability of interest payments. Since dividends fluctuate and interest is relatively stable we separate these two types of property income.

With this basic difference between interest and dividends two others are associated. The first is the presence in dividends, but not in interest, of an appreciable element of entrepreneurial income. Short term changes in dividends distributed by enterprises reflect the skill with which they have met changing economic conditions and fluctuations in the markets. And if under entrepreneurial income we include, among other elements, compensation for their success or failure, dividends obviously contain a substantial share of entrepreneurial income. On the other hand, interest on bonds, which carry legal obligations, can reflect business conditions only when default occurs, a concomitant of that extreme failure of entrepreneurial activity that occurs chiefly during depressions.

A corollary aspect of the difference between interest and dividends is that they go largely to people in substantially different income groups. Dividends represent a return on the more spec-

ulative investment, requiring a discernment and knowledge of opportunities that possessors of small savings usually do not have, and bestowing a right to participate in the affairs of the enterprises not desired by a small investor or accessible to one who holds only a few shares of stock. For these reasons the great bulk of stocks are held by large investors; and at least in this country, by far the major portion of all dividends disbursed to individuals is received by people enjoying incomes well above the average. Interest paying investments, on the other hand, appeal to small investors; and a large share of interest paid to individuals is received by people with moderate incomes.

While this generalization is on the whole true, two qualifications must be kept in mind. The first and more important is that the groups of people receiving interest and those receiving dividends overlap considerably, not only because the same individual may receive both, but also because some individuals with low incomes receive dividends and some with high incomes receive interest. The second is that interest and, to a much smaller extent, dividends, frequently flow from enterprises to individuals *via* some agency such as a savings bank or insurance company rather than directly. When such agencies intervene and we cannot separate the interest flow to them from their payments to individuals, interest does not necessarily measure current interest receipts by individuals, and cannot be compared with dividends. The intervening agencies may retain a part of the payments originating in the industries proper, or add to them from accumulated reserves; and there may be some disparities between actual receipts by individuals and the estimated net interest originating in the economic system.

D DISTRIBUTION OF PAYMENTS BY SIZE

The usefulness of the distribution of family income receipts by size classes cannot be realized fully unless it is supplemented by a distribution of the size and other characteristics of the family, of other economic resources at the disposal of families, and of the sacrifices incurred in obtaining income.

Yet its value in the treatment of various problems of economic analysis and in the interpretation of changes and differences in national income totals is great, even when it alone is available. Its contribution to any interpretation of the welfare equivalents of the income flowing to individuals from economic enterprises is patent. Its importance in the social conflict economic activity engenders between the 'haves' and 'have-nots' is equally clear.

To construct this distribution we need to know how much income each family received. It is not sufficient to know the distribution by size of each type of payment separately, since many individuals and families receive more than one type. The ideal, of course, would be to have the distribution by size combined with that by type, cross-classified by industrial origin. Such a combination of characteristics—size, type, and industrial origin —would shed light not only on differentiae with respect to current income receipts but, by segregating property income, would suggest the existence or absence of additional resources, and would also indicate differences in the standard of living of recipients and the sacrifices implied in the process of earning. However, the unit in this distribution would still be the family, not the industry or enterprise in which payments originate.

It is this circumstance that makes the construction of a distribution of payments by size so difficult. As indicated in the next chapter, most of the continuous, comprehensive data for this country are for activities of enterprises and industries; and records of income receipts of individuals or families have, until very recent years, been confined to the small group that file income tax returns. Direct and comprehensive information on the distribution of income receipts by size is not available even for a single year, let alone continuously. We must therefore consider substitutes and approximations.

The first and most obvious substitute is the distribution by type of payment. As noted, one criterion of distinction between wages and salaries is the size of average payment; and one difference between dividends and interest is that a preponderant

part of the former is received by people with incomes much larger than those of people who draw the preponderant part of the latter. Entrepreneurial income or withdrawals also are the source of low average incomes, being in the main receipts of small proprietors. Indeed, a great deal of the public interest in the distribution of payments by type lies in its identification with a distribution by size and among social groups. Shifts in the share of wages are interpreted as changes in the shares of the low income groups; and similar interpretations are applied to changes in the distribution between service and property income, or between entrepreneurial withdrawals and property income.

We have already indicated how crudely an allocation by type approximates a distribution by size. We point out here merely that departures from a true distribution by size are greater when it is among family units than when it is among individuals. Among the former there is more opportunity for income from several sources and greater possibility that substantial incomes from a combination of wages and/or salaries will raise a family to a higher income category than it would be in if classified by any one source. Moreover, although incomes from wages and salaries, or interest and dividends, or labor and property differ greatly, the hybrid category of entrepreneurial income or withdrawals is not so clearly separable from the others with respect to the income size class to which it gives rise. In some industries entrepreneurial income payments or withdrawals are akin to wages; in others, to salaries; in still others they tend to yield high bracket incomes.

This suggests one more reason for cross-classifying types of payment by industrial origin. Differences in average levels of wages and salaries prevail from industry to industry; and the like, as just indicated, is still more true of entrepreneurial income or withdrawals. Even dividends and interest may differ in this respect among industries, because of differences in the speculative character of the industries and in the net property return they yield. Thus the multiplication of cells serves to

suggest more accurately differences in size categories within total income payments to individuals and families. True, an increase in subdivisions increases the probability that one individual or family will draw income from more than one cell. But the possibly increased overlapping is surely more than offset by the greater precision with which differences among payments by size classes would be revealed.

4 Summary

Four types of classification may be used in studying the composition of the national income total: analytical, evaluative, empirical, and institutional. Analytical classifications are based upon the analysis of economic reality provided by economic theory and its various applications, analysis that attempts to establish the various factors making for stability and change and the interrelations among them in determining economic phenomena. Distributions like that among labor, entrepreneurial, and property income types, or between monopolistic and competitive industries are good examples.

The evaluative type distinguishes categories within which, for substantial or imaginary reasons, the contents of national income are to be evaluated differently. Extreme examples arise from violent prejudices or partisanship. If one happens to believe that blondes form a distinct and exalted group, then income payments should be apportioned between fair-haired and other recipients. But usually the grounds of distinction are somewhat more cogent, resting upon a recognition that types of activity or groups of individuals should be segregated for substantial reasons of similarities and differences in pattern of life and consciousness of kind. A good illustration is the distribution of income payments among social groups (farmers, urban manual workers, white collar employees, small business men, etc.).

The empirical type of classification is based upon categories that have behaved in significantly different ways in the past and hence should be segregated for the present and future as

a help in diagnosing changes in the national total. It is difficult to find an illustration of a purely empirical classification, but it could be exemplified by the hypothetical case of an investigator who classifies data on net values originating in each enterprise of the country into groups exclusively by the way they changed in the past.

The institutional classifications are based upon the categories in which the statistical data come. They follow the divisions determined by the institutional framework of economic activity as reflected in current statistics, which, while often suffering from sins of omission, rarely err by departing from institutional categories. Any book on national income affords numerous illustrations of such institutional classifications.

While these four types of allocation differ sufficiently to warrant their separation, they have a great deal in common. Economic analysis is not an exercise of the imagination detached from reality, but must consider the institutional framework of economic activity and deal with the institutions that are reflected in the statistical data. Nor are the factors analyzed without influence upon the groups or types singled out in evaluative classifications: they are at least one among several sets of factors that differentiate one social group or one type of activity from another. Whatever other factors are involved in such evaluative classifications, a goodly proportion must be reflected in the data and hence in the institutional classifications. The purely empirical allocations also have considerable kinship with the analytical and institutional: they are usually based upon institutional categories characteristic of the statistical data in the past, and if consistently observed, give clues to combinations of factors susceptible to economic analysis.

The investigator must perforce adhere to institutional classifications. Purely empirical allocations are few and unreliable, since adequately accurate estimates of national income do not cover a period or a number of countries sufficient to yield empirically established distinctions. And in order to assign quantitative counterparts to analytical or evaluative categories,

he should either be able to go behind the published summary statistics and reclassify the original returns from enterprises or individuals, or be in a position, by expenditure of time and ingenuity, so to readjust the institutional divisions in the published data as to get good approximations to analytical and evaluative categories. The former opportunity is usually lacking and the latter severely limited.

For this reason our estimates present chiefly the institutional classifications of industrial origin and type of payment, with a single and broad analytical allocation among withholdings, disbursements, and consumers' outlay. For the same reason we discuss in this chapter primarily these three classifications. The classification among withholdings, disbursements, and outlay, being largely analytical and having been made by means of extensive readjustments and recalculations, is discussed in order to show clearly the lines drawn between the various categories and the allocation of doubtful items. In the classifications by industrial origin and by type of payment there was no need to clarify the distinctions made familiar by everyday discourse. The main purpose was to indicate the extent to which these institutional classifications conform to or differ from the analytical and evaluative ones they approximate but with which they are often treated as identical. Thus, a distribution among industries is not synonymous with that among types of productive activity or among social groups characterized by their industrial attachment. Similarly, the distribution among wages and salaries, entrepreneurial net income or withdrawals, and dividends plus interest and rent is not identical with the analytical distinction between labor, entrepreneurial, and property incomes. Even though, without actually carrying through the analytical and evaluative classifications, we cannot indicate how far the institutional classifications depart from them, we must not forget that they do. Finally, we suggested the possible combinations of classifications and indicated their use in translating the institutional allocations into the analytical and evaluative categories they approximate.

CHAPTER 3

Methods of Measurement

ALTHOUGH repeatedly deploring the limitations imposed by lack of data, we have not explained how the stock of data affects our estimates. It is decisive, since a national income investigator must rely on adequate and fairly accurate information in assigning magnitudes to the categories he sets up; and such information is a matter of laborious accumulation by many agencies rather than the work of an individual.

The general characteristics of continuous data serve to determine the approach. But even after the approach has been chosen in conformity with the data that are most plentiful and continuous, approximations must be made when data are lacking. In attempting to bridge gaps, in estimating one cell after another, the investigator must have at hand some controlling figures to test whether he has attained the countrywide total or whether parts are missing. In trying to make continuous annual estimates he finds that some parts of the total are recorded for some years and not for others.

We therefore discuss briefly the approach, the approximation of parts, the controlling totals, and the preparation of continuous annual estimates. In a sense this chapter is a summary of the description of sources and procedures given in detail in Volume II, emphasizing only the salient points at which the stock of data conditioned our estimates.

1 The Approach

The primary data needed to measure national income may be reported by enterprises or by individuals and families. Information from enterprises may be submitted by producing or proprietorship units, with effects on the distribution by industrial origin already discussed. If it is in terms of the gross value of products without classification of products by type, and of the cost of goods consumed in the production process, net value originating in an industrial division can be estimated by subtracting the cost of goods consumed from the gross value of products; national income is then the sum of these net values. If such net values are reported directly by type of payment and the net savings that comprise them, national income can be distributed not only by industrial origin but also between withholdings and disbursements and by type of payment. If the flow of commodities and services is reported in considerable detail, national income can be divided between consumers' outlay and net capital formation and both can be distributed by type of commodity and service. Indeed, of the classifications discussed in the preceding chapter, the only one that cannot readily be derived from reports by enterprises is that of payments by size among individuals or families.

A distribution of payments by size could be most easily derived from an estimate of national income based on reports by individuals or families, for the first item of information requested would be total payments received by each. If, in addition, the industrial characteristics of the paying enterprises, the type of payment, the division of receipts between expenditures and savings, and the apportionment of expenditures among commodities and services of diverse types were covered, most of the breakdowns mentioned in the preceding chapter could be carried through. But two important items would be missing. First, net savings of enterprises could not be estimated, since they are revealed solely by the accounting of enterprises themselves. Second, the commodity and service counter-

parts of individuals' net savings, the larger portion of which is expended by enterprises rather than by individuals, could not be ascertained.

In this country, as in many others, primary data sufficiently comprehensive to estimate national income are reported by enterprises. The censuses of agriculture, mining, manufacturing, electrical and communication industries, and for recent years, of construction, trade, and service cover at not too infrequent intervals the major part of the country's productive system. In addition, the Interstate Commerce Commission publishes continuous and complete reports on steam railroads and most other public utilities; the federal income tax authorities publish summaries of the annual reports of business corporations; and there is continuous information on various activities of government and many semi-public agencies. Continuous information reported by individuals or families, in contrast, has been exceedingly meager and incomplete, at least until very recent years.

Continuous and complete primary data solely from enterprises do not in themselves determine how to estimate national income and to classify its components. As already indicated, they may give us any one approach or all three: (1) the gross-net product, (2) the industrial payments, (3) the finished products. By means of the first, from the value of the gross product of enterprises in various industries and of the materials and products consumed by them in the production process we can estimate national income and gross product totals distributed by industrial source; by means of the second, from income payments and net savings originating in various industries, we can estimate national income (but not necessarily a gross product total) distributed by both industrial source and type of income; by means of the third, from detailed data on the products of enterprises, we can estimate national income, divided into consumers' outlay and capital formation, with these two broad components further subdivided by various categories of goods.

Could we use all three approaches we could check the accuracy of our estimates of national income as well as make distributions that would be complementary and constitute a useful blueprint of the workings of the national economy. However, the second approach alone is feasible for the period under study. Information on gross product, especially on products consumed in the production process, is still lacking for most industries. Data on the finished products of various industries have become relatively abundant since 1929, and it would be feasible to approximate national income for recent years by the finished products method. Even so, the margin of error would be greater than in estimates derived by the industry payments approach; and the relatively better supply of data for the latter approach becomes more decisive for the years before 1929.

Therefore, we used the industry payments approach. We began with agriculture and attempted to estimate wages, salaries, other compensation of employees, dividends, interest, entrepreneurial withdrawals or income, and net savings of enterprises. The combined total of these items is net income originating in agriculture. Then we proceeded similarly for mining, manufacturing, construction, and all other industries that can be singled out, until the contents of the country's economic system had been covered. National income is the sum of all the parts, adjusted for the flow of property income payments into and out of the country.

Abundant as the data are for this method, formidable difficulties must be overcome before we arrive at complete and continuous annual estimates of national income distributed by industrial origin and type of income.

2 *The Approximation of Parts*

A DIFFICULTIES OF MEASUREMENT ENCOUNTERED IN MOST INDUSTRIES

Data are most abundant for industrial divisions concerned with the extraction, fabrication, and transportation of commodities

or the provision of publicly regulated services, and characterized by the corporate form of organization—mining, manufacturing, steam railroads, electrical industries (electric light and power, electric railroads), and communication (telephone and telegraph). With occasional lapses (such as the omission of petroleum mining by the *Census of Mines* in 1929), the industrial censuses and Interstate Commerce Commission reports cover these divisions fairly adequately, showing the number and compensation of employees and the proportion of incorporated and unincorporated enterprises. Since the corporation predominates in these industries, their property income and net savings are reported rather fully on federal corporate income tax returns. In addition, special governmental agencies (such as the Bureau of Mines and the Interstate Commerce Commission) report supplementary information that can be used in deriving estimates of gross income or of net income for some industry type of income cells.

But difficulties arise even in these industrial divisions. First, there are few data on receipts by employees of incomes other than monetary wages and salaries: perquisites and other payments in kind, gratuities, compensation for injury, pensions. For some industries, such as steam railroads, the items are reported; for others it is almost impossible to obtain them. Whenever feasible, these payments were estimated. Since they are small, discretion seemed the better part of statistical valor for industries for which great effort would have to be expended to achieve even rough approximations. For these industries 'other' payments to employees were omitted; and to that extent employee compensation is incompletely estimated.

Second, while in all industries discussed here corporations predominate, some activity in mining and manufacturing is still carried on by unincorporated establishments. The industrial censuses report the wages and salaries paid by such establishments but not the incomes of the proprietors. Nor are they given adequately in *Statistics of Income,* the annual statistical compendium of information reported on federal income tax

returns by individuals and corporations. The various means devised to estimate the total net income of these entrepreneurs and to divide it between entrepreneurial withdrawals and net savings, based largely upon some use of corporate data, are described in the notes to the tables in Part Four. The resulting estimates are crude, but the totals for these unincorporated firms are very small compared with the totals for the corporate, and any error in the former is not likely to affect the total for each industry greatly.

Third, *Statistics of Income* reports for the various industrial divisions total annual dividends and interest paid, but the payments are to other enterprises as well as to individuals. These inter-enterprise payments must be excluded if duplication is to be avoided. For dividends the adjustment can readily be made because *Statistics of Income* reports also dividends received by corporations. The difference between dividend receipts and payments is the net amount contributed by each industrial division to total dividends received by individuals, but it is the amount of net dividends *originating* rather than the amount actually *paid* by the industry *directly to individuals.*

The adjustment of interest is harder because the only long term interest receipts reported separately by corporations to the federal income tax authorities and published by the latter are those on government bonds; and total interest paid as reported in *Statistics of Income* is not divided between interest on short and long term debt. Our solution is based upon rather heroic assumptions; namely, that all interest on short term debt by corporations other than those representing aggregations of individuals (savings banks, insurance companies, etc.) is paid to enterprises, and that interest on long term debt is paid to individuals; and that, therefore, total interest paid on bonds minus interest received on government bonds is a good approximation to net interest originating and paid to individuals. Accordingly, we estimated interest on long term debt by applying an average rate of return derived from an extensive cor-

porate sample to the total corporate long term debt outstanding shown by *Statistics of Income,* revised for a minor shortage in coverage. From these payments we subtracted receipts on government bonds held by corporations. Our estimate of interest payments to individuals is undoubtedly an approximation much cruder than our estimate of net dividend disbursements.

Fourth, the reported industrial classifications of employee income (and the less important entrepreneurial income) are not comparable with those of property income and corporate net savings. The former are from industrial censuses, the latter from *Statistics of Income,* and the two are not identical. This difficulty is, however, minor, especially when we discuss the broad industrial divisions. More important is the fact that payments to employees are based on primary information classified by producing establishments, i.e., plants at specified locations, while property income and corporate net savings are reported by corporations which, until 1934, were permitted by federal tax authorities to file consolidated statements for the parent corporation and its affiliates. Even single corporations having no affiliates frequently control several producing establishments engaged in diverse productive activities and classified in the industrial censuses in more than one industrial division. Among consolidated corporations this is the rule rather than the exception. Federal tax authorities classify each reporting unit in the industrial division from which it derived the major part of its income. This means that a corporation devoting a considerable part of its resources to oil mining or distribution in one year may be classified under chemical manufactures; in another year, with a slight increase in the relative importance of its mining or distributive operations, it may be classified under mining or trade.

A national income investigator cannot unscramble this mixture. It is an onerous task even for the management of an enterprise to determine accurately what part of its net revenue can be attributed to the various activities pursued or the different products turned out. Such a calculation is impossible from

totals by industrial divisions in which reports of individual corporations are consolidated and from primary data for each corporation already combined for the various industrial activities represented. All we can do is to admit that property income and net savings of enterprises cannot be distributed by industrial divisions with the same thoroughness as payments to employees; and that consequently too much reliance cannot be placed on small differences among industrial divisions in the relative shares of property and service incomes or in the apportionment between aggregate payments to individuals and net savings of enterprises.[1]

The four types of difficulty in estimating income originating in mining, manufacturing, electrical industries and communication, and steam railroads (including Pullman and express), all industrial divisions for which data are relatively complete, are met also in most other industrial branches. The first, that relating to 'other' income of employees, is solved in these other industries along the lines already indicated: whenever possible we attempted to include these items, but we could not always attain complete coverage. However, when the payments are really substantial (e.g., relief disbursements, or subsistence for army and navy employees) the information is usually available

[1] The effect of the consolidation of reports on the industrial classification is revealed by a comparison made possible for 1934 by a change in the law restricting the right to file consolidated returns for income tax purposes (see *Statistics of Income* for 1934, Part 2, Tables 2, 10, and 13). The 1934 information is given for corporations classified by industrial divisions based on consolidated returns in 1933 and by industrial divisions based on separate returns in 1934. For net dividends originating (i.e., dividends paid minus dividends received) by major industrial groups, agriculture, manufacturing, and construction show minor changes from one classification to the other. But in dividends originating in mining, transportation and public utilities, and trade there is a significant decline (over 20 per cent) from the consolidated classification to the non-consolidated; and there is a striking increase in net dividends originating in finance. The apparent reason is that holding companies, formerly classified in the industrial division of their affiliates, are now segregated in finance and their dividend disbursements swell the item for that group. Of course, there may have been other substantial shifts not revealed in a classification by broad industrial groups.

and the items can be estimated. The omissions are therefore relatively minor. The third, estimating net interest payments to individuals, is also encountered in all other industries except government and those that represent transitional stages in the flow of property income to ultimate recipients, and is treated similarly. The last difficulty, fitting property income and net savings of enterprises into the moulds of the industrial classification in the same way as service income, is also present in the other industries; and there also little can be done beyond admitting it as a qualification of our estimates. The second difficulty, estimating entrepreneurial net income and its breakdown, assumes much greater proportions in most of the other industries than in those discussed and is aggravated by new problems.

B ADDITIONAL PROBLEMS IN AGRICULTURE, CONSTRUCTION, AND TRADE

The substantial part of activity in agriculture, construction, and trade carried on by unincorporated firms makes it especially necessary to estimate entrepreneurial net income more precisely than for industries in which unincorporated firms are relatively few; but for these three industries, to attain comprehensive coverage of any aspect of activity and of any type of income is far from easy.

This question of comprehensiveness might have been raised about the industrial divisions discussed first. Can it be assumed that the industrial censuses cover exhaustively the industries they purport to describe? Or that all active business corporations report to the federal income tax authorities as they are required to by law? Obviously some shortage in coverage may be expected, greater in some industries than in others. For example, while the reporting for steam railroads, electrical, and communication industries may be assumed to be complete, not all manufacturing and mining enterprises are covered; the censuses themselves expressly exempt establishments with a gross value of product under a low minimum. Also, there may

be some evasion in reporting by corporations. But the magnitudes involved probably have so slight an effect on the estimates of income originating that it did not seem worth while to strive for more complete coverage.

The situation is quite different in agriculture, construction, and trade. Even when census surveys have been made we cannot be sure that the coverage is reasonably complete or consistent. In agriculture, for which a census has been taken at regular intervals for several decades, grounds for suspicion lie first in the difficulty of distinguishing between a *bona fide* farm, i.e., a productive unit devoted exclusively or preponderantly to agricultural activity, and a farm that is the country residence of people whose major activity is elsewhere or a place of refuge from urban centers during depressions. Furthermore, coverage may vary from one census year to the next because of differences in the time it is taken, the money spent, and the enumerator's method. Finally, there is the ever present difference between information reported to enumerators by farmers and that submitted to authorities by business corporations. The former is in large degree a matter of rough calculations on the part of the farmer; and sometimes, as in the case of a new tenant reporting on activity for the preceding year, i.e., before he took over the given farm, hearsay evidence.[2] Fortunately, the Department of Agriculture, especially the Bureau of Agricultural Economics, supplements the censuses by special studies and attempts to provide continuous series of comparable scope. It is this Bureau's estimates of income originating in agriculture that, with slight changes, we present here.

The deficiencies of coverage in construction and trade are much more serious. Unlike farms, many firms in contract construction and not a few in trade have no clearly recognizable,

[2] For the difficulties of defining a farm unit see J. D. Black and R. H. Allen, 'The Counting of Farms in the United States', *Journal of the American Statistical Association*, Sept. 1937; and Karl Brandt, 'Fallacious Census Terminology and its Consequences in Agriculture', *Social Research*, Feb. 1938. On the whole subject of estimating income from agriculture see the Social Science Research Council monograph, *Research in Agricultural Income* (June 1933).

identifiable location, and can easily be overlooked in any countrywide survey. A contractor or a broker who has his office 'in his hat', or a tradesman who has a stand in the lobby of an apartment hotel, is operating a genuine business that is perhaps his sole source of income as well as that of one or two employees. But the Census Bureau or any other agency can scarcely be expected to comb these fields so finely as to turn up all these elusive units. Complete coverage would be especially improbable in a first census, without the benefit of experience, or in a survey that had no legal power to compel the giving of information—characteristics of the more recent censuses of construction and trade. Furthermore, high mortality, both secular and seasonal, is common among construction and trade units. Consequently, a census for a given year would necessarily miss the activity of the units that were seasonally idle when it was taken or no longer in existence. Finally, in view of the primitive methods of accounting prevailing among small tradesmen and construction contractors, the trustworthiness of the information collected is subject to considerable doubt.

Although the business units omitted are small, their number may be large, and the consequent deficiency in the coverage of income and expense items rather substantial. Since the censuses collect the basic information on employee income, as well as on the gross volume of activity (used subsequently to estimate entrepreneurial incomes), we attempted to adjust for the shortage in coverage in contract construction and retail trade. In construction it was substantial and we raised the wage, salary, and other items reported in the Census for 1929, the basic figures in our estimates. The shortage for retail trade was much smaller, and because the approximation was rough, we decided to adhere to the Census totals of the number and compensation of employees. Whatever shortage there may be in our estimates for trade proper is, at least in some degree, caught in 'miscellaneous industries', the division in which we attempt to make up for the shortcomings of our approximations by parts and

which is thus a patent measure of our failure to carry out the classification adopted.

Entrepreneurial income, the major type in agriculture and the preponderant one in construction and trade, is not reported in any industrial census and must be approximated. We have already suggested that the approximation based on corporate data—the means we used to estimate this item in mining and manufacturing—is too crude for industries in which unincorporated firms predominate. For instance, it would be nonsensical to try to approximate incomes of individual farmers from data for agricultural corporations. But can other information be found for estimating entrepreneurial income and its division between withdrawals and net savings?

The answer varies from industry to industry. The Census reports salaries paid to proprietors in many large construction firms. The salaries of executive officers may be used to approximate entrepreneurial withdrawals in wholesale trade. Besides, in 1929 corporate activity accounted for about 50 per cent of construction and of retail trade; 80 per cent of wholesale trade. We used corporate data to approximate total entrepreneurial net income in these three branches; and the reported salaries, salaries of corporation executives, or average salaries and wages, to approximate entrepreneurial withdrawals.

The expenses incurred by farmers in the conduct of their business are usually collected on a voluntary basis, and reported in terms of percentages of gross receipts. These reports are based on a sample of units that have fairly good accounting methods; such units are likely to be among the more successful and the larger units in the industry. The samples thus tend to exaggerate incomes and minimize losses; and their application to the countrywide totals leads to an exaggerated estimate of entrepreneurial net income. Nevertheless since with them a better approximation to the total net income of entrepreneurs in agriculture can be made than with the corporate reports in *Statistics of Income,* they were used by the Department of Agriculture, whose estimates we adopted. Entrepreneurial in-

come totals have been further divided into withdrawals and net savings by estimating the former on the basis of farm workers' wages raised to represent the higher standard of living of independent farmers.

C SPECIAL PROBLEMS OF THE SERVICE INDUSTRIES

The industrial divisions discussed under Sections A and B comprise almost all the commodity producing, transporting, and distributing industries. The other industries in the country's productive system, except a few branches of transportation (pipe lines, water transportation, motor trucking, local cartage), are concerned with the provision of services: government, finance (banking, insurance, real estate), and service industries proper (professional, amusement, personal, domestic, business, etc.). Finally there is always the miscellaneous group which supplements the parts approximated specifically.

These diverse industries can be divided roughly into two large groups: those in which corporations or some other nonpersonal form of organization are common—water transportation, motor trucking, cartage, aviation, pipe lines, banking, insurance, government, educational service, and some parts of real estate, personal, amusement, and other service; and those characterized by the prevalence of individually owned enterprises—some small subdivisions under banking (private investment banks, brokerage houses, etc.), the part of real estate represented by net rent received by individuals, professional, domestic, and parts of personal, amusement, and other service industries.

For practically all industries in both groups a comprehensive and reliable estimate of net income originating is difficult. Educational institutions alone have been covered by a census at fairly regular intervals; and even its information on employee compensation is incomplete. Census surveys for other industries have either not been made or were made too early (e.g., for water transportation in 1916) or too late (for several service industries in 1935), contain insufficient information, and are

inadequate in coverage. The 1935 *Census of Business* is especially deficient for those branches in which there are a multitude of small business units even more elusive than in contract construction and retail trade.

Thus for both groups, considerable difficulty is encountered in estimating employee, entrepreneurial, and property incomes. In the first group, that in which corporations and nonpersonal organizations predominate, little trouble is encountered in estimating property income originating: it is reported in *Statistics of Income* or elsewhere (as in the case of government debt and interest), or need not be considered at all since property income payments are interpreted as transfers of payments originating elsewhere in the productive system (e.g., in savings banks and life insurance companies). And since there are practically no unincorporated establishments, the main task is to estimate employee compensation. In the industries of the second group the main task is to estimate entrepreneurial net income. Employee income is a smaller though still considerable magnitude, and segregable property income is usually negligible.

We cannot describe adequately here the means by which we bridged gaps in information. Varying greatly according to the data used and in complexity, they yield final approximations of diverse reliability. But some general indications that suggest the main characteristics of the estimates can be given.

The estimates of payments to employees in the first group of industries utilize all or some of the following data: questionnaires sent to enterprises on the number and compensation of employees, the resulting sample raised to cover the total for the country; actual count of employees in a sample of enterprises, often reported in directories and manuals, raised to cover the entire industry, and multiplied by a sample average compensation; sample studies showing income paid to employees as a percentage of all operating expenses or all gross revenue; number of employees attached to the industry (according to the *Census of Population*), reduced by estimated

unemployment, and multiplied by average compensation derived on the basis of samples or assumed to be equal to average compensation in a related industrial branch; estimates of the capital equipment of the industry, multiplied by the complement or crew of employees needed to man the equipment and their compensation. In general we estimated income originating for divisions as narrow as possible. Wide as the margin of error may be within them, to estimate for narrow divisions is the one way to arrive at a more reliable estimate for larger divisions, the one approach that assures estimates whose validity can be appraised by a critical student.

For the second group of industries measurement is more complicated and the estimates even cruder. Not only employee compensation but also the more important item, entrepreneurial net income, must be estimated. And adequate samples cannot be taken of the numerous small, unincorporated enterprises. Questionnaires become expensive if a large sample is attempted and yield treacherous results if a small sample is used. The absence of big, non-personal organizations means the absence of information that such organizations usually collect and publish incident to the discharge of public obligations; and that, while not relating directly to income, does afford some basis for approximating its size. Finally, the great differences in net income known to exist among entrepreneurs in the industries in this group, or among enterprises in this and other groups, bar an acceptance of averages for the industries covered by available data as valid for industries for which no direct information exists.

Consequently, only crude approximations could be made for industries in the second group. Estimates of total entrepreneurial income were usually computed by multiplying the number of entrepreneurs, obtained either from the *Census of Population* or from directories, by average net income, derived from sample studies of widely diverse coverage. The procedure followed for net rent receipts by individuals was to estimate as comprehensively as we could total gross rent pay-

ments, subtract gross rent received by corporations, and reduce gross rent received by individuals to net rent on the basis of sample studies. Finally, employee compensation was determined partly on the basis of census information, partly on the basis of sample returns from individual employers, partly on the crude basis of estimating the number attached (from the *Census of Population*), reducing it to the number employed, and multiplying the latter by an average compensation derived either from a sample for the specific industry or from information for related or similar industrial branches.

This description conveys an inadequate notion of the devices used to compensate for the paucity of data. The main point is that ingenuity cannot fully or effectively compensate for lack of basic information. Most of the estimates for this group of industries are susceptible to a wide margin of error. And for many industrial branches in it a specific estimate had to be given up as hopeless. These were thrown into the miscellaneous group. Because the industries that had to be treated in this manner were large and because we had controlling totals for most of the service industries proper, a division of 'miscellaneous service' was established for all service industries for which we could not make separate estimates.

The 'miscellaneous service' as well as the general 'miscellaneous' division could more properly be designated 'all other service' and 'all other industries'. They comprise the segments of national income obtained by subtracting net income originating in the industrial branches for which specific estimates proved feasible from the totals that constitute the most comprehensive estimate of income in the field of service or of the total national product. The characteristics of these controlling totals and their effect on the scope of national income estimates are now considered.

3 *The Controlling Totals*

A THE NATURE OF THE TOTALS

The device of controlling totals is used commonly to approximate totals for industry type of income cells. Whenever detailed and complete information can be had for only a portion of the area under study, it is usual to find some other attribute by which the area of partial coverage can be compared with the entire area. The total of this attribute for the entire area becomes the controlling magnitude; and all totals derived from data covering a portion of the area are adjusted to correspond with it.

However, we are concerned here with countrywide controlling totals, not with those for any specific industrial division or industry type of income cell. Since the approximation by parts proceeds from one industrial division to the next, i.e., each category of payments and net savings of enterprises is estimated first in one industry, then in another, the countrywide controlling totals must, if possible, be given separately for each type of payment and for the net savings of enterprises. From a controlling total for employee income for the country as a whole and the payments accounted for in each industry we derived the payments to employees in the miscellaneous industrial group; and proceeded likewise for the other types of income.[3]

The controlling total for payments to employees was the number of gainfully occupied persons, exclusive of individual proprietors, reported in the *Census of Population*. A gainfully occupied person is one who, though he may not be employed or otherwise engaged in a gainful pursuit at the time the Census is taken, is ordinarily so engaged. The number of gainfully occupied employees reported by the Census, if the Census is at all

[3] The discussion that follows relates to the countrywide controlling totals used to derive the estimates for the miscellaneous industries group. The controlling totals for the service industry, used to derive 'miscellaneous service' and thus complete the estimate for the service group, are similar and need not be discussed here. They are described in detail in Part Four, in the notes appended to the tables that give estimates for miscellaneous service.

complete, thus represents the maximum number likely to receive wages and salaries; maximum since it includes persons ordinarily employed but who may have been inactive, either voluntarily or involuntarily, at the time the Census was taken.[4]

Consequently, the total must be adjusted for unemployment, even before it can be used to control the *number* receiving employee compensation. We attempted this adjustment as follows. For each industry covered in the approximation by parts, we estimated the number employed. The sum of these totals was subtracted from total gainfully occupied employees reduced by the number fully unemployed: the remainder is the number employed in the miscellaneous group. Since it still included some partly unemployed, it was reduced to equivalent full-time employment on the basis of ratios for other industries.

Total entrepreneurs were also estimated from the *Census of Population* but somewhat differently from employees. It was not feasible to compare the overall total of proprietors reported in the Census with the number accounted for in the industrial branches for which specific estimates had been made, because for some branches the estimates of entrepreneurs were the crudest of approximations. But since the latest *Census of Population* reports occupations by industries, we could obtain the number of proprietors in the industrial divisions for which no specific estimates of entrepreneurial income had been made. This number, unadjusted, is given as the number of entrepreneurs in the miscellaneous group. Total unemployment is infrequent among entrepreneurs so long as they remain entrepreneurs; and partial unemployment has little meaning in this type of gainful pursuit.

The number of equivalent full-time employees and of entrepreneurs in the miscellaneous group determined, the estimates

[4] Actually the Census is not complete in that it omits at least recipients of casual and part-time incomes, who would not classify themselves as gainfully occupied. For a brief discussion of this and other omissions see Section 3 C below and Chapter 9.

of employee compensation and entrepreneurial income originating in this residual group were dependent upon an average compensation per employee and an average net income per entrepreneur. Direct data from which such averages could be computed are not available; if they were, there would be no need for a miscellaneous division. Any averages that could be used would necessarily be arbitrary. Such arbitrariness was lessened by examining the nature of the industries included in this miscellaneous group, by finding similarities between them and other industries for which fairly acceptable estimates of service income had been made, and by using for some industries scattered data for 1929 and later years. Separate averages were applied to the number of employees and of entrepreneurs. Since those averages were at best merely reasonable guesses, we pressed the approximation by parts as far as we could, thereby reducing to a minimum the area covered by the residual miscellaneous industrial division.

The controlling total for net rent received by individuals was derived chiefly from (a) rent paid by corporations (*Statistics of Income* for recent years), raised whenever possible to cover unincorporated establishments; (b) rent paid by all enterprises in trade (*Census of Distribution*); (c) total residential rent (derived from the *Census of Population,* 1929); (d) rent originating in agriculture and paid to non-farmers as estimated by the Bureau of Agricultural Economics. From this total of gross rent (excluding rent from agriculture) we subtracted rent received by corporations (*Statistics of Income*); and to the residual gross rent received by or imputed to individuals we applied a ratio of net to gross rent, derived from samples of operating and maintenance expenditures for real estate, to obtain net non-farm rent. To the latter we added net farm rent.

Comprehensive totals of dividends and corporate net savings are given in *Statistics of Income* but we preferred to use for public utilities information reported by the Bureau of the Census and the Interstate Commerce Commission; conse-

quently, the derivation of dividends and net savings in the residual miscellaneous division by subtraction yields in several years patently absurd results. We therefore estimated dividends and net savings for this miscellaneous division directly, by using data from *Statistics of Income* on the industries specifically included. In that sense there is no single controlling total for either dividends or corporate savings. For both, the countrywide totals consist of *Statistics of Income* totals for all except the public utilities covered by the Bureau of the Census and the Interstate Commerce Commission, and the latter totals for them. In addition, net savings are estimated for unincorporated firms, for which the controlling total is essentially the number of entrepreneurs; and for governments, for which the controlling totals are, on the one hand, net public construction and, on the other, the net public debt of all governments.

The countrywide total of interest includes: (1) interest on long term debt for all corporations except public utilities, reported in *Statistics of Income* and raised to allow for a slight shortage in coverage, multiplied by a rate of interest derived from an extensive corporate sample, minus interest received by corporations on government bonds; (2) long term interest paid by public utilities, as reported by the Interstate Commerce Commission and the *Census of Electrical Industries,* minus all long term interest received; (3) interest payments originating in agriculture and real estate; (4) interest payments by governmental agencies. Interest payments in miscellaneous industries are estimated from *Statistics of Income* data for industries specifically covered, not by subtraction from a single controlling total.

The totals of interest and of net savings are, perhaps, the least comprehensive. The former explicitly omits interest paid by unincorporated firms to individuals—a presumably small item that cannot be gauged with the existing data. Estimates of net savings of enterprises are probably deficient for unincorporated firms.

B EFFECT ON TERRITORIAL COVERAGE

The controlling totals determine the territorial coverage of national income estimates. While the industrial and other censuses record some service income that may flow to people residing outside this country, the controlling total for this type of payment is the number of persons gainfully occupied reported in the *Census of Population*. Since this Census, as well as all the industrial censuses, cover only people residing in the continental United States (i.e., the forty-eight states and the District of Columbia), and exclude such outlying territorial possessions as Alaska, Hawaii, the Virgin Islands, and Puerto Rico, the service income total is for this territorial area. If the service income in the various industrial branches except miscellaneous does cover some people residing outside the continental United States, there will be an offsetting reduction in the service income originating in the residual, the miscellaneous division. Full coverage of the number of employees drawing wages and salaries, the number of entrepreneurs, and the activity of unincorporated enterprises, is also for the continental United States.

At first sight, net rent received by individuals seems to have the same coverage, since the global totals are derived largely from the *Census of Population* and the industrial censuses. But it must be remembered that rent, though *paid* by individuals and business organizations domiciled in the continental United States, may flow to people residing abroad; conversely, residents of this country may receive rent from abroad. This is possible so far as we conceive of net rent as purely property income, not calling for participation by the recipient in activity within the country. Since the flow of net rent across international boundaries is relatively minor and can be neglected, we accept the total originating in the continental United States as identical with the total received by its residents, although this treatment results in greater error than a similar procedure for employee compensation or entrepreneurial income.

The basic totals for dividends, interest, and corporate net

savings are from *Statistics of Income,* which covers Alaska and Hawaii in addition to the continental United States. The corporations are classified by the states and territories in which the principal place of business or principal office or agency is located. Adjustment for the inclusion of Alaska and Hawaii to assure strict identity of territorial coverage with that of service income is both difficult and relatively unimportant. In the case of dividends and interest we wish to know how much individuals residing in the United States receive; and the fact that the principal agency, office, or place of business of a corporation is in Alaska or Hawaii is no assurance that its dividends and interest are received largely by individuals residing outside the continental United States. A better case can be made for the exclusion of the net savings of corporations in Alaska and Hawaii. But the corporations classified under these two territories are such a small fraction of the total (for 1936 their net income and net deficit combined accounted for less than one-half of one per cent of a similar total for the continental United States), and their exclusion would entail so many minor and arbitrary reductions in the industrial divisions that it did not seem worth while. Consequently, the totals of corporate net savings include corporations domiciled in the continental United States, Alaska, and Hawaii.

The totals of dividends and interest received by individuals discussed so far *originate* in enterprises domiciled in the continental United States, Hawaii, and Alaska. But some of these payments are received by residents of foreign countries; conversely, residents of this country receive some interest and dividends from abroad. Our definition of national income demands an estimate of dividends and interest received by the residents of this country, preferably residents of the continental United States. Figures for the adjustment, that for the flow of property income into and out of the country, are from the study of the balance of international payments, in the course of which the Department of Commerce estimates the returns on investments in this country by foreigners and by Americans

abroad. These investments are largely in securities; and while direct investments (in such properties as real estate) are also estimated by the Department of Commerce, they are small and the estimates do not cover the entire period. The final adjustment was to subtract from total dividends and interest originating the payments flowing to foreigners and to add the payments received from abroad by residents of this country.

However, the territorial area, for purposes of this adjustment, is even wider than that covered in *Statistics of Income*. "In addition to continental United States, our balance-of-payments area includes Alaska, Hawaii, Puerto Rico and the Virgin Islands. The Philippine Islands and the Panama Canal Zone fall outside this area and are therefore considered foreign countries" (*Foreign Investment in the United States,* prepared under the direction of A. E. Taylor, Department of Commerce, Washington, 1937, p. 3, note 1). It would be difficult to modify this adjustment to reduce the area it covers, and the change would be too slight to affect the totals significantly.

To sum up: In view of the dominance of employee compensation and entrepreneurial income, total national income is almost exclusively for the continental United States. Dividends, interest, and corporate net savings cover a somewhat larger area; but the additional coverage probably amounts to less than one-half of one per cent of the respective type of income totals.

C RESULTING EXCESSES AND OMISSIONS

The national income estimates, as described in the approximation by parts and delimited by the controlling totals, include some items that should be omitted and omit others that should be included. Their excesses and omissions are not to be confused with under- or overvaluations in the estimates themselves. We do not deal here with such questions as whether wages and salaries for various industrial divisions are larger or smaller than they should be. We are concerned with the pos-

sible omission of some group of employees, a certain type of income, some industry; or the inclusion of items that definitely do not belong in national income.

Activities whose compensation should be omitted are likely to be included because people engaged in pursuits upon which society frowns cannot be expected to report them under their real name. Peddlers of pernicious and prohibited drugs, panders, professional assassins are loathe to admit their true occupations to Census enumerators; and if recorded, they will appear under some occupation that meets with social approval or tolerance. Similarly, many people, corporations, or individual firms engaged in occupations that are innocuous, or at least not prohibited, but are recognized by society at large as not contributing to the positive contents of national income, may try, sometimes in vain, to evade Census surveys as they do the vigilance of authorities. Hence, the controlling totals undoubtedly include some activities whose compensation should be excluded from national income. This over-inclusion cannot be even roughly approximated, but it can be assumed to be minor relative to the total.

The omissions due to lack of data are more numerous and the items are larger. Reasonably complete coverage of goods that do not appear on the market is attained only for products retained by farmers for their own consumption and the services of houses inhabited by their owners. Payments in kind to employees are covered for only a few industries, and have to be omitted for most. None of the other activities whose products do not appear on the market (listed in Ch. 1) is included in national income. The size of these omissions depends mainly upon which of these non-market goods one thinks belong in national income. If a most inclusive viewpoint is adopted, the shortage in our total is relatively large.[5]

Some significant groups of monetary income payments are omitted. We have already noted that 'other' income of employees cannot be fully estimated except for a few industries.

[5] For a suggestion of the magnitudes involved see Chapter 9.

A much larger omission is income from casual or secondary occupations, either combined with a full-time pursuit or engaged in by persons not usually gainfully occupied and of a type not sufficiently important to place their performers in the category of gainfully occupied. For example, a full-time worker in a factory may earn some occasional income by doing repair work for a householder. The net value of his activity is recorded in our estimates in connection with his full-time job. But his additional earnings, derived from occasional repair jobs, stand little chance of being recorded anywhere. They cannot be retrieved through comparison of the number gainfully occupied and employed: the household does not report its expenditure on this job, and the worker is unlikely to be subject to an income tax or to report his earnings. Other not uncommon instances are those of professional salaried people deriving fees from lecturing, writing, and other free lance jobs; proceeds from the sale of products by people to whom gardening, flower raising, or owning a milch cow is a secondary pursuit, etc.

Illustrations of incomes earned by people not classified as gainfully occupied are also plentiful. Many minors in urban communities deriving small incomes from occasional jobs (bootblacking, newspaper selling, fruit gathering, etc.) also stand little chance of being recorded among the gainfully occupied in the *Census of Population*. Many a housewife, especially among the lower income families, takes in a boarder or two without thereby converting the household into a professional boarding house and considering herself, or being considered by statistical authorities, as gainfully occupied; the same is true of occasional charring, laundry work, and similar domestic jobs. Finally, a gainfully occupied person, entirely or partly unemployed, may find an occasional job that yields a small income. He does not thereby fall out of the unemployed classification, and his income is not recorded anywhere. Each of these omissions, which are partly employee compensation and partly entrepreneurial income, is fairly small, but they are numerous and may well add up to a substantial sum. Un-

certain as the amount is, it is probably not large relative to total recorded payments to employees and entrepreneurial income.

Some items are omitted from property income. As indicated in Chapter 2 (Sec. 3 A), royalties cannot be estimated. The item is reported by individuals who file federal income tax returns, but the authorities combine it with net rent receipts in their publications. We noted also that interest paid to individuals by unincorporated firms cannot be estimated. But it is not a large amount, relatively. The chief shortcoming of our estimates of property income arises because we cannot trace its flow through institutions such as banks and insurance companies. In it we include all dividends and long term interest received by these institutions and interpret their receipt as an accrual to the account of the ultimate recipient. However, we cannot ascertain whether the actual net disbursement to the ultimate recipients by these institutions is larger or smaller than the flow of dividends and long term interest to them.

Finally, all our estimates may have a shortage over and above that due to the items we are aware we omit, for the controlling totals, no matter how comprehensive, may fail to cover some parts of the country's economic activity. Some residents and gainfully occupied persons may elude the Census enumerator; some corporations may not be recorded in *Statistics of Income*. The bias is toward omission rather than overinclusion, for the obvious reason that it is easier for a census, as for any statistical survey, to miss units than to count those that do not exist.

Most of the omissions are vague or unknown quantities, and one cannot do more than conjecture what they amount to. They are noted here primarily to indicate the scope of our national income total, and to emphasize that we can estimate recordable, 'professional' economic activities alone. Products of activities so far removed from the market as to have an uncertain market value, products of casual and secondary pursuits, and the margin of unknown that always remains, even after assiduous effort at completeness, are perforce excluded.

4 *Continuous Annual Estimates*

A THE NEED

Estimating national income for a single hypothetical year, assumed to be most advantageous from the viewpoint of the supply of basic data, is easy compared with preparing reliable totals covering each year in a period. Do we really need continuous annual estimates? Since they are necessarily approximate and only rough guides in a study of short term changes in the economic scene, would it not be sufficient to estimate national income for single years at substantial intervals, preferably those for which censuses are taken—1909, 1919, 1929?

Several reasons may be suggested for declaring such an intermittent series unsatisfactory and for estimating national income continuously on an annual and perhaps even shorter time unit basis. First and foremost is that estimates for any single year are inevitably affected by the economic conditions peculiar to it: the phase of the business cycle through which the country was passing and the conjuncture of events. For example, from estimates for 1919 and 1929, the character of the changes during the decade could scarcely be inferred; and from estimates for a single year, it would be impossible to infer which magnitudes and relations are persistent and which contingent upon conditions peculiar to it. To differentiate between transient and persistent elements we must have estimates for several time units.

Consequently, whether one is content with annual estimates at decennial, quinquennial, or biennial intervals or strives for a continuous annual series depends primarily upon the period for which one wishes to establish significant changes or differences in national income and its components. From decennial estimates we can establish tendencies free from cyclical and casual disturbances only for sixty years or more, and must treat the entire period as a unit, since we cannot isolate the secular changes peculiar to any part. With quinquennial estimates we can study the non-cyclical, persistent movements

during a shorter period, say thirty to forty years; from annual estimates we can approximate secular movements for still shorter periods. In other words, cyclical and other transient changes can be the better distinguished and the persistent movements for shorter periods studied with greater accuracy the shorter (up to a certain limit) the intervals separating the estimates. The same holds *pari passu* for comparisons among countries or regions, since the impact of cyclical and other transient disturbances varies with the area. Here again a series composed of estimates for not too infrequent time units is needed in order to separate the persistent from the transient differences and study the former closely during relatively brief intervals.

Second, we may be interested in these transient changes or differences themselves. If so, we may consider national income estimates as attempts to synthesize diverse movements occurring at any given time in the various parts of the economic system. While approximate and too broad for a proper measurement of cyclical and other short term changes in economic conditions, still, in the absence of more comprehensive estimates for briefer time units, annual estimates are of some use for the study of short term changes or differences. For such purposes continuous estimates are indispensable.

This aspect of national income estimates accounts for the powerful incentive to bridge long intervals in any series. When a series contains an estimate for a year close to the present, the incentive is dormant. But if the estimate is for some year in the past, we are impelled to bring it up to date, to ascertain what happened in the years immediately preceding and what is happening at present. For example, were we to estimate national income for 1940, by 1942 or 1943 we would want to know what had happened meanwhile. This desire will be the stronger the more accurately the estimates reflect the conditions during the one year they cover and the greater the apparent changes since. Both factors, the accuracy of the estimates and the sensitivity of the economic system to short term disturbances, have

during recent years made more desirable national income estimates at close intervals.

Finally, there is the purely practical consideration that any interval longer than a year, combined with any choice of dates, would not be the best for all parts of the economic system. For example, if decennial intervals and the years 1909, 1919, 1929 were chosen, it would be unfortunate for estimates of electrical industries and communication, the censuses of which are for 1917, 1922, 1927, 1932, etc.; of water transportation, the census of which, when taken, covers the sixth year of the decade; and for any information on wealth, the census of which (*Wealth, Debt, and Taxation*) is taken decennially in the second year of the decade. Continuous annual estimates free us from the quandary of what intervals and dates to select.

B THE PREPARATION

The difficulties arising in the preparation of continuous series for this country apply exclusively to employee compensation, entrepreneurial income, and rent. Dividends, interest, and corporate net savings can be derived, for almost the entire period covered by us, from *Statistics of Income* and other reports published annually; and their measurement on a continuous annual basis involves few additional difficulties. The only point to be noted is that while our estimates are for calendar years, some corporations report for fiscal years. However, the proportion is small (for 1933 about 10 per cent of all corporations, accounting for about 12 per cent of combined net income and net deficit). The consequent blurring of the temporal limits of the year is not material.

To prepare continuous annual estimates of other income types is not simple, because censuses are taken at decennial, quinquennial, or biennial intervals. We must either bridge the temporal gaps between the census years, when several fall within the period, or extrapolate a census figure for a single year backward and/or forward until the entire period is covered. Either choice reduces itself to the acceptance of the

census figure, adjusted or unadjusted, as the basic quantity; finding a related series, usually of much narrower coverage but continuous, and using it as an index of changes which, when applied to the census figures for one year or several, yields the continuous annual estimate of that particular group of income payments.

Our first task is to choose a continuous series which, when converted to an index, can be taken to represent annual changes in the total. The choice is seldom among several continuous series for the same group of wages, salaries, or entrepreneurial income. It is more often a matter of deciding what, in the absence of continuous series relating directly to the industry in question, we should choose to construct the interpolating or extrapolating index. In this choice we resorted to various expedients. If continuous direct series were reported for wages but not for salaries in a given industry, we used a ratio of salaries to wages in a related industry. If there were no indexes for total payments to employees but we could estimate annual gross sales in a given industry, as well as in a related one for which employee compensation could be estimated annually, we based the interpolation index on the ratio of employee compensation to gross sales. When continuous series were reported for the number employed but not for their compensation, we estimated the change in the per capita figure on the basis of a sample narrower in coverage than that for the number employed or of changes in the per capita figure for a related industry. For entrepreneurial income there were also either sample series relating directly to the industry concerned or estimates of the number based on the number of unincorporated firms, the latter interpolated between Census dates by an index based on the number of failures; and estimates of withdrawals per entrepreneur based largely on the movement of per capita salaries. In general we used all sample data that applied specifically to the industrial division or type of payment to be estimated, and only in their absence, sample information for

related industries, converting it to some ratio basis before using it as an index.

The supply of such continuous series is governed by the factors that determine the availability of basic information. Primarily for enterprises rather than for individuals and households, they are most plentiful for the industrial divisions for which the basic information is best, i.e., mining, manufacturing, and public utilities, and for the same reasons. The factors limiting the supply of comprehensive, basic data in such industries as contract construction and trade also affect the supply of continuous annual series and are aggravated by the lack of a census for these two industries before 1929. Again the absence of data is most acute in the service industries, in which unincorporated enterprises predominate. This similarity of the stocks of continuous sample series to that of intermittent Census data is to be expected not only because the same factors are operative, but also because regular censuses in themselves constitute an incentive to collect sample data. In industries for which censuses are not taken, or are recent, there is little incentive to collect continuous samples, since there are no basic totals in conjunction with which sample data could be used or by which they could be tested and improved.

Our second task was to decide how to treat industry type of income cells for which a crude but tolerable approximation could be made for a single year but for which data were insufficient for acceptable annual series. Such cells or branches were usually transferred to 'miscellaneous', a fate that befell fisheries, motor transportation, and aviation. The alternative, to make estimates for the more recent years for which they are feasible and change the industrial classifications for the various parts of the period under study, would increase the cumbersomeness of the classification and the difficulties of temporal comparison. It would be worth while only if the period covered by the specific estimates were substantial and the estimates themselves fully trustworthy.

This consideration indicates one reason why our estimates

begin in 1919. The decennial census is for 1919, which is also the year when new continuous sample data on employment began to be collected on a large scale. *Statistics of Income* tabulations start in 1916. If one were to go beyond 1919, especially to the somewhat abnormal war years, numerous series would cease to be available and the breakdown of national income could not be as detailed. On the other hand, there would be small gain in the amount of data continuously available had we begun after 1919, unless we had shifted all the way to 1929, another year that serves as the initial date for an appreciable amount of additional information.

Once we had chosen the continuous series to be used in extending the basic magnitudes over time, we had to decide upon the method of interpolation and extrapolation. The theoretically possible variety of methods is wide. In extrapolating, one can make various assumptions concerning the way in which changes in the area to be estimated are reflected in the sample series used as an index. We might assume that the sample is strictly proportional, the simplest possible hypothesis; or that it is too sensitive or not sufficiently sensitive to short term oscillations, so that its oscillations would be damped or intensified when we transfer them to the estimated area; or that it has an upward or downward bias as compared with the basic area studied, and allow for it in using the sample as an index. Similar assumptions may be made to modify the application of the continuous sample in interpolation, i.e., estimating the totals between two given magnitudes; and various interpolation formulae, expressive of different assumptions concerning the underlying line of movement and the relation between the sample series and the successive basic magnitudes, may be used.

But the choice presupposes more exact knowledge of the relation between the sample and the total area to be estimated than is possessed by the national income investigator. Even when the continuous series are based on data relating directly to the industry or type of income to be estimated, it is difficult to know precisely in what way the sample may not record the

relative changes in the magnitudes to be extrapolated or interpolated. When the index is based on data from other industries or types of income, no precise judgment is possible. For these reasons the simplest methods of extrapolation and interpolation were followed: for the former we assumed that the relative changes in the sample series describe exactly the relative changes in the basic figure; for the latter, that the average relative error of the index, as compared with the two basic totals, is distributed equally over the intervening years. Only in the interpolation between biennial Census totals was another method of interpolation sometimes used.

5 *Concluding Comments*

For an adequate account of how the supply of data conditioned our estimates of national income and of its components, a critical reader should consult the comments on the characteristics of the industrial and type of income classifications followed (Ch. 8), review the tentative magnitudes suggested for the various items omitted (Ch. 9), compare our estimates with those published by the National Bureau in the past and by the Department of Commerce at present (Ch. 10), inspect critically our classification of underlying data and the analysis of the interpolation and extrapolation procedures (Ch. 11), observe the relative margins of error we set for the various industry type of income cells that comprise national income in each year (Ch. 12), refer to the tables and notes in Part Four, and finally glance at the supplementary materials in Part Five.

Obviously, not much would be gained by trying to summarize this chapter, already a summary of Part Four. Instead, we speculate briefly upon the factors that determine the supply of income data in this country. The decisions it imposes have been stressed. Statistical information for so comprehensive a total cannot be collected by one investigator or research agency, but is the cumulative product of continuous and extensive collection largely by governmental agencies, which have the power to demand information and are impelled to do so by

considerations of public policy and administrative needs. Why are income data in this country so much more plentiful from enterprises than from individuals and households? Why are those from enterprises primarily suitable for the industry payments approach rather than for the gross-net product or finished product approaches?

In answer to the first question, several, necessarily tentative, suggestions can be advanced. First, there is the greater ease with which reports can be obtained from enterprises than from individuals or families, partly a matter of sheer numbers, partly of how well informed the reporter is. In recent years about 450,000 corporations reported to the federal income tax authorities. The families whose livelihoods were derived from these corporations must have numbered over fifteen million. In 1929 the *Census of Manufactures* reported about 211,000 manufacturing establishments. In April 1930 the *Census of Population* reported over eleven million persons usually engaged in manufacturing. Moreover, enterprises are in direct contact with production processes, sales, and payments, and have systems of accounting and control that place them in a much better position to provide accurate information than are individuals as ultimate consumers and members of households.

Second, much of governmental regulation is aimed directly at enterprises, rather than at individuals or families; and a large part of our statistical information on economic matters is a byproduct of such administrative efforts. This is especially true for public utilities, foreign trade, and business corporations subject to taxation. On the other hand, not until recent years have governments even tried to collect information on the incomes of individuals and households or the ways in which they disposed of payments received from enterprises, except when the incomes were above the taxable minimum. As they became more concerned with the temporal stability and the sufficiency of individuals' incomes, they began, through their social security administration, to collect comprehensive in-

formation on incomes. Even now, for technical reasons, they prefer to obtain it from enterprises.

Finally, both the public at large and students of economic problems have tended, and perhaps still tend, to emphasize production, neglecting distribution and consumption. With the rapid extensive and intensive progress that characterized this country through most of its history, the existence of frontiers to be conquered and the need to raise the industrial arts to the level of the more advanced countries, the pressing problems seemed to be in production; and the problems created by the distribution of national income and its utilization by ultimate consumers seemed relatively minor and soluble in the upward rush of industrial production. This viewpoint put a premium on information on productive activity, on the achievements of the industrial system in terms of goods produced, men employed, values added, etc., rather than on goods consumed or the shares of inhabitants in the national total. Obviously, information on productive activity can be supplied only by the enterprises that organize and control it. The recent shift in viewpoint, toward greater concern over the distribution of national income among ultimate consumers and between consumption and savings, presages a change in the emphasis on what questions should be asked and an increase, already apparent, in information reported in terms of individuals and household units.

These suggestions serve to explain also why we know so much more about some industries than about others. Information is richest for industries in which corporations, especially of the type that are subject to more rigid control by public authority (public utilities), are most common; and poorest for industries in which the predominant unit is the unincorporated firm. Here again the difference is due to the smaller number of corporations, their better accounting systems, their more rigid control by governmental and administrative agencies. Information is more plentiful for enterprises that deal with commodities, especially extraction, fabrication,

and transportation (agriculture, mining, manufacturing, construction, steam railroads), than for enterprises engaged in the provision of services that have no material embodiment (trade, direct service, finance, government, etc.). Here again emphasis on the productive accomplishments of the economic system in a society which, at least in the past, tended to identify them with increase in material wealth, led to a greater interest in commodity production than in services.

These comments suggest the answer to the second question: why data on income type are more abundant than on the value of products consumed or on finished products. Public interest, whether social or administrative, naturally lies chiefly in the productive system as a source either of employment and occupational possibilities, thereby establishing a link between population as a productive factor and total output, or of taxable income. The industrial censuses record employment and employee compensation, and the population censuses, occupations; *Statistics of Income* and similar byproducts of administrative agencies record dividends, interest, and corporate savings. To require reports on gross product, especially on the full value of products of other enterprises consumed, would mean demanding more from economic units than many could easily give and would serve no clear social or administrative purpose. Similarly, detailed reports on finished products would require a more comprehensive coverage of interrelations among enterprises and of purely service activities than seems warranted in a society whose industrial production is growing rapidly and the welfare of whose inhabitants is apparently increasing. Only concern over the adequacy of ultimate consumption, greater attention to service activities closer to the passage of goods into households, greater concern over the adequacy of capital formation, and emphasis on the *utilization* rather than on the *production* of income render detailed reports on finished products of sufficient importance for public agencies to attempt to procure them and for enterprises and society at large to recognize that their value justifies the effort.

Our discussion of the factors that determine the stock of income data in this country, sketchy and speculative though it is, perhaps attempts to explain too much. But the main conclusion seems valid: the stock, which can be accumulated only at appreciable cost to society, is far from being due to chance. It is rather due to factors deeply seated in social organization and the outlook of society at large. Some determine the extent to which the final units in social life—ultimate consumers, business enterprises, public organizations—record in their operations and define in their everyday discourse the figures from which estimates can be made. Others determine the extent to which these final units, which are at the same time units of reporting and observation, recognize that the information desired is indispensable from the viewpoint of the body social, whether for purposes of administration, legislation, or any other form of action by society at large, and hence are willing to provide it. Finally, more specific factors come into play in actuating governmental agencies, the only ones that can gather the continuous and comprehensive information requisite to estimate national income.

Again we stress the dependence of the supply of economic data in general, and income data in particular, upon the organization of the units of observation; upon the viewpoint entertained by society at large as to the relative urgency of various economic problems and hence as to the need for various types of data; upon the responsiveness of governmental agencies to the demands of public administration and social policy. Just as in defining his concepts and classifications, the investigator operates within a frame of reference determined by the viewpoint of the society whose economic activities he measures, so his actual statistical work is conditioned by the social organization and viewpoint that are reflected in the statistics for the period with which he is concerned. There is an obvious interplay among the factors that determine both the conceptual framework and the statistical bricks of the national income estimates.

PART TWO

Changes in National Income, 1919–1938

CHAPTER 4

National Income, Aggregate Payments, and Consumers' Outlay

1 *The Totals in Current Prices*

As WE define it, national income (Table 1, col. 1) is the net value of the services individuals and their property contribute to the production of economic goods; or the value of commodities and services produced by the country's economic system minus the costs of the commodities (raw materials and capital equipment) and of services of enterprises consumed in the production process.

National income does not measure the *gross* value of all industrial and financial transactions. A given commodity or service, or its components, may be bought and sold several times during the year, entering repeatedly into total transactions. But the only part that enters national income is the net value of the services of labor, capital, and enterprise embodied in the given commodity or service in its flow to ultimate consumers or in its entrance into the inventory holdings of enterprises or in the balance of international payments. Compared with the value of transactions or of gross product, which may differ with the amount of duplication involved, national income or net product is a much smaller and a single value total.

Furthermore, national income does not include the net value of *all* commodities and services produced in the country during the year. A considerable group of services and some commodities, e.g., housewives' services and hobby products, are excluded because their production is outside the field of eco-

nomic activity proper. Some minor activities on the borderline between economic and non-economic, e.g., urban gardening or cow keeping, and many occasional and incidental earnings are omitted for lack of data (see Ch. 9). Still other activities, which yield income to some individuals, are excluded because they do not contribute to the country's output of economic goods.

National income may also be described as the sum of all payments by enterprises to individuals as individuals (not as entrepreneurs) and of the savings of enterprises after all costs and disbursements sustained in the production process have been deducted. Payments to individuals are predominantly in compensation for services rendered either by the individuals themselves or by their property—wages, salaries, entrepreneurial withdrawals, interest, dividends, rent. They include, however, some few payments that are not in compensation for any activity of either individuals or their property, but that must be taken into account as part of the net value product of enterprises (pensions, compensation for injury, direct relief payments, etc.). Whether net savings of entrepreneurs should be included under disposable payments to individuals or be treated, similarly to the savings of corporations, as undistributed income, is another matter. The broader aggregate of payments to individuals, including entrepreneurial savings, is shown in Table 1, column 2; that excluding entrepreneurial savings, in column 3.

The commodities and services that comprise the net product of the nation's economic activity during the year may pass to ultimate consumers to satisfy their wants, be added to the stocks of goods held by enterprises within the country, or flow abroad, adding to the claims against foreign countries. The last two uses represent additions to the country's capital goods, a process the quantitative aspects of which are discussed in *Commodity Flow and Capital Formation,* Volume One. The totals of net capital formation given there can be subtracted from the national income totals to yield the value of goods and

services flowing to ultimate consumers—consumers' outlay (Table 1, col. 4).[1]

We present aggregate payments and consumers' outlay as components of the more comprehensive total, national income. Yet they may be regarded as in some respects better indicators

TABLE 1

National Income, Aggregate Payments to Individuals, and Consumers' Outlay, Current Prices, 1919–1938

	BILLIONS OF DOLLARS				INDEXES (1919–38 = 100)			
		Agg. pay. to individuals				Agg. pay. to individuals		
	National income	incl. entrep. savings	excl. entrep. savings	Consumers' outlay	National income	incl. entrep. savings	excl. entrep. savings	Consumers' outlay
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1919	64.2	64.5	59.0	53.9	96.2	97.0	89.4	87.2
1920	74.2	70.1	68.5	62.9	111.3	105.4	103.8	101.7
1921	59.4	57.7	57.1	56.1	89.1	86.8	86.5	90.7
1922	60.7	59.6	59.7	56.2	91.0	89.7	90.4	90.9
1923	71.6	69.0	67.9	63.0	107.4	103.8	102.8	101.9
1924	72.1	70.0	69.1	66.2	108.1	105.2	104.6	107.1
1925	76.0	73.6	72.0	66.8	114.0	110.7	109.0	107.9
1926	81.6	77.1	75.0	72.3	122.2	115.9	113.6	116.9
1927	80.1	77.2	76.1	71.9	120.0	116.1	115.3	116.2
1928	81.7	78.9	77.9	74.3	122.4	118.6	118.1	120.1
1929	87.2	83.5	82.4	77.2	130.8	125.5	124.8	124.8
1930	77.3	75.9	76.5	73.1	115.9	114.1	115.9	118.2
1931	60.3	63.0	65.1	60.2	90.4	94.7	98.5	97.3
1932	42.9	48.6	52.1	47.1	64.3	73.1	78.9	76.1
1933	42.2	46.3	48.7	45.8	63.2	69.6	73.7	74.1
1934	49.5	53.4	53.8	52.1	74.3	80.3	81.4	84.3
1935	54.4	58.2	58.0	53.7	81.5	87.6	87.9	86.8
1936	62.9	65.8	64.5	57.5	94.2	98.9	97.7	93.0
1937	70.5	71.4	71.0	64.1	105.7	107.4	107.5	103.7
1938	65.5	66.3	66.1	62.6	98.1	99.7	100.1	101.2
Average								
1919–28	72.2	69.8	68.2	64.4	108.2	104.9	103.4	104.1
1929–38	61.3	63.2	63.8	59.3	91.8	95.1	96.6	95.9
1919–38	66.7	66.5	66.0	61.9	100.0	100.0	100.0	100.0
Percentage change 1919–28 to 1929–38	−15.1	−9.4	−6.5	−7.8				

In the estimates of national income and of aggregate payments to individuals including entrepreneurial savings, shown here and in subsequent tables of Chapter 4, savings of enterprises are adjusted for (a) effects of changes in inventory valuation, (b) disparity between depreciation charges on cost and on reproduction bases, (c) gains and losses on sales of capital assets. All four totals include Social Security contributions of employers. They differ from totals used in Chapters 5 and 6, in which, except when noted, net savings are unadjusted and Social Security contributions are omitted.

1 See also *Bulletin 74*, Commodity Flow and Capital Formation in the Recent Recovery and Decline, 1932–1938. Revised estimates of capital formation have been used to pass from national income to consumers' outlay.

of the net contribution of the economic system. If our interest is primarily in the current contribution of the nation's economy to the purchasing power of its inhabitants, aggregate payments to individuals are a somewhat better gauge than national income, since net savings of enterprises, or at least of corporations, are not means of payment flowing to ultimate consumers and cannot immediately and directly affect their share in the nation's product. It may be argued that the amounts received by individuals but not spent on consumption goods do not represent a current contribution to individuals' welfare; and that consumers' outlay is a better measure of what the economic system yields currently to individuals.[2]

The annual average of national income, 1919–38, was $66.7 billion; of aggregate payments to individuals including entrepreneurial savings, $66.5 billion; of aggregate payments excluding entrepreneurial savings, $66.0 billion; and of consumers' outlay, $61.9 billion. These averages conceal marked fluctuations. The broad movement over the period is clearly downward in all four, the decline from the first decade to the second amounting to 15 per cent of national income, 9 per cent of aggregate payments including entrepreneurial savings, and to a somewhat smaller percentage of the other two totals. But this movement is obviously dominated by the severe contraction that developed after 1929. The greater severity of this contraction in national income explains why the decline for the period as a whole is more pronounced in it than in the other three totals.

That this decline can hardly be considered an approximation to the secular trend is seen when we go further back. With the help of W. I. King's estimates [3] we constructed a roughly continuous series for one of the income totals, aggre-

2 Estimates of consumers' outlay are subject to a wider relative margin of error than estimates of national income or of aggregate payments, especially in year to year fluctuations.

3 *The National Income and Its Purchasing Power* (National Bureau of Economic Research, 1930).

gate payments to individuals excluding entrepreneurial savings, since 1909 (Table 2). The broad sweep over the thirty years is upward, and the long term significance of the decline from the second to the third decade is extremely uncertain. Of course, it is possible that the downward movement of the more recent years will continue. But it seems more plausible to view it as the downward phase of a prolonged swing which may soon be succeeded by a resumption of the long term rise.

The totals in current prices reflect fluctuations during busi-

TABLE 2

Aggregate Payments to Individuals excluding Entrepreneurial Savings, King's and Present NBER Estimates
Current Prices, Selected Periods, 1909–1938

	AVERAGE VALUE PER YEAR (*billions of dollars*)		INDEXES (1919–23 = 100)	
	Based on King (1)	Present NBER estimates (2)	Based on King (3)	Present NBER estimates (4)
1909–13	30.7		47.7	
1911–15	33.0		51.3	
1914–18	41.7		64.7	
1916–20	53.3		82.7	
1919–23	64.5	62.5	100.0	100.0
1921–25	69.3	65.2	107.4	104.3
1924–28		74.0		118.6
1926–30		77.6		124.3
1929–33		64.9		104.0
1931–35		55.5		88.9
1934–38		62.7		100.3
1909–18			56.2	
1919–28			109.3	
1929–38			102.2	

Entries in col. 1 are based upon King's estimates adjusted to assure greater conformity in scope with our estimates (see Ch. 10, Sec. 3, and its Appendix). The indexes in col. 3 are based upon the assumption that the relative discrepancy between King's and our estimates for 1919–23 would also characterize his estimates for the years before 1919. It might have been more reasonable to ascribe such validity to the discrepancy between King's and our estimates for 1919–20 alone. On this assumption, the entry in col. 1 for 1919–23 would be $62 billion and the indexes for earlier years in col. 3 would be raised accordingly. But this small change would not affect the broad picture revealed by Table 2.

ness cycles. Some, such as the decline from 1920 to 1921, the sustained rise from 1921 to 1929, and the drastic contraction from 1929 to 1932, are obvious. Others can be established only upon further analysis. A simple measure of the fluctuations during business cycles is given in Table 3.[4]

TABLE 3

National Income, Aggregate Payments to Individuals, and Consumers' Outlay, Changes during Business Cycles
Current Prices, 1919–1938

All measures of change are on a per year basis and are in percentages of the average value of the series for each full reference cycle. The dates used are those established by Wesley C. Mitchell and Arthur F. Burns in the National Bureau's study of business cycles.

	NATIONAL INCOME (1)	AGGREGATE PAYMENTS TO INDIVIDUALS Incl. entrep. savings (2)	AGGREGATE PAYMENTS TO INDIVIDUALS Excl. entrep. savings (3)	CONSUMERS' OUTLAY (4)
Cycle 1919–21				
Change, 1919–20	+14.7	+8.5	+15.1	+15.2
Change, 1920–21	−21.8	−18.8	−18.1	−11.5
Difference	−36.5	−27.3	−33.2	−26.7
Cycle 1921–24				
Change, 1921–23	+9.2	+8.8	+8.5	+5.8
Change, 1923–24	+0.7	+1.4	+1.9	+5.3
Difference	−8.5	−7.4	−6.6	−0.5
Cycle 1924–27				
Change, 1924–26	+6.0	+4.8	+4.0	+4.4
Change, 1926–27	−1.9	+0.1	+1.5	−0.6
Difference	−7.9	−1.7	−2.5	−5.0
Cycle 1927–32				
Change, 1927–29	+4.8	+4.3	+4.3	+3.8
Change, 1929–32	−20.1	−16.0	−13.8	−14.6
Difference	−24.9	−20.3	−18.1	−18.4
Cycle 1932–38				
Change, 1932–37	+9.9	+7.8	+6.4	+6.2
Change, 1937–38	−9.1	−8.6	−8.2	−2.9
Difference	−19.0	−16.4	−14.6	−9.1
Average for 5 business cycles				
Change during expansion	+8.9	+6.8	+7.7	+7.1
Change during contraction	−10.4	−8.4	−7.3	−4.9
Difference	−19.4	−15.2	−15.0	−11.9

[4] See *Bulletin 57*, The National Bureau's Measures of Cyclical Behavior.

Every reference cycle established for the American economy since 1919 is reflected in our four totals. All rise during each expansion and decline during contractions except the mild recession from 1926 to 1927 and, more surprisingly, the contraction from 1923 to 1924. Uniformly, the fluctuations in national income are greater than in aggregate payments or in consumers' outlay. There is less difference in this respect between the two totals of aggregate payments; but, by and large, the total including entrepreneurial savings seems to fluctuate more during business cycles than the total excluding them. Both fluctuate more than does consumers' outlay, except during the 1924–27 cycle. These differences, as well as the consistency with which the various income totals reflect business cycles, conform to expectations based upon other knowledge concerning the cyclical behavior of net business savings, income payments, and consumers' outlay.

2 *Adjustment for Price Changes*

The estimates discussed above are in current prices, measuring the net value of product at the changing price levels that prevailed on the market during each year; totaling payments to individuals without allowance for changes in their purchasing power; gauging the value of consumers' outlay at prices varying from year to year. Obviously, any change in these totals cannot be interpreted as a change in the basket of commodities and services unless some allowance is made for the effect of fluctuations in prices on the purchasing power of money.

Adjustment for price changes may, however, be made for various purposes, which will, or should, find expression in different procedures. And while the choice is severely limited by the available data, we venture a few comments on the possibilities.

Whether we are concerned with the effects of changes in prices of groups of goods or in the more nebulous general price level, no adjustment can be expected to correct for the funda-

mental effects of price fluctuations on output and economic activity at large. One can merely conjecture what national income, aggregate payments, or consumers' outlay would have been had no commodity or service changed in price. The output of goods would have been vastly different, but from the output of the economy as it actually operated under conditions of fluctuating price levels there is no way of inferring its quantity, in tolerably precise terms. Even were it possible, there is independent utility in the kind of correction for price changes that we make.

Granted that changes in the amount of commodities and services comprised in the income totals have been determined in the past by fluctuating price levels (among other factors), how can we measure changes in the real contents of these current value totals separately from the changes in prices at which the commodities and services are weighted? The answer depends largely upon the choice of the basket of goods to be taken into account in measuring price changes and adjusting the totals expressed in dollars of current purchasing power. An investigator can attempt to take into account commodities and services in the varieties and quantities that actually characterized the economy in the years under study or he can attempt to adjust for the fluctuating prices of some hypothetical basket of goods, whether definitely specified or only vaguely implied. To adjust consumers' outlay (for illustrative purposes, the most simple total) by the first method would demand (1) a breakdown of total consumers' outlay in current prices into as many groups of commodities and services as can be distinguished, based on data that reflect changes throughout the period; (2) indexes of prices of each category of commodities and services. Adjustment would be carried through for each category, and the adjusted total of consumers' outlay obtained by addition. The second type of adjustment would begin by assuming a hypothetical basket of goods, let us say that comprised in a standard subsistence budget for a family of five of a specified age and sex composition. The cost of goods bought

on this budget would then be evaluated at current prices for each year in the period, and a price index derived; its application to total consumers' outlay in current prices would yield outlay in dollars of constant purchasing power.

Since we wish to measure the actual course of the economy, taking into account the full variety of the changes, the adjustment we attempt is of the first type. If we could, we would distinguish all the various groups of commodities and services that enter consumers' outlay, are bought with the aggregate receipts by individuals from enterprises (including investment goods), or are comprised in national income. But limitations of data necessitate a compromise. We are forced to use approximate price indexes for large groups of goods in which the prices of various goods are given weights not necessarily conforming to the quantities currently appearing in the income totals and which, therefore, may give an 'economic' bias[5] to the price indexes. However, as will be seen below, the price measures used have implicit weights, most of which are quantities of goods relating to the period covered by the income estimates, or to a period close to it; and the brevity of the period covered by our estimates lessens the danger of substantial bias arising from improper weighting.

We began with the adjustment of consumers' outlay for price changes, carrying through two variants. For the first (Table 4, col. 1), expenditures on passenger cars were corrected for price changes on the basis of the Bureau of Labor Statistics index. For the rest of consumers' outlay an index was derived by weighting, by non-farm population, the BLS cost of living index, and, by farm population, the Bureau of Agricultural Economics index of prices paid by farmers for subsistence

[5] Because relative changes in prices cause changes in quantities demanded and produced. Treating quantities as constant may underweight the importance of goods whose price (relative to the prices of other goods) has declined and the demand for which has in consequence increased. On the other hand, prices may decline when demand slackens. If so, a lowering of the price relative to the prices of other goods may be correlated with a diminution rather than an increase in the quantity produced.

goods. The second variant (col. 2) was based largely upon the price adjustment work in the capital formation study. The flow to consumers of perishable, semidurable, and durable commodities was estimated in 1929 prices. The only part of consumers' outlay that still had to be adjusted for price changes was the outlay on services not embodied in new commodities. For this purpose we utilized the various group indexes in the BLS cost of living index, choosing those that represented preponderantly direct services.[6] The differences between the indexes in the two variants are minor. We used both to reduce consumers' outlay in current prices to 1929 prices,[7] and averaged the two sets of results (Table 5, col. 4; the corresponding price index appears in Table 4, col. 3).

From consumers' outlay in 1929 prices we derived national income in 1929 prices by adding net capital formation in 1929 prices to it. The implicit price index is given in Table 4, column 6.

The differences between national income and both totals of aggregate payments, as well as between the latter and consumers' outlay, represent shares in net capital formation. These shares, in current prices, can be derived (from the estimates in Table 1) by simple subtraction. To obtain the two totals of aggregate payments in 1929 prices we assumed that the shares of entrepreneurial savings and of individuals' savings (i.e., the difference between the two totals of aggregate payments and that between aggregate payments, excluding entrepreneurial savings, and consumers' outlay) in total net capital formation were, for each year in the period, the same for values in both current and 1929 prices. While this assumption may be erroneous in that savings of individuals, of entrepreneurs, and of corporations may be embodied in types of

[6] With weights as provided in BLS bulletins. The groups chosen were rent, fuel and light, and miscellaneous (made up chiefly of services).

[7] We chose 1929 as the base year because it was the basic year in the capital formation study from which most of the price adjustments were derived. But the price level for that single year is only slightly different from the average for 1924–26, and even for 1919–28.

TABLE 4

Comprehensive Price Indexes Compared (1929 = 100)

INDEXES IMPLICIT IN THE ADJUSTMENT OF INCOME TOTALS FOR PRICE CHANGES

	CONSUMERS' OUTLAY			Agg. pay. to individuals			BLS INDEXES	
	Var. I (1)	Var. II (2)	Avg. (3)	incl. entrep. savings (4)	excl. entrep. savings (5)	National income (6)	Cost of living (7)	Wholesale price (8)
1919	111.4	109.2	110.3	112.8	111.6	112.7	101 6	145.4
1920	124.5	122.7	123.6	125.9	125.5	127.1	116.9	162.0
1921	104.0	105.4	104.7	104 9	104.8	105.2	104.2	102.4
1922	98.2	99.9	99.0	99.6	99.7	99.8	97.7	101.5
1923	99.9	101.7	100.8	101.2	101.1	101.3	99 5	105.6
1924	99.9	100.3	100.1	100.4	100.4	100.6	99.8	102.9
1925	102.4	102.9	102.6	102 8	102.8	102.8	102.4	108.6
1926	102.3	103.3	102.8	103 0	102.9	103.2	103.2	104.9
1927	100.7	100.2	100.4	100 5	100 5	100.5	101.2	100.1
1928	100.2	101.1	100.6	100 7	100.7	100.7	100.1	101.5
1929	100 0	100 4	100 2	100.2	100.2	100 2	100.0	100.0
1930	96.5	97.0	96.8	96.7	96.7	96.7	97.5	90.7
1931	86.6	87.6	87.1	86.7	86.4	87.1	88.7	76.6
1932	77.1	77.0	77.1	77 0	76.9	77.2	79.7	68.0
1933	74.0	74.6	74.3	74 3	74.2	74.4	75.4	69.2
1934	78.3	80.4	79.3	79.1	79.1	79.8	78.1	78.6
1935	80.2	84.6	82.3	86.0	85.8	82.9	80.1	83.9
1936	80 4	85 3	82 8	84.3	84.1	83.8	80.9	84.8
1937	83.5	89.1	86.2	87.4	87.3	87.3	83.8	90.6
1938	81.5	83.7	82.6	82.9	82.9	82.8	82.3	82.5
Average								
1919–28	104.4	104.7	104.5	105 2	105.0	105.4	102.7	113.5
1929–38	83.8	86.0	84.9	85.5	85 4	85.2	84.6	82.5
1919–38	94.1	95.3	94.7	95.3	95.2	95 3	93.7	98.0
Percentage change 1919–28 to								
1929–38	−19.7	−17.9	−18.8	−18.7	−18.7	−19.1	−17.6	−27.3

capital formation characterized by diverse price movements, absence of information led us to accept it as a plausible basis for the most consistent procedure. Accordingly, we applied to net capital formation in 1929 prices the percentages of net capital formation in current prices that could be attributed in each year to entrepreneurial and individuals' savings. This gave us the amounts of these two types of savings embodied in net capital formation in 1929 prices; adding the second to consumers' outlay in 1929 prices yielded aggregate payments excluding entrepreneurial savings; adding the first to this total yielded aggregate payments including entrepreneurial savings, both in 1929 prices. The implicit price indexes are given in Table 4, columns 4 and 5.

All indexes in Table 4 show a declining trend over the period as a whole and fairly similar patterns of shorter term movements: a decline from a peak in 1920 to a trough in 1922; a relatively moderate rise to a peak in 1925–26; a drastic fall to a trough in 1932 or 1933; a recovery to a peak in 1937; and a decline from 1937 to 1938.

The indexes implicit in the four income totals (cols. 1–6) move in close conformity to business cycles. That implicit in national income declines somewhat more from 1920 to 1922 than the other three; and that implicit in consumers' outlay rises somewhat more from 1922 to 1926. But the differences are minor for the simple reason that consumers' outlay and aggregate payments alike constitute such a large percentage of national income. More significant differences appear between the indexes implicit in the income totals and those representing wholesale commodity prices and wage earners' cost of living. In general, the income price indexes show movements over the period or cyclical variations intermediate in amplitude between those in wholesale commodity prices and the cost of living. The decline from the first to the second decade in the income price indexes is not as great as in wholesale commodity prices but greater than in the cost of living. The cyclical rises and declines in the income price indexes are uniformly less than in wholesale commodity prices, but greater than in the cost of living (except the rise from 1919 to 1920 and from 1922 to 1926). These differences are to be expected since the income totals include both consumers' outlay, made at retail prices represented in the cost of living index, and capital formation, investment outlays made at wholesale prices represented in the wholesale commodity price index.

3 The Totals in 1929 Prices

Adjustment for price changes has several effects (Table 5). It alters materially the general trend, canceling the decline apparent in the four totals in Table 1. Tables 1, 4, and 5 indi-

cate clearly that the downward movement of the totals in current prices was due to a decline in the price level, not in real product.

TABLE 5

National Income, Aggregate Payments to Individuals, and Consumers' Outlay, 1929 Prices, 1919–1938

	BILLIONS OF DOLLARS				INDEXES (1919–38 = 100)			
		Agg. pay. to individuals				Agg. pay. to individuals		
	National income (1)	incl. entrep. savings (2)	excl. entrep. savings (3)	Consumers' outlay (4)	National income (5)	incl. entrep. savings (6)	excl. entrep. savings (7)	Consumers' outlay (8)
1919	57.0	57.2	52.9	48.9	81.4	81.6	75.7	74.4
1920	58.4	55.7	54.6	50.9	83.5	79.4	78.2	77.4
1921	56.5	55.0	54.5	53 6	80.7	78.5	78.0	81.5
1922	60.8	59.8	59.9	56.8	86.9	85.4	85.8	86.4
1923	70.7	68.2	67.1	62.5	101.0	97.3	96.1	95.1
1924	71.7	69.7	68.8	66.2	102.4	99.4	98.5	100.6
1925	73.9	71.6	70.1	65.1	105.6	102.1	100.3	99.0
1926	79.0	74.9	72.9	70.3	112.9	106.8	104.4	107.0
1927	79.6	76.8	75.8	71.6	113.8	109.6	108.4	108.9
1928	81.1	78.3	77.4	73.8	115.8	111.7	110.8	112.3
1929	87.1	83.3	82.2	77.0	124.4	118.8	117.7	117.2
1930	79.9	78.4	79.1	75.5	114.2	111.9	113.2	114.9
1931	69.3	72.7	75.3	69.1	99.0	103.7	107.8	105.1
1932	55.6	63.1	67.7	61.1	79.5	90.0	96.9	93.0
1933	56.7	62.3	65.6	61.6	81.0	88.9	93.8	93.8
1934	62.1	67.5	68.0	65.7	88.8	96.3	97.3	100.0
1935	65.6	67.7	67.6	65.2	93.7	96.6	96.7	99.2
1936	75.0	78.1	76.8	69.5	107.2	111.3	109.9	105.7
1937	80.8	81.7	81.3	74.4	115.4	116.5	116.3	113.1
1938	79.0	80.0	79.7	75.8	112.9	114.1	114.1	115.3
Average								
1919–28	68.9	66.7	65.4	62.0	98.4	95.2	93.6	94.3
1929–38	71.1	73.5	74.3	69.5	101.6	104.8	106.4	105.7
1919–38	70.0	70.1	69 9	65.7	100.0	100.0	100.0	100.0
Percentage change 1919–28 to 1929–38	+3.3	+10.1	+13.6	+12.2				

The upward trend in the totals in 1929 prices is least pronounced in national income and most pronounced in aggregate payments excluding entrepreneurial savings. The rise in consumers' outlay is somewhat smaller than in the latter.

Here again we take advantage of King's estimates for years prior to 1919 to paint a broader picture of the movement of an income total adjusted for changes in the price level (Table 6). First, while the rise in aggregate payments excluding entrepreneurial savings for the period is not as marked as in the

totals in current prices (see Table 2), it is still substantial even after adjustment for the effects of a rising price level—more than 50 per cent over 25 years (from 1909–13 to 1934–38), or on the basis of decennial averages, more than 40 per cent over 20 years (from 1909–18 to 1929–38). Second, while the percentage rise from the second to the third decade is smaller than from the first to the second, the quinquennial averages suggest that this retardation is due exclusively to the pronounced depression of 1929–32. Thus the rise from 1909–13 to 1919–23 is relatively less than that from 1919–23 to 1929–33, even though the latter quinquennium is already affected by the great contraction that followed 1929; and the decline from 1926–30 to 1931–35 may be regarded as offsetting the rapid rates of growth from 1919–23 to 1926–30. Third, against the background of the rise over the longer period, the decline during the recent quinquennia takes on the appearance of a small break. These three conclusions would probably hold for consumers' outlay also; but would have to be modified somewhat for national income, in view of its more drastic decline after 1929.

Adjustment for price changes affects also the consistency and intensity with which the income totals fluctuate during business cycles (Table 7). In 1929 prices national income still reflects each of the five business cycles, but each of the other three totals fails to respond in one: aggregate payments including entrepreneurial savings in 1919–21, aggregate payments excluding entrepreneurial savings in 1924–27, and consumers' outlay in 1919–21. The amplitudes of fluctuations are greatly reduced by the adjustment for price changes: in 1929 prices the averages are from less than one-half to less than one-fourth of those in current prices. The relative decrease in amplitude due to the adjustment for price changes, greatest for consumers' outlay and smallest for national income, is inversely correlated with the amplitude and conformity of fluctuations during business cycles. The greater the conformity and the amplitude of fluctuation in values in cur-

TABLE 6

Aggregate Payments to Individuals excluding Entrepreneurial Savings, King's and Present NBER Estimates
1929 Prices, Selected Periods, 1909–1938

	AVERAGE VALUE PER YEAR (*billions of dollars*)		INDEXES (1919–23 = 100)	
	Based on King (1)	Present NBER estimates (2)	Based on King (3)	Present NBER estimates (4)
1909–13	52.2		84.8	
1911–15	54.9		89.3	
1914–18	58.3		94.8	
1916–20	58.5		95.1	
1919–23	61.5	57.8	100.0	100.0
1921–25	68.8	64.1	111.7	110.9
1924–28		73.0		126.3
1926–30		77.5		134.0
1929–33		74.0		128.0
1931–35		68.8		119.1
1934–38		74.7		129.1
1909–18			89.8	
1919–28			113.1	
1929–38			128.6	

Entries in col. 1 are based upon King's adjusted estimates. The correction for price changes was carried through with the help of King's index of prices of consumers' goods, the index transferred from the 1913 to the 1929 base on the assumption that no change took place between 1928 (last year for which it is given) and 1929. For further explanations see the note to Table 2.

rent prices, the less the relative decrease introduced by price changes.

As a result, adjustment for price changes accentuates the differences in fluctuation during business cycles among the various income totals. During the five business cycles national income in 1929 prices varies more, on the average and for each cycle, than any of the other three income totals. On the basis of averages but not necessarily for each cycle, this is true of aggregate payments including entrepreneurial savings compared with aggregate payments excluding them; and of the latter compared with consumers' outlay. The increase in these differences caused by the adjustment for price changes is clear when we compare the average cyclical swings in current and

TABLE 7

National Income, Aggregate Payments to Individuals, and Consumers' Outlay, Changes during Business Cycles
1929 Prices, 1919–1938

	NATIONAL INCOME (1)	AGGREGATE PAYMENTS TO INDIVIDUALS Incl. entrep. savings (2)	AGGREGATE PAYMENTS TO INDIVIDUALS Excl. entrep. savings (3)	CONSUMERS' OUTLAY (4)
Cycle 1919–21				
Change, 1919–20	+2.5	−2.7	+3.2	+3.8
Change, 1920–21	−3.4	−1.1	−0.3	+5.4
Difference	−5.9	+1.6	−3.5	+1.6
Cycle 1921–24				
Change, 1921–23	+10.8	+10.4	+10.0	+7.5
Change, 1923–24	+1.5	+2.3	+2.7	+6.1
Difference	−9.3	−8.1	−7.3	−1.4
Cycle 1924–27				
Change, 1924–26	+4.8	+3.6	+2.8	+3.0
Change, 1926–27	+0.8	+2.7	+4.0	+1.8
Difference	−4.0	−0.9	+1.2	−1.2
Cycle 1927–32				
Change, 1927–29	+4.8	+4.2	+4.2	+3.8
Change, 1929–32	−13.6	−8.8	−6.3	−7.3
Difference	−18.4	−13.0	−10.5	−11.1
Cycle 1932–38				
Change, 1932–37	+7.4	+5.2	+3.8	+3.9
Change, 1937–38	−2.6	−2.4	−2.1	+2.1
Difference	−10.0	−7.6	−5.9	−1.8
Average for 5 business cycles				
Change during expansion	+6.1	+4.1	+4.8	+4.4
Change during contraction	−3.5	−1.5	−0.4	+1.6
Difference	−9.5	−5.6	−5.2	−2.8

Based on entries in Table 5; see the notes to Table 3.

in 1929 prices: in current prices, that in national income is less than twice that in consumers' outlay; in 1929 prices the ratio is almost 4 to 1.

4 *Income per Population Unit*

It is the country's population that helps to produce national income, receives payments from enterprises, and consumes the major part of the resulting product. A broad picture of changes

in national income, aggregate payments, and consumers' outlay is not complete until these changes are compared with those in the population as a body of producers and consumers.

Table 8 presents measures of population in terms of units

TABLE 8

Population in Units relevant to the Production and Consumption of Income, 1919–1938

	TOTALS IN MILLIONS				RATIO OF:		
	Population [1] (1)	Gainfully occupied [2] (2)	Engaged [3] (3)	Consuming units [4] (4)	Col. 2 to col. 1 (5)	Col. 3 to col. 1 (6)	Col. 4 to col. 1 (7)
1919	105.0	41.3	39.8	74.8	39.3	37.9	71.3
1920	106.5	42.3	40.2	75.9	39.7	37.7	71.2
1921	108.2	43.2	36.5	77.2	39.9	33.7	71.4
1922	109.9	43.8	38.0	78.5	39.9	34.6	71.5
1923	111.5	44.7	40.8	80.0	40.1	36.6	71.7
1924	113.2	45.7	40.6	81.4	40.4	35.9	72.0
1925	114.9	46.4	41.3	82.7	40.4	36.0	72.0
1926	116.5	47.2	42.8	84.0	40.5	36.7	72.1
1927	118.2	47.9	42.9	85.2	40.5	36.3	72.1
1928	119.9	48.7	43.2	86.4	40.6	36.0	72.1
1929	121.5	49.4	44.9	87.6	40 7	37.0	72.0
1930	123.1	50.2	42.8	88.7	40.8	34.8	72.0
1931	124.1	50.8	39.4	89.6	41.0	31.7	72.2
1932	125.0	51.4	36.0	90.6	41.1	28.8	72.5
1933	125.8	52.0	36.0	91.5	41.3	28.7	72.7
1934	126.6	52.6	38.5	92.3	41.5	30.4	72.9
1935	127.5	53.2	39.8	93.1	41.7	31.2	73.0
1936	128.4	53.8	41.8	94.0	41.9	32.6	73.2
1937	129.3	54.5	43.8	94.9	42.1	33.9	73.4
1938	130.2	55.1	41.4	95.8	42.4	31.8	73.6
Average							
1919–28	112.4	45.1	40.6	80.6	40.1	36.1	71.7
1929–38	126.2	52.3	40.5	91.8	41.4	32.1	72.8
1919–38	119.3	48.7	40.5	86.2	40.8	34.1	72.2
Percentage change 1919–28 to							
1929–38	+12.3	+15.9	−0.4	+13.9	+3.2	−11.1	+1.5

[1] Annual midyear estimates prepared by the Bureau of the Census and published in the *Statistical Abstract*.

[2] Estimates by Daniel Carson of the National Research Project in *Labor Supply and Employment, Preliminary Statement of Estimates Prepared and Methods Used* (WPA, mimeo., Nov. 1939).

[3] See Tables 51 and 53.

[4] The age and sex distributions of the population are those of W. S. Thompson and P. K. Whelpton of the Scripps Foundation, Miami, Ohio. The consuming equivalents are from their monograph, *Population Trends in the United States* (McGraw-Hill, 1933), p. 169. The data in this column are not strictly comparable with those in column 1 because the basic total population figures are slightly different.

relevant to the production and consumption of income. Total population (col. 1) is the crudest gauge for the purpose at hand: while it is a count of the individual members of the nation, it includes as equivalent units men and women, in both

productive and unproductive years and at ages of both high and low consumption needs. A somewhat better approximation to population as a body of producers is the number gainfully occupied (col. 2), adults who ordinarily engage in economic pursuits, whether or not they happen to be employed when a census is taken. This measure of the available productive population should not be confused with another--the number actually employed, in the case of employees, and engaged, in the case of entrepreneurs (col. 3). Employees are in terms of equivalent full-time units, i.e., after an approximate reduction of the partly employed to the number estimated on the assumption of full employment. But partial unemployment is allowed for only so far as it is reflected in the data. Changes in the working time of a fully employed person, such as the secular decline in the length of the working day or reductions during a severe depression that may result from attempts to 'spread' work, are not allowed for. Consequently the number engaged or employed is not an accurate measure of man-hours of productive effort, although it is better than the number gainfully occupied. A fourth way to express population is in terms of equivalent consuming units, i.e., by allowing for differences among various age and sex groups in subsistence needs (col. 4).

It will be seen at a glance that total population, persons gainfully occupied, and the number of consuming units are characterized primarily by sustained long term movements and do not reflect shorter term cyclical fluctuations. All three totals rose steadily, but at a slower pace during the second half of the period. The rate of increase was fairly rapid, the rise from the first to the second decade exceeding 10 per cent. It was significantly higher in both gainfully occupied and the number of consuming units than in total population, reflecting a shift in the age distribution in favor of the adult producing and heavily consuming ages.

The total engaged is the only measure in Table 8 that reflects cyclical changes, declining from 1920 to 1921, 1923 to 1924, 1937 to 1938, and especially severely from 1929 to 1932.

This susceptibility to cyclical fluctuations accounts for its slight downward movement over the period.

For comparison with changes in population, income estimates in 1929 prices alone are relevant, since our purpose is to ascertain changes in productivity per employed or available unit of the human factor or in the supply of goods per consuming unit; i.e., in terms of commodities and services, not in monetary units of fluctuating purchasing power.

National income in 1929 prices can be compared with all four population measures (Table 9): since it is a comprehen-

TABLE 9

National Income per Population Unit, 1929 Prices, 1919–1938

	INCOME IN DOLLARS PER			
	Capita	Gainfully occupied	Engaged	Consuming unit
	(1)	(2)	(3)	(4)
1919	513	1,380	1,431	761
1920	518	1,380	1,453	770
1921	522	1,308	1,547	732
1922	553	1,388	1,599	774
1923	634	1,582	1,732	884
1924	633	1,569	1,764	880
1925	644	1,592	1,789	894
1926	678	1,675	1,847	941
1927	674	1,661	1,856	934
1928	676	1,665	1,879	938
1929	716	1,761	1,938	994
1930	649	1,591	1,869	901
1931	558	1,362	1,758	773
1932	445	1,082	1,545	614
1933	451	1,091	1,573	620
1934	491	1,181	1,612	673
1935	515	1,233	1,648	705
1936	584	1,394	1,793	798
1937	625	1,483	1,844	852
1938	607	1,433	1,909	825
Average				
1919–28	610	1,520	1,690	851
1929–38	564	1,361	1,749	776
1919–38	587	1,441	1,719	813
Percentage change 1919–28 to 1929–38	−7.6	−10.5	+3.5	−8.9

sive gauge of net value product it can be compared not only with the number actually participating in the production process but also with the potential number; and since it may be treated also as a type of maximum fund for current consumption it can be compared with consuming units.

National income per capita, per person gainfully occupied, and per consuming unit decline from the first to the second decade about one-tenth or somewhat less, because the increase in population—total, gainfully occupied, or converted to consuming units—was, over the period, appreciably greater than in total national income in 1929 prices. While this decline from the first to the second decade in the per unit figures was due to the severe depression of 1929–32, it is noteworthy that in 1937, the latest peak year, national income per capita was still about 13 per cent below that in the preceding peak year (1929); that national income per person gainfully occupied in 1937 was still 16 per cent below that in 1929; and that national income per consuming unit in 1937 was still 14 per cent below that of 1929. If we compare these figures with the secular rise that would ordinarily be expected in the real national product per population unit, we see the substantial degree to which by 1937 the recovery from the 1929–32 depression was still incomplete.

The pattern traced by national income per equivalent full-time unit engaged was significantly different. It rose 3.5 per cent from the first to the second decade. While this rise was in contrast to the substantial decline over the period in national income per capita, per person gainfully occupied, and per consuming unit, the annual figures in column 3 show that even on a per person engaged basis the entry for the recent highest year, 1938, was about 1.5 per cent below that for 1929. The increase in the decennial averages is thus due exclusively to the rise from the first to the second half of the 1920's.

The cyclical behavior of national income per person engaged deserves attention. Income per capita, per person gainfully occupied, and per consuming unit fluctuated in close

conformity with business cycles: per capita income declined significantly from 1920 to 1921, 1929 to 1932, and 1937 to 1938, and very slightly from 1923 to 1924 and 1926 to 1927; and rose during each reference expansion. Income per person gainfully occupied and per consuming unit display equally marked conformity to business cycles. But income per person engaged declined only from 1929 to 1932; and rose substantially in other contractions, in some at a rate greater than the annual rise in the preceding expansion. These movements are plausible. During contractions the labor force is reduced by the elimination of the less efficient, and capital per worker employed is increased, causing a rise in the net product (in constant prices) per unit of work. While, as already indicated, our figures on equivalent full-time units engaged do not reflect faithfully variations in the units of work (such as man-hours), their failure to take cognizance of changes in the number of hours in a full-time month and of some types of partial unemployment is not, during brief contractions, sufficiently great to offset the rise in the product per unit of work; hence the rise in column 3 during the brief contractions of 1920–21, 1923–24, 1926–27, and 1937–38. But during the severe and prolonged depression of 1929–32 the reduction in the hours of full-time workers and increase in partial unemployment not reflected in our figures more than offset the increase that may have occurred in real product per unit of work, causing national income per person engaged to decline.[8]

It did not seem necessary to show annual figures on per unit aggregate payments or consumers' outlay: these can easily be derived from Tables 5 and 8, and they tend to duplicate the evidence of Table 9, differing from national income in pattern, as already noted in the discussion of Table 5. We therefore

[8] It is also possible that in a severe contraction real product per work unit declines. This may occur if business enterprises keep employees on largely in order to maintain a skeleton force, the hours of work being partly devoted to tasks whose current net value (disregarding price changes) is appreciably lower than that of tasks to which the hours would have been devoted under conditions of fuller employment.

confined Table 10 to summary measures of changes in per unit aggregate payments and consumers' outlay: consumers' outlay is compared solely with total population and consuming units, since little meaning is to be attached to consumers' outlay per person gainfully occupied or engaged.

TABLE 10

Aggregate Payments and Consumers' Outlay per Population Unit 1929 Prices, Selected Periods, 1919–1938

	AVERAGES (DOLLARS)			% CHANGE	VALUES (DOLLARS) AT RECENT PEAKS		% CHANGE
	1919–38 (1)	*1919–28* (2)	*1929–38* (3)	*1919–28 to 1929–38* (4)	*Latest* (5)	*1929* (6)	COL. 6 TO COL. 5 (7)
Aggregate payments incl. entrepreneurial savings per							
Capita	587	592	583	−1.5	632 (1937)	685	−7.7
Gainfully occupied	1,440	1,473	1,406	−4.6	1,500 (1937)	1,685	−11.0
Engaged	1,725	1,637	1,813	+10.7	1,932 (1938)	1,855	+4.2
Consuming unit	813	824	801	−2.9	861 (1937)	951	−9.5
Aggregate payments excl. entrepreneurial savings per							
Capita	585	580	590	+1.7	629 (1937)	677	−7.1
Gainfully occupied	1,433	1,444	1,423	−1.5	1,492 (1937)	1,664	−10.3
Engaged	1,721	1,605	1,837	+14.4	1,925 (1938)	1,831	+5.1
Consuming unit	809	808	810	+0.3	857 (1937)	939	−8.7
Consumers' outlay per							
Capita	550	549	551	+0.3	582 (1938)	634	−8.2
Consuming unit	762	765	758	−1.0	791 (1938)	880	−10.1

In the changes from the first to the second decade the differences among the various per unit figures are similar to those in national income. Aggregate payments including entrepreneurial savings per capita, per person gainfully occupied, and per consuming unit decline, on the whole, slightly; aggregate payments excluding entrepreneurial savings per capita rise a little and per person engaged, substantially. All these measures of rise and decline over the period are algebraically larger than the corresponding measures for national income, reflecting, of course, the greater rise in each total over the period than in national income. Comparison for the reference peak years shows that during the last decade the decline per capita, per person gainfully occupied, and per consuming unit was much greater and the rise per person engaged much less than from the first to the second decade (col. 5–7). Aggregate

payments and consumers' outlay per capita in 1937 or 1938 were from 7 to 8 per cent lower than in 1929; aggregate payments per person gainfully occupied in 1937, from 10 to 11 per cent lower; and aggregate payments and consumers' outlay per consuming unit in 1937 or 1938, from 9 to 10 per cent lower. Aggregate payments per person engaged were from 4 to 5 per cent higher in 1938 (the latest peak year) than in 1929. The failure of the other three totals to regain the per unit levels reached during 1929 confirms the evidence of national income that by 1937–38 the recovery from the 1929–32 depression was far from complete.

In conclusion, with the aid of Dr. King's estimates we trace the movement of aggregate payments excluding entrepreneurial savings per capita and per person gainfully occupied since 1909 (Table 11). While there is a secular rise, it is quite moderate. In the comparison by decades the rise in aggregate payments per capita during twenty years is about 11 per cent, and per person gainfully occupied only about 7 per cent. One would be inclined to infer that for national income the per capita and per person gainfully occupied averages would not rise significantly over the period as a whole, if at all. Much as this result may be affected by the severity of the recent depression, it does suggest that any secular rise in the real net product per capita or per person gainfully occupied could not have been appreciable during the period under review.

Moreover, the rise in the per unit figures is concentrated between 1919–23 and 1924–28, more specifically between 1921 and 1929. Before 1921 there was little significant rise in the real value of aggregate payments per capita and per person gainfully occupied, and one is inclined to infer that the same must have been true of national income and of consumers' outlay. Because the rise occurs only during the 1920's one is all the more justified in discounting the effect of the recent severe depression on the trends over the period as a whole. In other words, there is more reason to attribute some secular significance to the small rise in the per unit figures of aggregate pay-

ments and to the inferentially probable stability of national income per capita or per person gainfully occupied.

TABLE 11

Aggregate Payments to Individuals excluding Entrepreneurial Savings, per Capita and per Gainfully Occupied
King's and Present NBER Estimates
1929 Prices, Selected Periods, 1909–1938

	PER CAPITA		PER GAINFULLY OCCUPIED	
	Based on King (1)	Present NBER estimates (2)	Based on King (3)	Present NBER estimates (4)
	DOLLARS			
1909–13	556		1,463	
1911–15	566		1,487	
1914–18	573		1,503	
1916–20	562		1,474	
1919–23	568	533	1,502	1,341
1921–25	615	574	1,625	1,430
1924–28		626		1,547
1926–30		647		1,591
1929–33		598		1,460
1931–35		547		1,325
1934–38		581		1,385
	INDEXES (1919–23 = 100)			
1909–13	97.9		97.4	
1911–15	99.6		99.0	
1914–18	100.9		100.1	
1916–20	98.9		98.1	
1919–23	100.0	100.0	100.0	100.0
1921–25	108.3	107.7	108.2	106.6
1924–28		117.4		115.4
1926–30		121.4		118.6
1929–33		112.2		108.9
1931–35		102.6		98.8
1934–38		109.0		103.3
1909–18	99.3		98.7	
1919–28	108.8		107.7	
1929–38	110.6		106.1	

The estimates of population and of persons gainfully occupied used to derive the per unit figures based on King's data are those prepared by Dr. King and published in his *National Income and Its Purchasing Power* (Table I, p. 47). For derivation of the income totals based on King's data, see the notes to Tables 2 and 6.

5 Summary

a) Over the twenty years 1919–38 national income in current prices averaged $66.7 billion per year; both totals of aggregate payments to individuals only slightly less; and consumers' outlay, $61.9 billion. In 1929 prices the annual averages of national income and of aggregate payments were roughly $70 billion, and of consumers' outlay, $65.7 billion.

b) All income totals in current prices declined over the two decades. But study of one total since 1909 suggests a substantial rise over the thirty years in all the totals, even when expressed in current prices.

c) The decline from 1919–29 to 1929–38 in the totals in current prices is due exclusively to the downward tilt of the price levels. When adjusted for price changes, the income totals rise from the first to the second decade. The rise in national income is moderate (3 per cent); that in aggregate payments and consumers' outlay, substantial (over 10 per cent). But for all totals the rise is concentrated in the decade of the 1920's; and in the most recent peak year, 1937 (1938, for consumers' outlay), no total had regained the 1929 level, even though adjustment is made for the decline in prices since 1929.

d) Population, the number of persons gainfully occupied and of consuming units grew from the first to the second decade at a rate appreciably greater than national income (in 1929 prices); the number of equivalent full-time units employed declined slightly. As a result, national income per capita, per person gainfully occupied, and per consuming unit declined over the period; national income per unit employed rose. The other totals per unit (in 1929 prices) described similar patterns, except that the declines were less appreciable and the rises more pronounced than in national income per unit.

e) Over the thirty years 1909–38 aggregate payments excluding entrepreneurial savings in 1929 prices rose substantially. But since population and the number of gainfully occupied also grew rapidly, aggregate payments per capita and

per person gainfully occupied rose only moderately (about 11 and 7 per cent respectively). National income per capita or per person gainfully occupied must have risen even less, if at all.

f) All totals in current prices fluctuate in close conformity with business cycles. The amplitude of conforming movements is greatest in national income; greater in aggregate payments including entrepreneurial savings than in aggregate payments excluding them; and greater in either total of aggregate payments than in consumers' outlay.

g) Adjustment for price changes sharply reduces amplitudes. But in 1929 prices all totals still reflect business cycles, and the difference between national income and the other three totals in amplitude of conforming movements is even greater for the totals in 1929 than in current prices.

h) Since population, the number of gainfully occupied and of consuming units are not greatly affected by business cycles, movements in the income totals divided by these units and in the undivided totals are quite similar during business cycles. But the number of equivalent full-time engaged rises during expansions and declines during contractions. National income and aggregate payments in 1929 prices, when calculated on a per person engaged basis, rise during four contractions and decline only from 1929 to 1932 (aggregate payments excluding entrepreneurial savings, from 1931 to 1935). These movements during contractions suggest rises in real product per worker due to greater efficiency and an increase in capital per worker. That such a rise did not occur from 1929 to 1932 may be due partly to the failure of the number engaged to reflect fully reduction in hours and certain forms of partial unemployment and partly to a genuine decline in real product per man-hour employed that may result from attempts to maintain a minimum labor force in the face of a drastic curtailment of output.

CHAPTER 5

Distribution by Industrial Source

1 *Annual Distribution of National Income*

How THE stock of data conditioned our industrial classification is recounted at length in Chapter 8. Here we may say in general that it is not feasible to distribute national income or its components precisely among the productive functions that form the basis of our industrial classification; that, for savings of enterprises and property income payments particularly, the shares attributed to a given industry may contain substantial amounts of income from productive factors engaged in other industries; and that even compensation of employees and entrepreneurs can be attributed precisely to only a few industrial divisions.

These qualifications lessen but do not destroy the essential usefulness of the distribution by industrial source. The resulting divisions of the national product reflect differences in the economic conditions of the people who derive most of their livelihood from them; represent segments susceptible in varying degree to the benefits of economic progress and to the disturbing effects of business cycles; and in divers ways reveal the capacity of the nation to sustain itself and its role in the concert of nations.

As has been indicated, net income originating may be interpreted as a measure of a given industry's contribution to or draft upon the total net product of the nation. We might consider income from agriculture and the percentage it con-

stitutes of national income as measuring the amount and share that productive factors—labor, capital, and enterprise engaged in agriculture—contributed to the total value of that hypothetical heap of goods we call national income; or as measuring how much they succeeded in wresting from the common pot in return for their services, i.e., the total price they forced society to pay. The two interpretations are equally cogent if we define the value of any good, of any positive economic contribution, as the price it fetches on the market.

Under either interpretation income originating in the several industries measures results of interdependent processes; and this interdependence implies the contingency of one value upon others. During a given phase of economic and social development, a phase that may last several decades, some relations among activities representing various industrial functions tend to persist; for example, between functions of government and those of the private economic system or between amounts spent upon construction and capital formation and upon immediate consumption. Consequently, the percentage distribution of national income by industrial source tends to vary within narrow limits, especially when it is of averages for broad industrial groups for a long period.[1] If a large or small amount of income originates in an industry, a correspondingly large or small amount originates in other industries. In this sense a given industry that contributes to or draws from national income a certain net value product does so only because and so long as the other industries contribute or draw corresponding net value products.

For this reason the easiest and most promising way to analyze the distribution by industrial source is to emphasize that in percentage terms. Fluctuations in the totals have already been considered in Chapter 4. Here we try to answer two questions: What was the industrial composition of national income and of various types of income during the period as a whole? What

[1] This is especially true for a large and relatively self-contained national economy, like that of the United States.

TABLE 12

National Income * and its Percentage Distribution by Major Industrial Divisions, 1919–1938

	AGR. (1)	MINING (2)	MFG. (3)	CONSTR. (4)	TRANSP. AND OTHER PUB. UTIL. (5)	TRADE (6)	FINANCE (7)	SERVICE (8)	GOV. (9)	MISC. (10)	TOTAL (11)
					TOTALS (billions of dollars)						
1919	10.9	1.8	16.2	2.0	6.0	10.2	6.8	6.1	3.8	2.2	65.9
1920	9.1	2.3	19.8	2.6	7.4	11.5	7.4	6.8	7.0	2.4	76.4
1921	5.5	1.7	12.6	2.0	6.3	9.5	7.8	6.7	6.2	2.0	60.3
1922	5.9	1.3	13.1	2.3	6.2	8.6	8.3	7.4	6.1	2.3	61.5
1923	6.7	2.0	16.8	3.3	7.1	10.1	8.8	8.3	7.0	2.7	72.9
1924	7.1	1.7	15.6	3.7	7.1	9.8	9.6	8.6	7.3	2.8	73.4
1925	7.9	1.8	16.8	4.0	7.6	10.2	9.8	9.3	7.4	3.1	77.8
1926	7.5	2.2	18.1	4.3	7.9	11.5	9.8	10.1	8.1	3.2	82.8
1927	7.5	1.9	17.2	4.1	7.8	10.6	10.3	10.3	8.5	3.3	81.4
1928	7.3	1.6	17.9	4.0	8.0	11.0	10.9	10.7	8.3	3.7	83.4
1929	7.7	1.8	19.8	4.1	8.5	11.4	10.9	11.3	8.9	3.5	87.8
1930	5.8	1.4	16.3	3.5	7.7	11.0	9.7	10.4	8.9	2.9	77.6
1931	4.0	0.83	11.0	2.2	6.5	9.0	7.9	8.8	7.4	2.6	60.3
1932	2.8	0.48	6.3	1.1	4.9	6.3	5.9	6.5	6.2	2.1	42.6
1933	3.6	0.48	6.6	0.71	4.7	5.2	5.2	5.8	7.5	2.0	41.8
1934	4.7	0.83	9.0	0.83	4.8	7.0	5.1	6.8	8.2	2.3	49.5
1935	5.4	0.92	11.4	1.0	5.2	7.4	5.7	7.4	7.5	2.6	54.4
1936	6.1	1.2	14.2	1.6	5.8	8.5	6.0	8.3	8.2	2.9	62.7
1937	6.3	1.4	15.9	1.8	6.1	9.0	6.6	9.1	10.7	3.2	70.1
1938	5.5	1.1	12.6	1.7	5.5	9.3	6.5	8.9	10.8	3.0	64.9

TABLE 12 (concl.)

	AGR. (1)	MINING (2)	MFG. (3)	CONSTR. (4)	TRANSP. AND OTHER PUB. UTIL. (5)	TRADE (6)	FINANCE (7)	SERVICE (8)	GOV. (9)	MISC. (10)	TOTAL (11)
					PERCENTAGE DISTRIBUTION						
1919	16.5	2.7	24.6	3.0	9.0	15.5	10.3	9.3	5.7	3.4	100.0
1920	11.9	3.0	25.9	3.5	9.7	15.0	9.7	9.0	9.2	3.1	100.0
1921	9.2	2.8	20.9	3.3	10.5	15.8	12.9	11.1	10.3	3.3	100.0
1922	9.5	2.2	21.3	3.8	10.1	14.0	13.4	12.0	10.0	3.7	100.0
1923	9.2	2.8	23.0	4.6	9.7	13.9	12.1	11.3	9.7	3.7	100.0
1924	9.7	2.3	21.3	5.1	9.7	13.4	13.1	11.8	9.9	3.8	100.0
1925	10.2	2.4	21.6	5.1	9.8	13.1	12.5	12.0	9.5	3.9	100.0
1926	9.1	2.6	21.9	5.2	9.5	13.9	11.9	12.2	9.8	3.9	100.0
1927	9.2	2.3	21.1	5.1	9.6	13.0	12.7	12.7	10.4	4.0	100.0
1928	8.8	2.0	21.5	4.8	9.6	13.2	13.0	12.8	9.9	4.4	100.0
1929	8.8	2.1	22.5	4.6	9.7	13.0	12.4	12.8	10.1	4.0	100.0
1930	7.5	1.8	20.9	4.5	10.0	14.1	12.6	13.4	11.5	3.7	100.0
1931	6.7	1.4	18.3	3.7	10.7	15.0	13.1	14.6	12.3	4.3	100.0
1932	6.6	1.1	14.7	2.6	11.5	14.8	13.9	15.3	14.5	5.0	100.0
1933	8.5	1.1	15.8	1.7	11.3	12.5	12.4	13.9	17.9	4.8	100.0
1934	9.6	1.7	18.2	1.7	9.7	14.2	10.2	13.6	16.5	4.6	100.0
1935	9.9	1.7	20.9	1.9	9.5	13.6	10.4	13.5	13.8	4.7	100.0
1936	9.7	1.9	22.6	2.5	9.3	13.5	9.5	13.2	13.1	4.7	100.0
1937	8.9	2.0	22.7	2.6	8.8	12.8	9.5	13.0	15.3	4.5	100.0
1938	8.4	1.7	19.4	2.6	8.5	14.3	10.1	13.7	16.7	4.6	100.0

* Unadjusted for the disparity between depreciation and depletion charges at cost and reproduction prices, and gains and losses from sales of capital assets before 1929. Social Security contributions of employers are omitted.

changes occurred in the relative weight of the different industries in national income and in the countrywide totals of various types of income?

Table 12 answers both questions in a preliminary fashion. But for close analysis the distribution shown is unsatisfactory in several respects. First, only national income is apportioned; changes in it cannot be clearly understood until they are seen as changes in the industrial apportionment of the constituent types. Second, the industrial classification omits the minor industrial divisions. Third, and most important, it follows institutional lines which, while interesting in themselves, should perhaps be recast in order to satisfy more directly analytical purposes. Such recasting can, of course, be done only by combining the minor industrial divisions into broader analytical categories, since it is impossible to subdivide them further.

2 *Average for the Period*

Table 13 presents percentage distributions of national income and of its components by major and minor industrial divisions, based on arithmetic means of the totals for the two decades, 1919–38. Serving to introduce the countrywide totals of national income and the components whose industrial distribution can be studied, it reveals the composition of some of the major industrial groups; although omitting several industry type of income cells, it suggests the multitude of separate elements of which national income and other countrywide income totals are composed. Chiefly for reference, enabling the reader to gauge the relative importance of the various cells in the industrial type of income structure, it calls for no extended comment.

We should note, however, the striking differences in the shares of one and the same industry in the countrywide totals of various types of income; for example, while agriculture accounts for about 10 per cent of national income, it accounts for less than 3 per cent of wages and salaries, over 40 per cent of entrepreneurial income, and for slightly over 3 per cent of

TABLE 13

National Income and its Components, Percentage Distribution by Industrial Source, Based on Average Values for 1919–1938

	NATIONAL INCOME	AGGREGATE PAYMENTS Incl. entrep. savings	AGGREGATE PAYMENTS Excl. entrep. savings	WAGES AND SALARIES	ENTREPRENEURIAL Withdr.	ENTREPRENEURIAL Net income	SERVICE INCOME Incl. entrep. savings	SERVICE INCOME Excl. entrep. savings	DIVIDENDS	INTEREST	PROPERTY INCOME INCL. RENT
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
I Agriculture	9.6	9.6	10.0	2.6	45.2	41.9	11.1	11.6	0.43	8.6	3.3
II Mining	2.2	2.5	2.5	3.3	0.20	0.19	2.6	2.6	5.2	0.84	2.0
1 Anthracite coal	0.33	0.35	0.36	0.54	...[1]	...[1]	0.40	0.41	0.17	0.21	0.14
2 Bituminous coal	0.96	1.0	1.0	1.6	0.04	0.04	1.2	1.2	0.49	0.23	0.24
3 Metal	0.30	0.36	0.36	0.39	0.01	0.01	0.30	0.30	1.9	0.11	0.65
4 Oil & gas	0.35	0.45	0.46	0.52	0.14	0.13	0.42	0.43	1.6	0.17	0.58
5 Other	0.21	0.26	0.26	0.30	0.02	0.02	0.23	0.23	1.1	0.12	0.39
III Manufacturing[2]	21.0	21.0	21.1	28.6	2.9	3.2	22.3	22.4	44.0	3.4	15.5
1 Food & tobacco[2]	2.6	2.5	2.6	3.1	0.98	0.96	2.5	2.5	7.3	0.74	2.7
2 Textile & leather[2]	3.9	3.9	3.9	5.7	0.76	0.84	4.5	4.5	4.4	0.12	1.5
3 Constr. mat. & furn.[2]	2.4	2.5	2.5	3.6	0.33	0.38	2.8	2.8	3.5	0.28	1.2
4 Paper[2]	0.61	0.60	0.60	0.82	0.03	0.04	0.63	0.63	1.2	0.24	0.47
5 Printing[2]	1.6	1.6	1.6	2.3	0.34	0.40	1.8	1.8	1.9	0.17	0.69
6 Metal[2]	7.2	7.1	7.1	9.8	0.22	0.30	7.5	7.5	15.2	0.97	5.3
7 Chemical[2]	1.5	1.6	1.6	1.7	0.12	0.13	1.3	1.3	8.2	0.55	2.9
8 Misc. & rubber[2]	1.2	1.2	1.2	1.7	0.12	0.13	1.3	1.3	2.3	0.30	0.87
IV Construction	3.8	3.8	3.8	5.3	2.9	3.0	4.7	4.6	0.90	0.16	0.35

V	Transp. & other pub. util.	9.8	9.6	9.6	11.1	0.05	0.05	8.6	8.6	21.1	19.2	14.0
1	Elec. light & power	1.4	1.3	1.3	0.82	0.02	0.01	0.62	0.63	7.2	5.0	4.2
2	Mfd. gas	0.25	0.27	0.27	0.22			0.17	0.17	1.3	0.75	0.69
3	Steam rr., Pull., & exp.	5.4	5.3	5.3	6.7			5.2	5.2	5.9	10.2	5.7
4	Street rwy.	0.74	0.75	0.75	0.88			0.66	0.67	0.88	2.2	1.1
5	Water transp.	0.73	0.75	0.75	1.1	0.03	0.04	0.86	0.86	0.62	0.22	0.28
6	Pipe lines	0.20	0.19	0.19	0.10			0.07	0.07	2.0	0.03	0.68
7	Telephone	0.94	0.92	0.92	1.1			0.83	0.84	3.0	0.78	1.3
8	Telegraph	0.16	0.16	0.16	0.22			0.17	0.17	0.21	0.05	0.08
VI	Trade	13.5	13.6	13.4	15.5	18.4	19.4	16.0	15.7	10.3	0.86	3.7
VII	Finance	11.9	12.2	12.3	5.1	1.8	1.7	4.2	4.3	10.9	32.4	46.0
1	Banking	1.4	1.3	1.3	1.4			1.1	1.1	7.4		2.4
2	Insurance	1.6	1.7	1.7	2.2	1.8	1.7	2.0	2.0	0.93	—0.49	0.12
3	Real estate	8.9	9.2	9.3	1.5			1.1	1.2	2.5	32.9	43.5
VIII	Service	12.6	12.8	12.4	12.8	25.0	26.8	15.5	15.1	1.9	1.4	1.1
1	Professional				2.5		17.2	5.7				
2	Personal				3.7		6.6	4.3				
3	Domestic				3.8			2.8				
4	Misc.				2.8		3.0	2.7				
IX	Government	11.6	10.6	10.7	10.9			10.6	10.7		29.0	10.8
1	Federal		5.2	5.2	3.6			4.9	4.9		17.6	6.5
2	State		0.55	0.56	0.73			0.64	0.64		0.55	0.20
3	County		0.58	0.58	0.72			0.55	0.55		1.9	0.70
4	City incl. pub. educ.		4.3	4.3	5.8			4.5	4.6		8.9	3.3
X	Miscellaneous	4.0	4.3	4.2	4.8	3.7	3.8	4.5	4.5	5.2	4.1	3.2
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 13 (concl.)

	NATIONAL INCOME (1)	AGGREGATE PAYMENTS Incl. entrep. savings (2)	AGGREGATE PAYMENTS Excl. entrep. savings (3)	WAGES AND SALARIES (4)	ENTREPRENEURIAL Withdr. (5)	ENTREPRENEURIAL Net income (6)	SERVICE INCOME Incl. entrep. savings (7)	SERVICE INCOME Excl. entrep. savings (8)	DIVIDENDS (9)	INTEREST (10)	PROPERTY INCOME INCL. RENT (11)
CLASSIFICATION A BY CHARACTER OF PRODUCTIVE FUNCTION											
1 Commodity producing	38.2	38.5	39.0	40.8	51.1	48.2	41.4	42.0	59.0	18.7	26.1
2 Commodity transp. & distr.	19.8	19.8	19.6	23.4	18.4	19.5	22.1	21.9	18.9	11.3	10.3
3 Services	41.9	41.7	41.4	35.8	30.5	32.3	36.5	36.1	22.1	70.0	63.6
CLASSIFICATION B BY DURABILITY OF PRODUCT											
1 Non-durable	43.2	43.9	44.0	32.6	72.6	71.2	40.2	40.3	33.9	48.2	59.3
2 Durable	13.9	14.0	14.0	19.3	3.4	3.7	15.4	15.5	22.5	1.6	7.9
3 Mixed	42.9	42.1	42.0	48.0	24.0	25.1	44.3	44.2	43.6	50.2	32.8
4 Non-durable as % of durable & non-durable	75.7	75.8	75.9	62.8	95.5	95.1	72.3	72.2	60.1	96.8	88.2
CLASSIFICATION C BY TYPE OF BUSINESS ORGANIZATION											
1 With large proportion of individual firms	52.4	53.3	53.1	42.5	95.1	94.9	52.9	52.6	21.3	48.1	55.2
2 Private corp.	23.2	23.5	23.6	31.9	3.1	3.4	24.9	25.0	49.2	4.2	17.5
3 Semi-public corp.	12.8	12.6	12.6	14.7	1.8	1.8	11.6	11.7	29.5	18.7	16.5
4 Public	11.6	10.6	10.7	10.9			10.6	10.7		29.0	10.8

[1] Less than 0.005 per cent.

[2] Including salaries of employees at central administrative offices.

property income. The share of the electric light and power industry in property income is about seven times its share in service income. Indeed the net income of few industries has a composition similar to that of national income. This diversity betokens the great diversity among industries in the character of their business organization, which determines the relative importance of entrepreneurial income; in the ratio of direct labor to capital, which largely determines the importance of wages and salaries compared to property income; in the relative availability of various types of long term credit, which determines the relative importance of interest and dividends, etc. These differences in the composition of income by type among industries are measured directly and treated in more detail in Chapter 6, but they necessarily appear here in the distribution of national income components by industrial source.

The three new classifications into which we combined the major and minor industrial divisions, based on significant characteristics, are useful in economic analysis; their composition is revealed in the accompanying tabular exhibit.

Classification A is based on the nature of the productive function, not the physical characteristics of the industry's product. A portion of governmental and banking services is embodied in the commodity whose production governmental administration or the credit activity of banks has helped promote; and the value of the commodity certainly embodies the cost of governmental or banking activities. But the productive function of government or banks is not part of the physical process of extraction or fabrication, and it is the substantive nature of the production process that is the basis of the distinction.

Viewed in this light, the classification is obviously rough. Agricultural and manufacturing enterprises, and the corresponding industries as a whole, engage in transportation, distribution, and services that are only indirectly related to the physical process of production, as well as in the extraction and

Composition of Groups in the Industrial Classifications by Character of Productive Function, Durability of Product, and Type of Business Organization

A BY CHARACTER OF PRODUCTIVE FUNCTION

Commodity Producing	*Commodity Transporting and Distributing*	*Services*
Agriculture (I)	Steam rr., Pullman, & express (V-3)	Street rwy. (V-4)
Mining (II)	Water transp. (V-5)	Telephone (V-7)
Manufacturing (III)	Pipe lines (V-6)	Telegraph (V-8)
Construction (IV)	Trade (VI)	Finance (VII)
Elec. lt. & power (V-1)		Service (VIII)
Mfd. gas (V-2)		Government (IX)
		Misc. (X)

B BY DURABILITY OF PRODUCT

Non-durable	*Durable*	*Mixed*
Agriculture (I)	Metal mining (II-3)	Bituminous coal (II-2)
Anthracite coal (II-1)	Other mining (II-5)	Misc. & rubber mfg. (III-8)
Oil & gas (II-4)	Construction materials & furniture (III-3)	Elec. lt. & power (V-1)
Food & tobacco (III-1)	Metal mfg. (III-6)	Steam rr., Pullman, & express (V-3)
Textile & leather (III-2)	Construction (IV)	Water transp. (V-5)
Paper (III-4)		Telephone (V-7)
Printing (III-5)		Telegraph (V-8)
Chemical (III-7)		Trade (VI)
Mfd. gas (V-2)		Banking (VII-1)
Street rwy. (V-4)		Insurance (VII-2)
Pipe lines (V-6)		Government (IX)
Real estate (VII-3)		Misc. (X)
Service (VIII)		

C BY TYPE OF BUSINESS ORGANIZATION

With Large Proportion of Individual Firms	*Private Corporations*	*Semi-public Corporations*	*Public*
Agriculture (I)	Mining (II)	Transp. & other pub. util. (V)	Government (IX)
Construction (IV)	Mfg. (III)	Banking (VII-1)	
Trade (VI)		Insurance (VII-2)	
Real estate (VII-3)			
Service (VIII)			
Misc. (X)			

The roman and arabic numerals in parentheses designate the line number of the industrial division in Table 13.

fabrication of commodities. On the other hand, governmental agencies and some public utilities carry on some commodity production, e.g., by engaging in construction on force account. Yet the distinction is real in that in agriculture and manufacturing, transportation, distribution, and service are subsidiary to extraction and fabrication; likewise, in telephone companies and governmental agencies commodity production is secondary and auxiliary.[2]

It is the physical characteristics of the final product, including both the finished product and the materials that eventually enter it, that underlie Classification B. The criterion of durability is whether the product, in its utilization by the ultimate user, ordinarily lasts longer than three years; and by ultimate use we mean not only consumption by ultimate consumers but also the utilization by enterprises of such durable capital as buildings and machinery.[3]

Unfortunately, the industrial division followed in our estimates is not fine enough for a clear-cut classification by durability; indeed, no purely *industrial* (rather than *product*) classification could be. We could not separate perishable product from semidurable product industries; and more important, we had to classify industries by the characteristics of the preponderant part of their product, without further division of the latter. Even on this crude basis, we could classify only a majority of industries. A substantial number in which the proportion of durable or of non-durable products was too large to be ignored had to be placed in a mixed category.

Classification C, by type of prevailing organizational unit, distinguishes industries in which a substantial proportion of

2 The inclusion of electric light and power and manufactured gas under commodity production may be questioned. Yet it is perhaps more questionable to include them under services. They are admittedly borderline industries. The Pullman Company should properly be excluded from commodity production and distribution and put under services. But the items involved are so minor that it was not considered worth while to make the necessary calculations.

3 For a more detailed discussion of this classification see *National Income and Capital Formation, 1919–1935*, pp. 35–7.

the field is still in the hands of entrepreneurs from others in which large private corporations, corporations of more public character and hence subject to governmental regulation, and governmental agencies predominate to the virtual exclusion of individual proprietorship. This also is a rough classification. We disregarded the formally corporate character of numerous one-man corporations in such fields as trade, construction, or service, and we may have put too much weight on the fact that in such fields as steam railroading or banking, corporations are subject to more public control than in mining or manufacturing; yet these two groups differ significantly in flexibility and freedom in price, production, and cost policies.

Commodity producing industries account for about two-fifths of national income, aggregate payments to individuals, and wages and salaries, a somewhat larger share of entrepreneurial withdrawals, and a smaller share of property income. Commodity transporting and distributing industries account for roughly one-fifth of national income and aggregate payments, a larger share of wages and salaries, a smaller share of entrepreneurial withdrawals, and half as large a share of property income. Service industries account for the remaining two-fifths of national income and aggregate payments, a larger share of property income, and smaller shares of entrepreneurial withdrawals and wages and salaries.

The significant aspect of Classification A is the substantial proportion of total net product accounted for by activities that are not production, transportation, or distribution of commodities. It is perhaps exaggerated in Table 13, since commodity producing activities in the service industries may be greater than purely service activities in the other industries. Yet the exaggeration cannot be so large as to invalidate the inference that at least one-third of the net national product is accounted for by services that do not contribute directly to the increase in commodity stocks or to their availability to ultimate users. Such a high proportion is undoubtedly possible only in communities of advanced economic development, since low

productivity would compel greater concentration on the production and distribution of objects of prime necessity, the preponderant part of which is in the form of commodities.

In Classification B the share of industries that produce durable commodities mainly is small, amounting to 14 per cent of national income and of aggregate payments, a somewhat larger percentage of wages and salaries, and a somewhat smaller percentage of property income. The smallness of the share that, by the nature of the goods included, is a source of additions to the stock at the disposal of consumers and producers is partly determined by the definition: we assume that tangible goods alone can be durable, and classify as non-durable or mixed some products of service industries for which a claim of longevity may be made (e.g., education). And, of course, there may be a substantial share of durable products in the mixed category. Yet the proportion of durable goods, whether consumer or producer, in national income probably does not exceed one-fifth; the great majority of goods currently produced are obviously for fairly immediate consumption.[4]

The distribution in Classification C may seem at first to contradict the generally prevalent notion of the predominance of the corporate and non-personal form of organization in our economy: the share of industries in which entrepreneurs are numerous is slightly over one-half of national income, of aggregate payments, and of property income (including rent). But the contradiction is only apparent. Predominance need not be judged by the apportionment of the *net* product of the economy. Of gross volume of activity the share of industries in which corporations and non-personal forms of organization predominate is possibly larger than in Table 13; and the same is likely to be true of the share of material capital. Moreover,

4 For reasons already indicated, no really satisfactory classification by durability can be derived by using the industry as the unit. Classification B is, therefore, omitted in the analysis of changes in the industrial composition over the period. We return to it in Chapter 7, where we analyze the distribution of national income by type of final product.

corporations and other non-personal organizations may exercise an effect on the course of economic affairs quite out of proportion to their share in net or gross income, or in the total of all physical resources. Nevertheless, for the understanding of changes in the national product it is worth noting that industries with large groups of entrepreneurs still play an important role. Also, a substantial share of the ultimate product is contributed by industries that are either completely public or under social control sufficient to affect greatly the freedom with which they can adapt their activity to market demand, and thus to the changing needs or wishes of ultimate users. The combined share of these two groups (public and semi-public corporations) average about one-fourth of national income.

Other classifications could probably be devised, despite the difficulty of fitting the unwieldy units of our industrial divisions into them neatly.[5] Broader groups could be based on differences in the spatial mobility of the product; on variations in the extent to which industries depend upon foreign countries, either as markets or as sources of supplies; on differences in the cost structure of industries, i.e., the ratio of capital to direct labor, etc.; or on differences in the pattern of secular or cyclical fluctuations. But some of these groupings are not relevant, in that they would not reveal any significant tendencies in the industrial distribution of the national product; while others will emerge in the analysis of temporal changes below. Classifications A, B, and C promise to add to the conclusions concerning the distribution of national income and of its components by industrial source. Even of these three, that by durability has to be abandoned in some of the analysis in this chapter; and the crudities in the other two make it necessary often to go behind the broad categories in order to check the conclusions suggested in terms of the minor and major industrial divisions of which they are composed.

[5] One that unfortunately could not be carried through satisfactorily is that between consumer and producer goods industries.

3 Changes over the Period

The percentage distribution of national income tends to reflect the structure of the nation's productive system and is not likely to show the pronounced and violent fluctuations that often characterize the totals. Yet even during a period as short as that since the first World War, the distribution by industrial source may have changed radically, especially as notable structural shifts took place, reflecting the post-War readjustment and new developments that led to the severe depression of 1929–32 and its aftermath. We therefore consider changes in the industrial distribution of income, first during the period as a whole, as possible indicators of secular movements in the industrial structure of the economy, then the shorter term cyclical fluctuations. To some degree we can make up for the shortness of the period by utilizing King's estimates back to 1909.

The basic series for establishing changes over the period in the distribution by industrial source are the annual percentage shares of major and minor industrial divisions in the country-wide totals, shown fully in the Statistical Appendix to Part Two. From these annual percentages we derive averages for longer periods in which the transient effects of business cycles are moderated and that should, therefore, reveal the longer term movements in the percentage distribution. After experimenting with various periods, we chose the decades 1919–28 and 1929–38, and, as a check on the decade measures for possible effects of the severe contraction of 1929–32, the quinquennia 1919–23 and 1934–38. By computing the arithmetic means [6]

[6] It would have been more proper to take geometric means. But the percentages do not show extreme variations and the minor improvement that would be effected by taking geometric means did not warrant the additional labor.

It would also have been possible to follow the procedure adopted in Table 13 and compute percentages based on arithmetic means of absolute values for decades or quinquennia. This is tantamount to computing arithmetic means of percentages, each percentage weighted by the base to which it is computed. But there did not seem to be sufficient reason why, in establishing average percentage shares for the study of changes in percentage distributions over the period, a percentage should be given greater weight because the absolute total from which it is derived is larger. Accordingly, in all subsequent calculations

of percentages for them we obtained two measures of change in each percentage distribution—one, the difference between the arithmetic means for the two decades, the other, the difference between the arithmetic means for the two quinquennia.

These changes in average shares from the first decade to the second and from the first quinquennium to the last are usually in the same direction for one industry in one income total; but they vary in magnitude and direction among industries within the various totals.

To summarize the evidence most effectively and bring out clearly the most telling conclusions, we established the following broad categories of change: (a) a minor rise or decline over the period—both measures rise or decline, but neither more than one-tenth of the average share for 1919–38 (as given in Table 13); (b) a significant rise or decline—both measures rise or decline, one or both more than one-tenth of the average percentage for the entire period, but not more than four-tenths; (c) a large rise or decline—same as (b), but the rise or decline exceeds four-tenths of the average percentage for the period; (d) no definite movement—the two measures of change have opposite signs. In Tables 14, 15, and 16 changes of type (a) are designated by o with a sign attached to differentiate a minor rise from a minor decline; (b) is denoted by + if a rise and by — if a decline; (c) by + * if a rise and by — * if a decline; and (d) by an unadorned o.

Columns 1–4 of Table 14 illustrate the classification of direction and magnitude of change. The first column gives the percentage for the entire period accounted for by various industries in national income (from Table 13); the second column, the change from the arithmetic mean of percentages for 1919–28 to that for 1929–38; and the third, the change from

relating to changes in percentage distributions over the period we used arithmetic means of percentages rather than percentages of arithmetic means of absolute values. However, because changes in both percentages and/or their bases were fairly moderate within quinquennia or decades, the alternative procedure would reveal shifts in distribution similar to those shown by our present procedure.

the arithmetic mean of percentages for 1919–23 to that for 1934–38. The symbols in column 4 are derived by applying to columns 1–3 the rules formulated in the preceding paragraph; e.g., the entry for agriculture is — because the measures of change in columns 2 and 3 are both negative and one or both exceed one-tenth, but not four-tenths, of the percentage in column 1. The other entries in column 4 are similarly derived from columns 1, 2, and 3. Columns 5 and 6 contain the final entries—changes in the industrial distribution of the two totals of aggregate payments—derived by a procedure strictly analogous to that followed for the distribution of national income.

Three considerations must be borne in mind in interpreting the conclusions suggested by this and the following tables. First, since we are dealing with percentages, not with totals, an increase in the share of an industry does not necessarily mean an increase in the income originating in it. Second, the percentages are interdependent in that if the share of one industry rises during a period, the share of another *must* decline; i.e., the share of an industry depends upon the composition of the countrywide total and if percentages are based upon a total made up of different components, a different movement results. For example, the percentage that trade constitutes of national income declines from 14.1 for 1919–23 to 13.8 for 1934–38 because service and government are included. If for some reason they were excluded, it would be 17.6 and 19.2 respectively, thus increasing instead of decreasing. Third, and perhaps most important, the distributions in Table 14 and subsequent tables are of totals in current prices. Consequently we must not infer from a decrease or increase in the share of an industry that its share in the *goods* volume of the national product, i.e., in constant prices, changed similarly. Were it possible to adjust the incomes originating in the various industries for fluctuations in the specific price levels involved, the shifts in the distribution might differ from those in Table 14.

The industrial distributions of national income and of aggregate payments in current prices changed considerably

(Table 14). The shares of most commodity producing industries declined, some strikingly—not only those of the four major divisions—agriculture, mining, manufacturing, and construction—but also those of most minor divisions under mining and manufacturing. Under mining, the share of oil and gas alone failed to decline over the period; under manufacturing, food and tobacco, paper, printing, and chemicals are the sole increasing shares.

Although it is primarily the commodity producing industries whose shares decline, the shares of two other groups also decline: the public utility—steam railroads, street railways, and water transportation, forms of transportation whose development was distinctly retarded by new competitors; and the finance—real estate and banking; on these two latter industries the effect of the downward sweep of the cycle after 1928 may perhaps have been greater and more prolonged than on others.

Other knowledge concerning the dark spots in the nation's economic picture from 1919 to 1938 is corroborated by the severe declines in the shares of anthracite coal, bituminous coal, construction materials and furniture, construction, steam railroads, street railways—the laggards in the productive system.

The list of industries whose shares in national income and aggregate payments increase is also familiar. In addition to food and tobacco, paper, printing, and chemicals, it comprises electric light and power (large increase), manufactured gas, pipe lines (large increase), telephones (large increase), insurance, the service industries, total government and all its branches (large increase), and miscellaneous. It thus includes the more rapidly growing manufactures; the utilities that are not affected by new technical competitors but profit from technological progress and increasing urbanization; services (professional, personal, etc.) the demand for which increases with an improvement in the standard of living; and government, whose more vigorous participation in the economic life of the nation is reflected in its increasing share in national income. The in-

TABLE 14

National Income and Aggregate Payments to Individuals Change over the Period in the Percentage Distribution by Industrial Source, 1919–1938

	NATIONAL INCOME			DIRECTION AND MAGNITUDE OF CHANGE		
		CHANGE FROM			AGGREGATE PAYMENTS	
	AVG. % 1919–38	*1919–28 to 1929–38*	*1919–23 to 1934–38*	NATIONAL INCOME	Incl. entrep. savings	Excl. entrep. savings
	(1)	(2)	(3)	(4)	(5)	(6)
Agriculture	9.6	−1.9	−2.3	—	—	—*
Mining	2.2	−0.83	−0.87	—	—*	—*
Anth. coal	0.33	−0.12	−0.19	—*	—*	—*
Bit. coal	0.96	−0.47	−0.61	—*	—*	—*
Metal	0.30	−0.13	−0.08	—*	—	—
Oil & gas	0.35	−0.04	+0.04	0	0	0
Other	0.21	−0.07	−0.04	—	—	—
Manufacturing	21.0	−2.4	−1.4	—	0 —	0 —
Food & tobacco	2.6	+0.42	+0.47	+	+	0 +
Text. & leather	3.9	−0.72	−1.0	—	—	—
Constr. mat. & furn.	2.4	−1.2	−1.0	—*	—	—*
Paper	0.61	+0.05	+0.10	+	+	+
Printing	1.6	+0.32	+0.30	+	+	+
Metal	7.2	−1.1	−0.26	—	—	—
Chemical	1.5	+0.07	+0.24	+	+	+
Misc. & rubber	1.2	−0.28	−0.27	—	—	—
Construction	3.8	−1.5	−1.4	—	—*	—
Transp. & other pub. util.	9.8	+0.22	−0.88	0	—	—
Elec. light & power	1.4	+1.1	+1.1	+*	+*	+*
Mfd. gas	0.25	+0.07	+0.09	+	+*	+
Steam rr., Pull., & exp.	5.4	−1.3	−2.1	—	—*	—*
Street rwy.	0.74	−0.20	−0.38	—*	—*	—*
Water transp.	0.73	−0.05	−0.12	—	—	—
Pipe lines	0.20	+0.11	+0.10	+*	+*	+*
Telephone	0.94	+0.46	+0.46	+*	+*	+*
Telegraph	0.16	0.0	−0.01	0 —	+	0 +
Trade	13.5	−0.08	−0.31	0 —	0 —	0 +
Finance	11.9	−0.90	−2.1	—	—	—
Banking	1.4	−0.24	−0.19	—	0	0
Insurance	1.6	+0.67	+0.78	+*	+	+
Real estate	8.9	−1.3	−2.7	—	—	—
Service	12.6	+2.3	+2.5	+	+	+
Government	11.6	+4.8	+5.7	+*	+*	+*
Federal					+*	+*
State					+*	+*
County					+*	+*
City incl. pub. educ.					+*	+*
Miscellaneous	4.0	+0.35	+1.1	+	+	+

TABLE 14 (concl.)

	NATIONAL INCOME			DIRECTION AND MAGNITUDE OF CHANGE		
		CHANGE FROM			AGGREGATE PAYMENTS	
	AVG. % 1919–38	*1919–28 to 1929–38*	*1919–23 to 1934–38*	NATIONAL INCOME	Incl. entrep. savings	Excl. entrep. savings
	(1)	(2)	(3)	(4)	(5)	(6)
CLASSIFICATION A BY CHARACTER OF PRODUCTIVE FUNCTION						
Commodity prod.	38.2	—5.5	—4.8	—	—	—
Commodity transp. & distr.	19.8	—1.3	—2.5	—	—	—
Services	41.9	+6.8	+7.3	+	+	+
CLASSIFICATION C BY TYPE OF BUSINESS ORGANIZATION						
With large proportion of individual firms	52.4	—2.1	—3.1	0 —	0 —	0 —
Private corp.	23.2	—3.3	—2.3	—	—	—
Semi-public corp.	12.8	+0.65	—0.29	0	0	0
Public	11.6	+4.8	+5.7	+*	+*	+*

The symbols are based upon the direction and magnitude of change in the average percentages from 1919–28 to 1929–38 and from 1919–23 to 1934–38: 0 means that the signs of change in the two comparisons are different; 0 + or 0 —, that the change, in the same direction for both comparisons, is in both less than 10 per cent of the average percentage for 1919–38; + or —, that the change in one or both comparisons is more than 10 per cent but less than 40 per cent of the average percentage for the period; + * or — *, that the change in one or both comparisons is more than 40 per cent of the average percentage for the period.

crease in the share of the miscellaneous division seems to be due largely to the inclusion of some industries for which, because of their very rapid growth, continuous estimates for the period could not be made: motor transportation, aviation, and brokerage.

These movements in the shares of specific industries cause changes in the relative distribution among categories of Classifications A and C. In Classification A the share of commodity producing industries declines, of course; that of commodity transporting and distributing industries also declines since its two chief components, steam railroads and trade, decline markedly and slightly, respectively. The share of service industries rises significantly.

In Classification C the share of industries in which private corporations predominate (i.e., mining and manufacturing) declines significantly. That of industries with a large propor-

tion of individual firms also declines, but slightly; the marked decline in the shares of agriculture and construction and the slight decline in that of trade tend to be offset by the rise in the share of professional, personal, and other service industries in which individual firms are numerous. The share of semi-public corporations shows no definite movement, increases in the shares of some public utilities and divisions of finance offset-

TABLE 15

Aggregate Payments to Individuals excluding Entrepreneurial Savings, Change over the Period in the Percentage Distribution by Industrial Source, King's and Present NBER Estimates, 1909–1938

	PERCENTAGE SHARES 1919-23		INDEXES (1919-23 = 100)			DIRECTION AND MAGNITUDE OF CHANGE [1]		
	King (1)	Present NBER (2)	1909–18 (3)	1919–28 (4)	1929–38 (5)	1909–18 to 1919–28 (6)	1919–28 to 1929–38 (7)	1909–18 to 1929–38 (8)
1 Agriculture	12.2	12.7	101.9	90.2	67.2	—	—	—
2 Mining	2.8	3.1	105.7	93.5	63.6	—	—	—*
3 Manufacturing	21.8	22.5	93.0	97.7	88.6	0+	0—	0—
4 Construction	3.1	3.8	140.6	117.8	77.5	—	—	—*
5 Steam rr.	6.3	6.5	101.0	93.0	68.3	0—	—	—
6 Street rwy.	0.98	0.94	111.2	92.5	67.6	—	—	—*
7 Water transp.	1.1	0.91	72.7	88.2	76.8	+	—	0+
8 Communication	0.84	0.80	76.2	110.3	160.0	+	+*	+*
9 Elec. light & power	0.60	0.63	66.7	138.3	279.8	+*	+*	+*
10 Trade	13.0	13.4	93.8	99 2	101.4	0+	0+	0+
11 Banking	1.3	1.3	95.4	103.5	104.1	0+	0+	0+
12 Rent	9.9	8.9	114.0	102.1	80.7	—	—	—
13 Government	9 0	8.4	72.6	97.9	162.8	+	+*	+*
14 All other	17.2	16.1	112.8	110.3	136.4	0—	+	+
CLASSIFICATION A [2] BY CHARACTER OF PRODUCTIVE FUNCTION								
15 Commodity prod. (1 + 2 + 3 + 4 + 9)	40.5	42.7	99.8	97.5	82.2	0—	—	—
16 Commodity transp. & distr. (5 + 7 + 10)	20.3	20.8	95.4	96.8	89.9	0+	0—	0—
17 Services (6 + 8 + 11 + 12 + 13 + 14)	39.2	36.4	102.5	104.7	126.6	0+	+	+
CLASSIFICATION C [2] BY TYPE OF BUSINESS ORGANIZATION								
18 With large proportion of individual firms (1+4+10+12+14)	55.4	54.9	107.7	102.1	98.8	0—	0—	0—
19 Private corp. (2 + 3)	24.6	25.6	94.4	97.2	85.5	0+	—	0—
20 Semi-public corp. (5+6+7+8+9+11)	11.1	11.1	94.9	97.6	91.8	0+	0—	0—
21 Public (13)	9.0	8.4	72.6	97.9	162.8	+	+*	+*

[1] See note to Table 14.
[2] Classifications A and C are not strictly comparable with those in other tables. Manufactured gas is excluded from line 15, pipe lines from line 16, and both are included in line 17. Manufactured gas, pipe lines, and insurance are excluded from line 20 and included in line 18. Rent, here, is the sum of rent received by individuals, imputed rent, and real estate interest.

ting declines in the shares of others. The public sector, i.e., government, rises markedly.

For the distribution of aggregate payments excluding entrepreneurial savings we extend the analysis to 1909 by using King's estimates (Table 15). The first two columns show the differences in the industrial distributions, which are roughly continuous for the three decades, during the quinquennium for which the two series of estimates can be compared. The symbols in columns 6–8 are determined by a procedure analogous to that used in Table 14, except that the distinctions between slight, significant, and large changes are based upon a comparison of the change with the average percentage share in the middle decade, 1919–28.

The movements in the shares of several industries during the last two decades characterized also the longer span of three decades: the shares of agriculture, mining, construction, steam railroads, street railways, and rent (roughly comparable to real estate in the other tables) declined not only from 1919–28 to 1929–38 but also from 1909–18 to 1919–28; the shares of electric light and power, communication (largely telephone), trade, banking, and government increased not only from 1919–28 to 1929–38 but also from 1909–18 to 1919–28. In other industries the change from the first to the second decade was in the opposite direction from that from the second to the third: the shares of manufacturing and water transportation rose from 1909–18 to 1919–28 but declined from 1919–28 to 1929–38; that of the 'all other' division declined from 1909–18 to 1919–28 and rose from 1919–28 to 1929–38. Comparison of column 8 in Table 15, recording the movement from the first to the third decade, with column 6 in Table 14, showing changes in the industrial distribution of the same total during two decades, indicates similarity for comparable industrial branches. The only difference is that the share of water transportation rises slightly in Table 15, i.e., over the three decades, and declines in Table 14; and that the share of banking rises slightly in Table 15 but not at all in Table 14.

The decline in the share of commodity producing industries (Classification A) was persistent, although less from the first to the second decade than from the second to the third; the share of commodity transporting and distributing industries increased slightly between 1909–18 and 1919–28, the decline developing only after the first World War; and the share of service industries rose persistently, although more markedly during the third than during the earlier decades. In Classification C the share of industries in which individual firms predominate declined slightly but consistently; and the share of government rose throughout but especially during the recent decades. The shares of industries in which private corporations predominate and of semi-public industries rose from 1909–18 to 1919–28 and declined from 1919–28 to 1929–38.

Having established that the shares of commodity producing industries, of the older public utilities, and of real estate declined in national income and aggregate payments, while the shares of some public utilities, direct service industries, and government rose, we now inquire whether similar declines and rises characterized their shares in the countrywide totals of wages and salaries, entrepreneurial income, dividends, interest, etc. (Table 16). The symbols that indicate slight, significant, and large rises; slight, significant, and large declines; and no movement, are determined by a procedure analogous to that used in Table 14. The one minor modification was to disregard shares that, for the period as a whole, averaged less than one-tenth of one per cent of the countrywide total. Changes in such minute shares are likely to be extremely erratic; they are designated 'a', which means that for the given industry the type of income or payment does not exist, is not estimated, or changes in its share are not classified.

a) The first impression conveyed by Table 16 is that in few industries do their shares in various types of income move similarly. If we assume as the criterion of consistency the same sign in all the columns (excluding those marked a), whether it follows o (designating a slight change), stands by itself (desig-

TABLE 16: Direction and Magnitude of Change * over the Period in the Percentage Distribution by Industrial Source of Types of Income, 1919–1938

		ENTREPRENEURIAL		SERVICE INCOME					PROPERTY	
	WAGES & SALARIES	Withdr.	Net income	Incl. entrep. savings	Excl. entrep. savings	DIVIDENDS	INTEREST	DIVIDENDS & INTEREST	INCOME INCL. RENT	NATIONAL INCOME
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Agriculture	—*	—	o—	—	—*	o	—*	—*	—	—
Mining	—*	—*	—*	—*	—*	—	—	—	o	—
Anthracite coal	—*	a	a	—*	—*	—*	—	—	—	—*
Bituminous coal	—*	a	a	—*	—*	—*	—*	—*	—*	—*
Metal	—*	a	a	—*	—*	—*	o	—	—	—*
Oil & gas	o	—*	—*	o—	o—	o	+	o	+*	o
Other	—	a	a	—	—	o	o	o	+	—
Manufacturing	o—	—*	—*	—	—	o—	+	o	+	—
Food & tobacco	o+	—*	o+	o	o—	+*	—	+*	+*	+
Textile & leather	—	—*	—*	—	—	—*	—*	—*	—*	—
Constr. mat. & furn.	—	—*	—*	—*	—*	—*	+	—	o	—*
Paper	o	a	a	+	+	—	+*	—	+	+
Printing	+	—	—*	+	+	+	+*	+	+*	+
Metal	—	—*	—*	—	—	o	+	o	+*	—
Chemical	o+	—*	o	o+	o+	+	+*	+	+*	+
Misc. & rubber	—	—	—*	—	—	—*	—*	—*	—*	—
Construction	—*	o	—*	—*	—*	—	—*	—	o	—
Transp. & other pub. util.	—	a	a	—	—	+	o—	+	+	o
Elec. light & power	+*	a	a	+*	+*	+*	+*	+*	+*	+*
Mfd. gas	o+	a	a	o+	o	+*	+*	+*	+*	+
Steam rr., Pull., & exp.	—*	a	a	—*	—*	—*	—	—*	—	—
Street rwy.	—*	a	a	—*	—*	—*	—*	—*	—	—*
Water transportation	—	a	a	—	—	+	+	+	+*	—
Pipe lines	+	a	a	a	a	+*	a	+*	+*	+*
Telephone	+	a	a	+	+	+*	o	+*	+*	+*
Telegraph	o+	a	a	+	o+	—*	a	—*	a	o—

Trade	o+	o	−	o−	o	o	o	o	+	o−
Finance	+	+*	+*	+	+	−*	+	o+	−	−
Banking	+	a	a	+	o+	−*	a	−*	−	−
Insurance	+	+*	+*	+	+	−	−	−*	−*	+*
Real estate	o+	a	a	+	o+	−*	+	+	−	−
Service	+	+*	+	+	+	o	+*	+*	+*	+
Professional	+*	a	+	+	a	a	a	a	a	a
Personal	+	a	o	o+	a	a	a	a	a	a
Domestic	−	a	a	−	a	a	a	a	a	a
Misc.	+*	a	−	+	a	a	a	a	a	a
Government	+*	a	a	+*	+*	a	o	o+	+	+*
Federal	+	a	a	+*	+*	a	−*	−*	o−	a
State	+*	a	a	+*	+*	a	+*	+*	+*	a
County	+*	a	a	+*	+*	a	+*	+*	+*	a
City incl. pub. education	+*	a	a	+*	+*	a	+*	+*	+*	a
Miscellaneous	+*	+*	+	+	+	o−	−*	−	o	+
CLASSIFICATION A BY CHARACTER OF PRODUCTIVE FUNCTION										
Commodity producing	−	−	−	−	−	o+	o−	o	+	−
Commodity transp. & distr.	−	o	−	−	−	−	−	−	o+	−
Services	+	+*	+	+	+*	−	o+	o+	−	+
CLASSIFICATION C BY TYPE OF BUSINESS ORGANIZATION										
With large proportion of individual firms	o+	o+	o+	o−	o−	o−	o	o	−	o−
Private corp.	−	−*	−*	−	−	o−	o+	o−	+	−
Semi-public corp.	−	+	+*	−	−	+	o−	o	+	o
Public	+*	a	a	+*	+*	a	o	o+	+	+*

* See note to Table 14. An entry of 'a' signifies that the corresponding type of income is either absent, has not been estimated, or is less than 0.1 per cent of the countrywide total.

nating a significant change), or has an asterisk (designating a large change), we find that the shares of anthracite coal, bituminous coal, textiles and leather, miscellaneous and rubber manufacturing, steam railroads, Pullman, and express, and street railways declined consistently. The shares of electric light and power, pipe lines, and state, county, and city subdivisions of government rose. Thus of 42 major and minor industrial divisions and 7 categories in Classifications A and C, the shares of only 11 in national income and all its components rose or declined consistently. Naturally enough, these 11 are the industries whose shares in national income rose or declined most over the period.

b) In some industries an increase or lack of change in their shares in wages and salaries is accompanied by a decrease in their shares in either entrepreneurial withdrawals or net income or both: oil and gas, food and tobacco, printing, chemicals, and trade (col. 1, 2, and 3). In other industries the movements are in the same direction, but the change over the period in their shares in entrepreneurial withdrawals and net income is algebraically smaller than in wages and salaries: total manufacturing, textile and leather, construction materials and furniture, metal, miscellaneous and rubber manufacturing, professional, personal, and miscellaneous service. The major factor in these differences is the declining relative importance of unincorporated firms. The greater decrease in the share of entrepreneurial withdrawals in oil and gas, various branches of manufacturing, trade, and some divisions of direct service industries than in other industries in which unincorporated firms predominate is due to the more rapidly diminishing scope of the noncorporate form of organization in these fields. On the other hand, for agriculture, the one industry in which unincorporated firms predominate and in whose relative importance no notable reduction occurred, the change in its share in entrepreneurial withdrawals or net income is algebraically greater than in wages and salaries.

c) Because in most industries wages and salaries (including

or excluding other compensation of employees) are so much greater than either entrepreneurial withdrawals or net income, the industrial distributions of total service income and of wages and salaries are similar; consequently, changes over the period in them are also similar. When we compare columns 4 and 5 with column 1 we find divergence in sign for merely a few industries: oil and gas, food and tobacco, paper, trade, and, naturally enough, the category of industries in Classification C in which unincorporated firms predominate.

d) Changes in the industrial distributions of dividends and interest are divergent (col. 6 and 7). In oil and gas, total manufacturing, construction materials and furniture, paper, metal manufacturing, total finance, real estate, and direct service industries a decline or no movement in their shares in dividends is accompanied by a rise in their shares in interest. In anthracite coal, metal mining, and steam railroads a decline in their shares in dividends is accompanied by a less notable decline (or absence of decline) in their shares in interest. In printing and chemicals a rise in their shares in dividends is accompanied by a much more pronounced rise in their shares in interest. On the other hand, in a few but important industries the change in their shares in dividends is algebraically greater than in their shares in interest: agriculture, food and tobacco, construction, total transportation and public utilities, telephone, and miscellaneous.

These divergent changes over the period in the industrial distributions of dividends and interest arise from several factors. In many industries one or both of these income types are so small that changes in the industry shares in the country-wide totals are likely to be erratic: e.g., the share of agriculture in dividends and of service industries in both. In industries in which dividends were much more severely affected by the depression of the 1930's, even changes over the period would reveal the greater decline (or smaller rise) in their shares in dividends compared with their shares in interest. In other indus-

tries fixed interest indebtedness may have been reduced and replaced by dividend paying stocks.

e) Because of the divergence in changes in the industrial distributions of these two types of property income, and the shift in their relative weight, changes in the industrial distribution of dividends and interest combined are unlike those in either. The inclusion under property income of rent and its assignment to real estate cause another big difference. Since rent declined much more than interest and dividends the algebraic value of the change in all industries except real estate is raised, i.e., any decline in their shares in total property income is reduced and any increase, augmented (col. 8 and 9).

f) Perhaps the most interesting comparison is between changes in the industrial distributions of service income (col. 4 and 5) and property income (col. 8 and 9). In oil and gas, other mining (non-metal mines and quarries), total manufacturing, food and tobacco, metal manufacturing, transportation and other public utilities, and water transportation a decline in their shares in service income is accompanied by a rise or absence of decline in their shares in interest and dividends combined. In chemicals, manufactured gas, telephone, and service an absence of decline or a rise in their shares in service income is accompanied by a distinct or greater rise in their shares in dividends and interest combined. Industries in which changes in their shares in service income exceed algebraically the changes in their shares in dividends and interest combined are chiefly in the finance and government groups.

Since for most industries the change in their shares in property income including rent is algebraically greater than in their shares in property income made up of dividends and interest alone, the conclusions drawn from comparing columns 4 and 5 with column 8 are strengthened in the comparison with column 9. In the preponderant majority of cases the decrease in the share of an industry in total service income is accompanied by a smaller decrease (or no decrease, or an increase) in its share in total property income; and an increase in its share in total

service income is often accompanied by a larger increase in its share in total property income. The notable exceptions are textiles and leather, miscellaneous and rubber manufacturing, total finance and its subgroups, and total and federal government.

g) In Classification A the shares of commodity producing industries in wages and salaries combined, entrepreneurial withdrawals and net income, and in both totals of service income decline. Their shares in dividends and in property income including rent rise, but their share in interest declines slightly. The shares of commodity transporting and distributing industries in all totals except entrepreneurial withdrawals and property income including rent decrease; those of service industries in all except dividends and property income including rent increase.

h) In Classification C the shares in the various totals of industries in which unincorporated firms predominate change only slightly. The one significant decrease is in their share in property income including rent. The industries in which private corporations predominate account for decreasing shares in service income and its components, and for a relatively unchanging share in property income (but an increasing share in property income including rent). The semi-public industries account for a decreasing share in wages and salaries, and surprisingly enough, for an increasing share in entrepreneurial net income; but their share in the latter countrywide total is so slight that the increase is of no moment. The shares of government behave most consistently, increasing over the period in the various type of income totals (except interest) to which government contributes.

Table 16 shows clearly that a decline or rise in the share of an industry in national income or aggregate payments does not necessarily mean a similar change in the relative importance of that industry as a source of wages and salaries, of entrepreneurial income, or of property income. This conclusion is not unexpected. That an industry whose share in national in-

come decreases may yet have an increasing share in total wages and salaries or dividends is not a matter for surprise. For even if the composition of national income by type were to remain constant, i.e., even if the percentage share in national income of wages and salaries, entrepreneurial income, dividends, etc. were to remain exactly the same over the period, the direction and magnitude of industry shares might still diverge because of changes in the relative importance of various types of income within each industry. For example, if the share of wages and salaries in national income were to remain constant, a decrease in its share and an increase in the share of dividends in net income originating in manufacturing could cause a decrease in the share of manufacturing in total wages and salaries, an increase in its share in total dividends, and either movement in its share in national income. Such shifts within industries are common because of changes in the organization of an industry, in the composition of its productive resources (between direct labor and capital), and in its disbursement policy with respect to types of income. If, in addition to these shifts within industries, we consider that the relative distribution of national income by type of income or payment also changed, the reasons for divergence in the movement of the shares of one and the same industry in various countrywide type of income totals become abundant.

If we were to treat the type of income composition of national income as constant, changes in the industrial distribution of national income (or of aggregate payments) would be different from those in Table 14. If the industrial composition of the various countrywide type of income totals changed similarly, changes in the type of income composition of national income could not affect changes in its industrial composition; i.e., shifts in the type of income composition would mean changing weights, all applied to one and the same series of figures measuring changes in the industrial composition of the various type of income totals. But the differences among columns in Table 16 mean that, if the distribution of national

income or aggregate payments by type of income or payment changed, their industrial composition would also be affected. For example, since the share of manufacturing in wages and salaries declined, and that in interest rose, a shift in the composition of national income in favor of interest, reducing the share of wages and salaries, would raise algebraically the change in the share of manufacturing in national income.

If we assumed that the percentage distribution of national income by type of income remains constant, we could calculate changes in its industrial distribution, allowing the industrial distribution of each type of income total to vary from year to year. But this assumption is unrealistic: there is no discernible mechanism in society that either consciously or unconsciously operates to hold the distribution of national income by type constant.[7] Nor is the industrial distribution of an income type a sufficiently realistic concept to be worth pushing far: all people receiving entrepreneurial income from various industries hardly constitute a homogeneous group. We therefore considered it unnecessary to carry out laborious calculations in order to derive an industrial distribution of national income or of aggregate payments, on the assumption of constancy over the period in their relative distributions by type.

4 *Changes during Business Cycles*

The brevity of the period covered, the time unit used, the crude and approximate character of the estimates for some of the industry type of income cells—all bar detailed analysis of cyclical fluctuations in the income flows. Yet we can perhaps answer a few questions concerning their cyclical behavior, and

[7] Some mechanisms of this type may be evolving. The attempt of governments to maintain the purchasing power of the farming population relative to that of urban may be interpreted as an effort to hold the ratio of entrepreneurial income in farming constant relative to all other components of national income. The relief policy of the government is essentially an attempt to maintain the relative share of wages. But these attempts are for much narrower groups than those in our type of income or payment classification. With the detailed estimates in Volume II any student willing to formulate the assumptions and undertake the labor involved, can make the necessary calculations.

take advantage of the comprehensiveness of the estimates to study areas for which more adequate data are not yet available.

How do the income totals of various types that originate in the various industries of the nation change during business cycles? Do they rise during expansions, decline during contractions, and do their rates of movement decline from expansion to contraction? If they rise and decline in fair conformity with expansions and contractions in the nation's economy at large, do some rise or decline more than others?

With the help of reference cycle dates established in the National Bureau's study of business cycles, we determined the direction of change in the income totals during each expansion and contraction, and the sign of the differential movement, i.e., the difference in the rate of change *per year* between each expansion and the following contraction. An increase was credited with + 1; a decline, with — 1; no movement, with 0. Then the scores were added algebraically for the five expansions, the five contractions, and the five differential movements, i.e., the five differences in the annual rate of movement between an expansion and the following contraction. Thus, if an income total originating in a given industry rose during each expansion, its score is + 5; if it rose in four and declined in one, its score is + 3; if it rose in three, declined in one, and failed to change in one, its score is + 2; if it rose in three and declined in two, its score is + 1; and similarly for the behavior during the five contractions and cycles. A plus or minus sign indicates the direction of the preponderant number of changes in a given income during the reference periods.

The scores can, of course, range from — 5 to + 5, with every intervening integer and 0. However, for net income originating in each industry, 5 and 3 predominate, and 1 and 0 are rare, the values and signs indicating that net income originating in each industry tends to increase during expansions, decrease during contractions, and that its differential movement is negative (Table 17, col. 1, 3, and 5). Such scores suggest consistent positive conformity to business cycles.

TABLE 17

Direction of Movement during Business Cycles in Totals and Percentage Shares of Net Income Originating in Industrial Divisions, 1919–1938

	EXPANSION		CONTRACTION		DIFFERENTIAL	
	Total value (1)	Percentage share (2)	Total value (3)	Percentage share (4)	Total value (5)	Percentage share (6)
Agriculture	+3	−3	−3	−3	−5	+1
Mining	+5	+3	−5	−5	−5	−5
Anth. coal	+1	−3	−3	+1	−3	+3
Bit. coal	+3	+3	−5	−5	−5	−3
Metal	+5	+5	−5	−5	−5	−5
Oil & gas	+5	+5	−5	−3	−5	−5
Other	+3	+3	−3	−3	−5	−5
Manufacturing	+5	+3	−5	−5	−5	−5
Food & tobacco	+3	−1	−1	+3	−3	+3
Text. & leather	+1	−1	−3	−1	−3	+1
Constr. mat. & furn.	+5	+1	−5	−5	−5	−5
Paper	+5	+3	−3	−3	−5	−5
Printing	+5	+1	−1	+5	−5	+5
Metal	+5	+5	−5	−5	−5	−5
Chemical	+5	+3	−1	−3	−5	−5
Misc. & rubber	+5	+1	−3	−3	−5	−3
Construction	+5	+1	−3	−1	−5	−3
Transp. & other pub. util.	+5	+1	−5	−1	−5	+1
Elec. light & power	+5	+3	+1	+5	−5	+5
Mfd. gas	+3	−1	+1	+5	−3	+3
Steam rr., Pull., & exp.	+5	−3	−5	−3	−5	−1
Street rwy.	+1	−3	−5	+1	−5	+5
Water transp.	+3	−1	−3	−1	−3	−1
Pipe lines	+5	+3	−1	+3	−3	+1
Telephone	+5	+1	+1	+5	−5	+5
Telegraph	+5	−1	−3	+1	−5	+2
Trade	+3	−3	−5	−1	−5	+1
Finance	+5	−3	+1	+5	−1	+5
Banking	+5	+1	−1	+3	−1	+3
Insurance	+5	−1	+3	+5	−1	+5
Real estate	+3	−3	+1	+5	−1	+5
Service	+5	+1	−1	+5	−5	+3
Government	+5	−1	+1	+5	−5	+3
Miscellaneous	+5	+3	−1	+3	−5	+1
Total	+5		−3		−5	

Lack of such conformity to expansions or contractions is associated in part with pronounced long term rises or declines in the totals. We noted in the preceding section that the shares in national income of anthracite coal, textiles and leather, and street railways declined markedly over the period. Since national income in current prices also declined, the drop in these shares must have meant an even more marked decline in the totals in current prices. But it is these three industries that have the lowest score for rises during expansions (col. 1). Similarly, among the industries whose scores for contractions are algebraically greater than — 5 or — 3 there are many whose shares in national income, as shown in the preceding section, rose markedly over the period: food and tobacco, printing, chemicals, electric light and power, manufactured gas, pipe lines, telephones, total finance, banking, real estate, the direct service industries, government. Because of this effect of longer term movements on conformity to either expansions or contractions, the 'purest' indicator of behavior during business cycles is the score for the direction of the differential movement: a long term movement would affect approximately equally changes during an expansion and the following contraction, and should, therefore, have little effect on the difference.

When the effects of long term changes during expansions and contractions are reduced the income totals conform better (col. 5). Of the 35 entries in columns 1, 3, and 5 respectively, there are 24 maximum entries in column 1, only 11 in column 3, and 25 in column 5. Of the ten industries whose score in column 5 is algebraically greater than — 5, four are finance and its three subdivisions, industries that are either not too responsive to business cycles (such as insurance) or are susceptible to cycles different in timing from those characterizing general business conditions (real estate). Of the other six exceptions, four are purely consumer goods industries: anthracite coal, food and tobacco, textiles and leather, manufactured gas. On the other hand, industries that conform most consistently during expansion, contraction, and the full cycle (i.e., + 5 in

col. 1, — 5 in col. 3, and — 5 in col. 5) are chiefly those concerned with the production or transportation of industrial raw materials or durable goods—total mining, metal mining, oil and gas, total manufacturing, construction materials and furniture, metal manufacturing, and steam railroads.

While the entries in columns 1, 3, and 5 reveal the movement of the totals, they do not indicate whether some industries rise more or less than others during expansions; whether they decline more or less than others during contractions; or whether their differential movements are greater than those of others. Such differences in amplitude of conforming fluctuations could be ascertained by directly computing for each income series its changes in terms of the average value for the reference cycle: the change from trough to peak dates, from peak to trough dates, and the change in the rate of movement from expansion to contraction. However, since we already had percentage distributions of the countrywide totals by industrial branches, we approximated the differential amplitude of conforming fluctuations without going through the laborious direct computations.

Given a percentage distribution of an income total by industrial source, we can study the movements of the *percentages* during expansions, contractions, and full cycles. If the *percentage* share of an industry in national income increases during an expansion, the relative increase in net income originating in it is greater than the relative increase in national income (or decline in the former less than the decline in the latter). If the *percentage* share decreases, the underlying total increases less or decreases more, relatively, than the countrywide total to which the percentage is related. Knowing from columns 1, 3, and 5 in Table 17 that national income increases during each expansion, decreases during four of the five contractions, and that its differential movement is negative in each cycle, we also know how to interpret the movements in the percentage shares in this total. But whatever the movement of the countrywide total to which the percentage shares are related,

an *increase* in the percentage share of an industry during expansions means that the total originating in it is more responsive to cyclical expansions than the countrywide total of all industries and we describe it below as a conforming movement or fluctuation of wider amplitude than in the countrywide total; that a *decrease* in the percentage share of an industry during contractions means greater responsiveness to cyclical contractions, i.e., a conforming movement of wider amplitude than in the countrywide total; and that a negative differential movement (as compared with the countrywide total) means greater responsiveness of the percentage share of a given industry to the change in the rate of activity that is associated with a complete business cycle.[8]

We therefore scored the movements of the percentage shares of various industries during expansions, contractions, and full cycles in a fashion exactly analogous to that used to record the movements of the totals (Table 17, col. 2, 4, and 6).

The entries in columns 2 and 4, for expansions and contractions, are affected by longer term changes, in this case in the percentage shares rather than in the totals themselves. When such changes are pronounced, it is the differential movement that reveals most clearly behavior during business cycles (col. 6). The industries in whose net incomes conforming fluctua-

[8] It must be emphasized that changes in percentage shares are used here to study only greater or less responsiveness to business cycles. A statement that an income flow X exhibits conforming movements of a wider amplitude than income flow Y does not mean, therefore, that the cyclical fluctuations characterizing X are of wider amplitude than those in Y. It means only that during reference cycle phases for which a rise in the rate of economic activity is assumed, the change in X is algebraically greater than in Y (although this change itself may be either a rise or decline); and that during reference cycle phases or swings for which a decline in the rate of economic activity is assumed, the change in X is algebraically smaller than in Y. This meaning of the expression 'conforming movements' or 'fluctuations' and of their amplitude must be kept in mind in the discussion here and in Chapter 6.

However, since most income totals show fairly high positive conformity to business cycles, a conforming movement during reference expansions does denote a rise in most cases; and during contractions or in the differential movement over the whole cycle, it frequently does denote a decline.

tions are consistently of wider amplitude than in national income are total mining, metal mining, oil and gas, 'other' mining, total manufacturing, construction materials and furniture, paper, metal manufacturing, and chemicals—a list that includes most of the industries known to reflect business cycles most sensitively because of their concern with industrial materials and durable products. The industries in whose net incomes conforming fluctuations are consistently of narrower amplitude than in national income are anthracite coal, food and tobacco, textiles and leather, printing, total transportation and public utilities, electric light and power, manufactured gas, street railways, pipe lines, telephones, telegraph, trade, finance and its various subdivisions, direct service industries, and government. The list includes consumer goods industries and industries the character of whose very organization makes their incomes less sensitive to business cycles.

Table 17 presents the full set of measures for the industrial components and percentage shares of national income only. We now consider changes during business cycles in the industrial components and percentage shares of other countrywide income totals, such as aggregate payments, wages and salaries, and entrepreneurial net income, emphasizing the behavior of income totals in their origin in the various industries, and deferring analysis of the cyclical behavior of various types of income to Chapter 6.

A IN INCOME TOTALS

Totals of income originating in the various industries (Table 17, col. 1, 3, and 5) moved in consistent conformity with business cycles: a preponderant number of entries were + 3 or + 5 for expansion, — 3 or — 5 for the differential movement. The same conformity is largely true of business savings, payments to individuals, wages and salaries, and other income types.

Since we cannot attribute much significance to the difference between + 5 and + 3 or — 5 and — 3, we classified the two positive entries as expressing conformity of movement during

TABLE 18

Industrial Divisions and Types of Income whose Totals Fail to Conform to Business Cycles, 1919–1938

NET INCOME (1)	CORP. & GOV. SAVINGS (2)	TOTAL PAY. TO INDIVIDUALS EXCL. ENTREP. SAVINGS (3)	WAGES & SALARIES (4)	ENTREPRENEURIAL NET INCOME (5)	DIVIDENDS (6)	INTEREST (7)	PROPERTY INCOME INCL. RENT (8)
FAIL TO RISE DURING EXPANSIONS							
Anth. coal	Text. & leather	Anth. coal	Anth. coal	Manufacturing	Agriculture	Agriculture	Agriculture
Text. & leather	Misc. & rubber	Street rwy.	Street rwy.	Food & tobacco	Anth. coal	Mining	Anth. coal
Street rwy.	Construction	Fed. gov.	Fed. gov.	Text. & leather	Transp. & other	Anth. coal	Transp. & other
	Street rwy.			Misc. & rubber	pub. util.	Bit. coal	pub. util.
	Trade			Construction	Mfd. gas	Metal	Mfd. gas
	Finance			Elec. lt. & power	Pipe lines	Manufacturing	Steam rr.
	Banking			Trade	Telephone	Food & tob.	Street rwy.
	Insurance				Telegraph	Text. & leather	Pipe lines
	Real estate					Paper	Telegraph
	Service					Printing	Finance
						Chemical	Insurance
						Misc. & rubber	Real estate
						Construction	Fed. gov.
						Mfd. gas	
						Steam rr.	
						Street rwy.	
						Water transp.	
						Pipe lines	
						Telephone	
						Trade	
						Insurance	
						Service	
						Fed. gov.	

FAIL TO DECLINE DURING CONTRACTIONS

- Food & tobacco
- Printing
- Chemical
- Elec. lt. & power
- Mfd. gas
- Pipe lines
- Telephone
- Finance
  - Banking
  - Insurance
  - Real estate
- Service
- Government
- Miscellaneous

- Bit. coal
- Food & tobacco
- Construction
- Mfd. gas
- Street rwy.
- Finance
  - Banking
  - Real estate
- Service
- Government

- Anth. coal
- Printing
- Transp. & other pub. util.
  - Elec. lt. & power
  - Mfd. gas
  - Pipe lines
  - Telephone
- Finance
  - Real estate
- Service
- Government
  - Federal
  - State
  - County
  - City
- Miscellaneous

- Anth. coal
- Printing
- Elec. lt. & power
- Mfd. gas
- Telephone
- Finance
  - Banking
  - Insurance
  - Real estate
- Service
  - Professional
  - Personal
  - Domestic
  - Misc.
- Government
  - Federal
  - State
  - County
  - City
- Miscellaneous

- Oil & gas
- Construction
- Finance
  - Insurance
- Service
  - Professional
- Miscellaneous

- Agriculture
- Anth. coal
- Other mining
- Food & tob.
- Printing
- Metal mfg.
- Construction
- Transp. & other pub. util.
  - Elec. lt. & power
  - Mfd. gas
  - Steam rr.
  - Pipe lines
  - Telephone
  - Telegraph
- Trade
- Finance
  - Banking
  - Insurance
- Service
- Miscellaneous

- Mining
  - Anth. coal
  - Bit. coal
  - Metal
  - Oil & gas
  - Other
- Manufacturing
  - Food & tob.
  - Text. & leather
  - Constr. mat. & furn.
  - Paper
  - Printing
  - Metal
  - Chemical
  - Misc. & rubber
- Construction
- Transp. & other pub. util.
  - Elec. lt. & power
  - Mfd. gas
  - Steam rr.
  - Water transp.
  - Pipe lines
  - Telephone
  - Telegraph
- Trade
- Finance
  - Real estate
- Service
- Government
  - State
  - County
  - City
- Miscellaneous

- Agriculture
- Anth. coal
- Other mining
- Food & tobacco
- Printing
- Metal mfg.
- Construction
- Transp. & other pub. util.
  - Elec. lt. & power
  - Mfd. gas
  - Steam rr.
  - Pipe lines
  - Telephone
  - Telegraph
- Trade
- Finance
  - Banking
  - Insurance
  - Real estate
- Service
- Government
  - State
  - County
  - City
- Miscellaneous

TABLE 18 (concl.)

RATE OF MOVEMENT FAILS TO DECLINE FROM EXPANSION TO CONTRACTION

NET INCOME (1)	CORP. & GOV. SAVINGS (2)	TOTAL PAY. TO INDIVIDUALS EXCL. ENTREP. SAVINGS (3)	WAGES & SALARIES (4)	ENTREPRENEURIAL NET INCOME (5)	DIVIDENDS (6)	INTEREST (7)	PROPERTY INCOME INCL. RENT (8)
Finance	Text. & leather	Anth. coal	Anth. coal	Text. & leather	Agriculture	Agriculture	Anth. coal
Banking	Mfd. gas	Mfd. gas	Telephone		Anth. coal	Mining	Food & tobacco
Insurance	Telegraph	Pipe lines	Finance		Construction	Anth. coal	Construction
Real estate	Finance	Telephone	Banking		Transp. & other pub. util.	Bit. coal	Transp. & other pub. util.
	Banking	Finance	Real estate		Elec. lt. & power	Metal	Elec. lt. & power
	Insurance	Banking	Prof. service		Mfd. gas	Manufacturing	Mfd. gas
	Real estate	Real estate	Misc. service		Steam rr.	Food & tob.	Steam rr.
		Government	Government		Pipe lines	Text. & leather	Street rwy.
		Federal	Federal		Telephone	Constr. mat. & furn.	Pipe lines
		State	State		Banking	Printing	Telephone
		County	County		Insurance	Metal	Telegraph
		City	City		Miscellaneous	Chemical	Finance
						Misc. & rubber	Banking
						Construction	Insurance
						Transp. & other pub. util.	Real estate
						Elec. lt. & power	Fed. gov.
						Mfd. gas	State
						Steam rr.	County
						Street rwy.	City
						Water transp.	Miscellaneous
						Pipe lines	
						Telephone	
						Telegraph	

INTEREST (concl.) (7)

Trade
Finance
Insurance
Real estate
Service
Fed. gov.
State
County
City
Miscellaneous

expansions, the two negative entries as expressing conformity during contractions and conformity to the expected change in the differential movement. Applying this criterion to the scores established for various type of income totals originating in the different industries, we find that in the overwhelming majority they conform. We therefore present in Table 18 the industries in which they do not conform. A score of less than + 3 for expansion, or algebraically greater than — 3 for contraction and for the differential movement indicates lack of conformity.

Anthracite coal, textiles and leather, and street railways are conspicuous in that several of the type of income totals originating in them fail to conform during expansions. For other industries in the table, only one or two income types are listed, but even these industries, such as the federal government, agriculture, and finance, belong to the group that does not reflect sensitively fluctuations in general business activity.

The type of income totals of more industries fail to conform consistently to contractions, partly because of their upward trend in several industries, partly because of the relative brevity of most expansions during the period (of the five expansions, four last just one year when dated on an annual basis). But the list is again dominated by consumer goods industries, such public utilities as are insensitive to transient changes in business conditions, and government.

Among the industries whose type of income totals fail to conform in differential movement most consistently are anthracite coal, manufactured gas, telephones, construction, finance and its three subdivisions, and government.

Table 18 is by major and minor industrial divisions, not by the categories of Classifications A and C. Even so, it includes relatively few industries. Indeed, the more important evidence it provides is not the specific industries whose type of income totals fail to conform to business cycles, but rather the brevity of the list. For comprehensive totals such as net income, total payments, wages and salaries, entrepreneurial net income, and some of the narrower but sensitive income types such as cor-

porate savings and dividends, the industries failing to follow consistently cyclical swings in general business activity are few. For interest alone, a type relatively insensitive to business cycles, is the list of industries failing to conform long.

For the categories of the broader industrial classifications it is practicable to go further and present the actual measures of the direction of movement of the income totals during expansions, contractions, and full cycles (Table 19). We include Classification B, since the apportionment of the mixed group would not greatly affect the short term cyclical changes in the totals for the non-durable and durable groups whereas differences in the cyclical behavior of these two groups are prominent.

There is a general tendency toward high conformity, the entries for expansions being preponderantly either + 5 or + 3; for contractions, either — 5 or — 3; and for the differential movement, either — 5 or — 3. The differences in the scores among the various groups also are as we would expect, especially if we take into account the long term changes that characterize the income totals in the various industrial categories. Thus the score for the commodity producing group during expansions is in general higher than those for the commodity transporting and distributing group and for the service industries. Since this is true under conditions of smaller increase or greater decline over the period in the income totals originating in the commodity producing industries their closer conformity during expansions is all the more significant. Similarly, during contractions commodity producing industries have a more consistently negative score, which may partly be due to the lower rate of their movement over the period. In the most telling comparison, that for the differential movement, commodity producing industries have the highest conformity in accordance with expectations based on general knowledge.

In Classification B durable product industries conform better than non-durable industries during contractions and dur-

TABLE 19

Direction of Movement during Business Cycles in Income Totals Originating in Broad Industrial Divisions, 1919–1938

	NET INCOME (1)	CORP. & GOV. SAVINGS (2)	TOTAL PAY. TO INDIVIDUALS EXCL. ENTREP. SAVINGS (3)	WAGES & SALARIES (4)	ENTREP. NET INCOME (5)	DIVIDENDS (6)	INTEREST (7)	PROP. INCOME INCL. RENT (8)
EXPANSION								
Classification A By Character of Productive Function								
Commodity producing	+5	+3	+5	+5	+3	+5	+3	+5
Commodity transp. & distr.	+3	+3	+5	+5	+1	+3	+1	+3
Services	+5	+3	+5	+5	+3	+3	+3	+3
Classification B By Durability of Product								
Non-durable	+3	+3	+5	+5	+3	+5	+3	+5
Durable	+5	+3	+5	+5	+1	+5	+1	+5
Classification C By Type of Business Organization								
With large proportion of individual firms	+3	−1	+5	+5	+3	+5	+3	+3
Private corp.	+5	+3	+5	+5	+3	+5	−1	+5
Semi-public corp.	+5	+3	+5	+5	+5	+1	+1	+3
Public	+5	+3	+5	+3			+5	+5
Total	+5	+5	+5	+5	+3	+5	+3	+5
CONTRACTION								
Classification A By Character of Productive Function								
Commodity producing	−5	−5	−5	−5	−3	−3	+3	−3
Commodity transp. & distr.	−5	−5	−3	−5	−3	−1	+3	−1
Services	−1	−1	+3	+1	−1	+1	+1	+1
Classification B By Durability of Product								
Non-durable	−1	−5	−1	−1	−3	−3	+1	+1
Durable	−5	−5	−5	−5	−3	−1	−1	−1
Classification C By Type of Business Organization								
With large proportion of individual firms	−3	−3	−1	−1	−3	−1	+1	+1
Private corp.	−5	−5	−5	−5	−5	−3	+1	−3
Semi-public corp.	−1	−5	−1	−1	−1	−1	+3	+1
Public	+1	−1	+5	+5			+1	+1
Total	−3	−5	−1	−3	−3	−3	+1	+1
DIFFERENTIAL MOVEMENT								
Classification A By Character of Productive Function								
Commodity producing	−5	−5	−5	−5	−5	−5	+3	−5
Commodity transp. & distr.	−5	−3	−5	−5	−3	−3	+1	−1
Services	−5	−5	−3	−1	−5	−3	−1	−3
Classification B By Durability of Product								
Non-durable	−5	−3	−3	−3	−5	−5	+1	−3
Durable	−5	−5	−5	−5	−5	−5	−1	−5
Classification C By Type of Business Organization								
With large proportion of individual firms	−5	−3	−5	−5	−5	−5	+1	−1
Private corp.	−5	−5	−5	−5	−5	−5	+3	−5
Semi-public corp.	−5	−3	−5	−5	−3	−1	+3	−1
Public	−5	−5	+3	+3			−3	−3
Total	−5	−5	−5	−5	−5	−5	+1	−3

ing the complete cycle; but there is no evidence of their more consistent conformity during expansions.

In Classification C government naturally conforms least consistently to cyclical changes. Of the other three groups, industries in which private corporations predominate (mining and manufacturing) conform most consistently; there seem to be no significant differences in conformity between industries in which unincorporated firms are still numerous and those in which semi-public corporations predominate.

Because of the generally high conformity of the totals and the crudity of the measures, merely the most striking instances of failure to rise and decline in unison with the rate of general economic activity are revealed by the consistency with which the *totals* conform. To detect the industries whose incomes rise or decline in conformity with business cycles at a more or less rapid rate than the countrywide income totals we must study the percentage shares.

B IN PERCENTAGE SHARES OF VARIOUS INDUSTRIES

How shares of various industries in national income change during business cycles has already been discussed in connection with Table 17. We now consider their shares in other countrywide income totals (Table 20). For the sake of brevity, Table 20 is confined to measuring the consistency of the differential movement in the shares of industries in such countrywide totals as themselves conform adequately to business cycles during the entire period. It was observed in Table 19 that national income, aggregate payments, wages and salaries, entrepreneurial net income, and dividends all conform perfectly in their differential movements, whereas property income including rent has a score of — 3. Hence any departure from conformity in all except the last column of Table 20, i.e., any score that is algebraically greater than — 5, indicates that the component in question failed in at least one business cycle to decline from expansion to contraction as much as the total for all industries in the country. Similarly, an entry algebraically

TABLE 20

Direction of Differential Movement during Business Cycles in Percentage Shares of Industrial Divisions in Countrywide Income Totals, 1919–1938

	NATIONAL INCOME	AGG. PAY. TO INDIVIDUALS	WAGES & SALARIES	ENTREP. NET INCOME	DIVIDENDS	PROP. INCOME INCL. RENT
	(1)	(2)	(3)	(4)	(5)	(6)
Agriculture	+1	+3	−1	−1	+3	+3
Mining	−5	−5	−5	−5	−1	−5
Anthracite coal	+3	+3	+3	−4	+1	+3
Bituminous coal	−3	−3	−3	−5	+1	−5
Metal	−5	−5	−5	−3	−1	−3
Oil & gas	−5	−5	−3	−5	+1	−3
Other	−5	−5	−3	−5	+3	−5
Manufacturing	−5	−5	−3	−3	−5	−5
Food & tobacco	+3	+5	+5	−1	+3	+1
Text. & leather	+1	−3	−1	−1	−1	−3
Constr. mat. & furn.	−5	−5	−5	−5	−5	−5
Paper	−5	−5	−3	−5	−1	−3
Printing	+5	+1	+5	−1	−1	−3
Metal	−5	−5	−5	−5	−3	−3
Chemical	−5	−5	−5	−5	+1	−5
Misc. & rubber	−3	−5	−3	−3	−3	−5
Construction	−3	−5	−5	−1	−1	−3
Transp. & other pub. util.	+1	+3	+3	−5	+5	+5
Elec. light & power	+5	+5	+3	+5	+3	+1
Mfd. gas	+3	+5	+5		+5	+3
Steam rr.	−1	−1	−1		+1	+3
Street rwy.	+5	+5	+5		+3	+3
Water transp.	−1	−1	+1	−5	−3	−3
Pipe lines	+1	+3	+3		+3	+3
Telephone	+5	+5	+5		+5	+3
Telegraph	+2	−3	+1		+1	+1
Trade	+1	+3	+3	+3	+1	−3
Finance	+5	+3	+5	+5	−1	+3
Banking	+3	+5	+5		+5	+3
Insurance	+5	+5	+5	+5	+1	+1
Real estate	+5	+3	+3		−3	+3
Service	+3	+5	+5	+3	−1	−1
Professional			+5	+1		
Personal			+5	+3		
Domestic			+1			
Misc.			+1	+3		
Government	+3	+5	+5			−1
Federal		+5	+5			−1
State		+5	+5			+1
County		+5	+5			+3
City		+5	+5			+3
Miscellaneous	+1	+5	+3	+3	+3	+3

greater than -5 in the last column means that the income total in question failed in at least one business cycle to decline as much as (or rose more than) total property income. Relative intensity of change during business cycles is thus gauged in Table 20 by the negative score: the smaller the score (algebraically) the wider the amplitude of conforming fluctuations recorded for income flows in a given industry during business cycles, *wider in comparison with other industry entries in the same column.*

Keeping in mind that comparisons of scores among industries should be within rather than among columns, i.e., vertically among the rows, we group the industries according to the amplitude of their conforming fluctuations during business cycles: wide (score -5 or -3), narrow (score $+5$ or $+3$), or an amplitude not significantly different from those for the respective countrywide income totals (scores from -2 to $+2$). We first use as a basis of classification the entries for national income and aggregate payments (excluding all savings of enterprises); then the two large components of national income: wages and salaries and property income. In the first classification we place an industry among those showing wide amplitude if the score for its share in national income or aggregate payments does not rise above -3 (algebraically); in the second classification, if the score for its share in wages and salaries or property income is either -5 or -3; and likewise for the placing of industries in the narrow amplitude or intermediate groups.

The two groupings are similar. In general, industries whose incomes display conforming fluctuations of widest amplitude during business cycles are extractive, manufacturing, or construction, industries concerned with the production of industrial raw materials and durable commodities. Among the industries whose incomes fluctuate more than the countrywide totals, there is not one from other than the commodity producing category. On the other hand, industries whose incomes are distinctly less variable in conformity with business cycles

Classification of Industries by the Movement of Their Shares in Countrywide Income Totals

AMPLITUDE OF CONFORMING FLUCTUATIONS DURING BUSINESS CYCLES

WIDER THAN FOR THE COUNTRYWIDE TOTAL	NARROWER THAN FOR THE COUNTRYWIDE TOTAL	INTERMEDIATE

IN NATIONAL INCOME AND/OR AGGREGATE PAYMENTS (EXCLUDING SUBDIVISIONS OF GOVERNMENT)

Mining	Anthracite coal	Agriculture
Bituminous coal	Food & tobacco	Text. & leather
Metal		Printing
Oil & gas	Elec. light & power	
Other	Mfd. gas	Transp. & other pub. util.
Manufacturing	Street rwy.	Steam rr.
Constr. mat. & furn.	Telephone	Water transp.
Paper		Pipe lines
Metal	Finance	Telegraph
Chemical	Banking	
Misc. & rubber	Insurance	Trade
	Real estate	
Construction		Miscellaneous
	Service	
	Government	

IN WAGES AND SALARIES AND PROPERTY INCOME INCLUDING RENT (INCLUDING SUBDIVISIONS OF GOVERNMENT)

Mining	Anthracite coal	Agriculture
Bituminous coal	Transp. & other pub. util.	Food & tobacco
Metal	Mfd. gas	Text. & leather
Oil & gas	Street rwy.	Printing
Other	Pipe lines	
Manufacturing	Telephone	Elec. light & power
Constr. mat. & furn.		Steam rr.
Paper	Finance	Water transp.
Metal	Banking	Telegraph
Chemical	Real estate	
Misc. & rubber		Trade
	County gov.	
Construction	City incl. pub. educ.	Insurance
		Service
	Misc.	
		Government
		Federal
		State

than the countrywide totals are largely consumer goods industries producing non-durable goods; or private or public service industries. The group with intermediate amplitude of conforming fluctuations comprises industries concerned with both producer and consumer goods, such as printing, trade, steam railroads, and water transportation; and industries whose incomes while having cycles of their own, do not fluctuate in close conformity to cycles in general business conditions (agriculture).

The differential movements established for the major and minor industrial divisions in Table 20 determine the differences in variability among the categories of Classifications A, B, and C. In Table 21 these differences are measured directly, as are also the movements during expansions and contractions. The greater variability in conformity with business cycles of income flows from commodity producing industries stands out clearly. They rise more than those from other industries during expansions; decline more than those from other industries during contractions; and of course their differential movement is greater. The only exception is their share in entrepreneurial net income during expansions, possibly because of the non-conforming movement in farmers' net income. The shares of the commodity transporting and distributing industries in the various income types vary more in conformity with business cycles than do those of the service industries.

An even greater contrast in amplitude of conforming movement during business cycles is presented by the non-durable and durable goods industries. The latter uniformly rise more than the countrywide totals during expansions, uniformly decline more during contractions, and their differential movement is greater. The non-durable goods industries rise less during expansions than the countrywide totals, decline less during contractions, and their differential movement is smaller. But this narrower amplitude of fluctuation in income flows from non-durable goods industries is not so consistent as the wider amplitude of conforming fluctuations in the durable.

TABLE 21

Direction of Movement during Business Cycles in Percentage Shares of Broad Industrial Divisions in Countrywide Income Totals, 1919–1938

	NATIONAL INCOME (1)	AGG. PAY. TO INDIVIDUALS (2)	WAGES & SALARIES (3)	ENTREP. NET INCOME (4)	DIVIDENDS (5)	PROP. INCOME INCL. RENT (6)
EXPANSION						
Classification A By Character of Productive Function						
Commodity producing	+3	+3	+1	−3	+5	+5
Commodity transp. & distr.	−3	−1	−3	−3	−3	−1
Services	−3	−3	−1	+1	+1	−3
Classification B By Durability of Product						
Non-durable	−5	−5	−3	+1	+1	−3
Durable	+5	+5	+5	+1	+5	+5
Classification C By Type of Business Organization						
With large proportion of individual firms	−5	−3	+3	0	+3	−5
Private corp.	+5	+5	+3	−1	+3	+5
Semi-public corp.	+1	−1	−3	+1	−5	+1
Public	−1	−3	−1			−1
CONTRACTION						
Classification A By Character of Productive Function						
Commodity producing	−5	−5	−5	−1	−5	−3
Commodity transp. & distr.	−1	−1	+1	−1	+1	−1
Services	+5	+5	+5	+3	+3	+3
Classification B By Durability of Product						
Non-durable	+5	+3	+5	+1	−1	+1
Durable	−5	−5	−5	−1	−1	−3
Classification C By Type of Business Organization						
With large proportion of individual firms	+5	+3	+3	+5	−1	+1
Private corp.	−5	−5	−5	−5	−5	−5
Semi-public corp.	+5	+5	+3	+5	+5	+5
Public	+5	+5	+5			+1
DIFFERENTIAL MOVEMENT						
Classification A By Character of Productive Function						
Commodity producing	−5	−5	−5	−1	−5	−5
Commodity transp. & distr.	+1	+1	+1	+3	+5	+3
Services	+5	+5	+5	+3	+3	+5
Classification B By Durability of Product						
Non-durable	+5	+5	+5	−3	−1	+5
Durable	−5	−5	−5	−3	−3	−5
Classification C By Type of Business Organization						
With large proportion of individual firms	+5	+5	+1	+5	+1	+3
Private corp.	−5	−5	−5	−5	−5	−5
Semi-public corp.	+5	+3	+3	+5	+5	+5
Public	+3	+5	+5			−1

The public category is distinguished by the failure of its income flow to respond to business cycles with as wide an amplitude as the countrywide totals. Industries in which private corporations predominate are at the other extreme: the income flows from them fluctuate in conformity with business cycles much more than the countrywide totals. Income flows from the other two groups in Classification C, industries in which unincorporated firms are still numerous and semi-public industries, tend to increase less than the countrywide totals during expansions, decrease less during contractions, and have a smaller differential movement. No significant differences in the amplitude of conforming movements during business cycles between the two groups can be observed on the basis of Table 21.

5 Summary

All statements below concerning the industrial distribution of income are for totals in current prices.

a) From 1919 to 1938 commodity producing industries accounted on the average for two-fifths of national income, aggregate payments, and wages and salaries, a somewhat larger share of entrepreneurial income, and a smaller share of property income. Industries concerned with commodity transporting and distributing accounted for one-fifth of national income and aggregate payments, a somewhat larger share of wages and salaries, and a smaller share of entrepreneurial and property income. The service industries accounted for the remaining two-fifths of national income and aggregate payments, a somewhat larger share of property income, and smaller shares of wages and salaries and of entrepreneurial income.

b) Industries that could be directly classified as producing preponderantly durable goods accounted on the average for 14 per cent of national income and of aggregate payments, a larger share of wages and salaries, for only 3 to 4 per cent of entrepreneurial income, and for 8 per cent of property income (including rent). Industries that could be directly classified as producing non-durable goods accounted for 43 to 44 per cent

of national income and of aggregate payments, a somewhat smaller share of wages and salaries, a much larger share of entrepreneurial income, and a somewhat larger share of property income. With the addition of durable products from the mixed group, industries producing durable goods would perhaps account for not much more than one-fifth of national income or aggregate payments.

c) Industries in which unincorporated firms are still numerous accounted on the average for over half of national income and aggregate payments; those in which private corporations predominate, for 23 per cent, those in which semi-public corporations predominate, for 13 per cent, and government, for 11 to 12 per cent. The shares of these broad groups in the component income totals vary somewhat, but the distributions of wages and salaries and of property income tend to be roughly similar to those of national income and aggregate payments.

d) The industries whose shares in national income, aggregate payments, and *all* the component income totals declined over the period are anthracite coal, bituminous coal, textiles and leather, miscellaneous and rubber manufacturing, steam railroads, Pullman, and express, and street railways. The industries whose shares in *all* the comprehensive and component income totals rose are electric light and power, pipe lines, state, county, and city divisions of the government. In all other industries a rise or decline of shares in some countrywide income totals was accompanied by a decline or rise of shares in other totals. But if only national income and aggregate payments are considered, a significant decline occurred in the shares of the following industries (in addition to those listed above): agriculture, total mining, metal mining, 'other' mining, total manufacturing, construction materials and furniture, metal manufacturing, contract construction, water transportation, total finance, and real estate. The industries (in addition to those listed above) whose shares in national income and aggregate payments rose significantly are manufactured gas, tele-

phones, insurance, total service, total government (and all its subdivisions), and miscellaneous.

e) The shares of commodity producing industries in national income, aggregate payments, and some important component income totals decreased over the period, 1919–1938, as did those of commodity transporting and distributing industries, although not so much. The shares of service industries increased. The share of commodity producing industries in aggregate payments excluding entrepreneurial savings decreased also from 1909–18 to 1919–28, although not so markedly as from 1919–28 to 1929–38; that of commodity transporting and distributing industries increased from the first to the second decade, and decreased only from the second to the third; and that of service industries increased from 1909–18 to 1919–28, although not so markedly as from 1919–28 to 1929–38.

f) In national income, aggregate payments, and some component totals the shares of the two groups in Classification C in which unincorporated firms or private corporations predominate declined during the two recent decades; those of semi-public industries did not change significantly; and those of public industries rose markedly. In aggregate payments excluding entrepreneurial savings the decline in the share of industries with many unincorporated firms and the rise in the share of public industries characterized also the change from 1909–18 to 1919–28; but the shares of the other two groups (private and semi-public corporations) did not move consistently.

g) The divergence in movement among shares of one industry in countrywide income type totals arises from changes in the relative importance of the income types within industries and of total net income originating in the different industries. For most industries or industrial groups a decrease or increase in their shares in national income or in aggregate payments cannot be interpreted as a decrease or increase in their shares in each component—wages and salaries, entrepreneurial income, dividends, and interest.

h) Total net income and the income type totals originating

in the different industries fluctuate, on the whole, in close conformity with business cycles. The industries whose income type totals fail significantly to conform are anthracite coal, manufactured gas, telephones, contract construction, total finance and its subdivisions, and government. These are industries producing consumer goods, or so organized as to be unresponsive to transient changes in economic conditions, or having cycles of their own. The list of industries failing significantly to conform is longest for the industrial distribution of interest, a countrywide total itself insensitive to business cycles.

i) Income totals of various types originating in the broader industrial groups conform well to business cycles, showing the expected differences in degree. Incomes originating in the commodity producing group fluctuate in greater conformity than those originating in either the commodity transporting and distributing or service group; incomes originating in durable goods industries, than those originating in non-durable; incomes originating in industries in which private corporations predominate, than those originating in the other industry groups in Classification C.

j) Incomes originating in various industries differ greatly in the amplitude of their conforming fluctuations during business cycles. Wide amplitudes of conforming fluctuations characterize such commodity producing industries as are concerned with industrial raw materials and durable products (total mining, bituminous coal, metal mining, oil and gas, 'other' mining, total manufacturing, construction materials and furniture, metal manufacturing, chemicals, miscellaneous and rubber manufacturing, contract construction). Narrow amplitudes characterize industries concerned exclusively with consumer goods of the non-durable type or the more rigidly organized industries unresponsive to business cycles (anthracite coal, food and tobacco, electric light and power, manufactured gas, total finance and its subdivisions, government and some of its subdivisions). In the group with intermediate amplitudes of

conforming fluctuations are agriculture, steam railroads, trade, and telegraph, industries concerned with both consumer and producer goods or having cycles of their own.

k) Differences in amplitude of conforming fluctuations during business cycles appear again among incomes originating in the broad industrial groups. Incomes originating in commodity producing industries have much wider amplitudes than those originating in either the commodity transporting and distributing or service group. Incomes originating in durable goods industries have an even greater excess of amplitude over those originating in non-durable. Finally, incomes originating in industries in which private corporations predominate fluctuate in conformity with business cycles with a wider amplitude than incomes originating in any other group in Classification C.

CHAPTER 6

Distribution by Type of Income

1 *Annual Distribution of National Income*

OUR CLASSIFICATION of income by type (Table 22) reflects several principles or bases of distinction. First, there is the separation of income flows that are actual payments to ultimate income recipients from items that are accruals, i.e., of income payments from savings of enterprises. There is the further differentiation among the factors of production whose compensation the various types of income represent—labor, capital, and enterprise. Employee compensation may thus be taken to represent compensation of labor; dividends and interest, of capital; net savings, of enterprise; and entrepreneurial withdrawals or income, of all three, with labor preponderant. Finally, there is a third aspect of the classification relevant to income payments alone: its significance in differentiating among groups of income recipients at different average income levels. Wages are, by and large, the major source of income to the lowest income groups, while salaries are the major return to groups with distinctly higher average incomes. Dividends and interest, especially the former, are a major source of income to the high income groups. Entrepreneurial withdrawals are between the extremes represented by wages and dividends. In some industries entrepreneurial income constitutes the major return to groups whose average income is not much higher than that of wage earners; in others, it is high enough to raise the per capita income of entrepreneurs well above the average for the salaried group.

TABLE 22

National Income [1] and its Percentage Distribution by Type of Income, 1919–1938

	WAGES & SALARIES	OTHER PAY. TO EMPL.	ENTREPRENEURIAL		RENT	DIVIDENDS [2]	INTEREST	CORP. NET SAVINGS	GOV. NET SAVINGS	NATIONAL INCOME
			Withdr.	Savings						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	A TOTALS (billions of dollars)									
1919	36.7	0.43	11.8	5.5	4.0	2.9	3.2	1.0	—1.3	64.2
1920	43.3	0.57	13.5	1.6	4.3	3.2	3.7	2.2	1.9	74.2
1921	34.9	0.60	10.3	0.63	4.5	3.0	3.9	0.71	0.96	59.4
1922	36.4	0.60	10.8	—0.09	4.9	3.0	4.0	0.23	0.85	60.7
1923	42.7	0.62	11.3	1.2	5.2	3.8	4.2	0.97	1.6	71.6
1924	42.7	0.62	11.9	0.87	5.6	3.8	4.4	0.42	1.7	72.1
1925	44.4	0.61	12.5	1.6	5.5	4.4	4.6	0.83	1.6	76.0
1926	47.4	0.62	12.5	2.1	5.1	4.7	4.7	2.3	2.2	81.6
1927	47.8	0.65	12.6	1.1	5.1	5.1	4.9	0.56	2.3	80.1
1928	48.7	0.66	12.9	0.91	4.9	5.5	5.3	0.92	1.9	81.7
1929	51.5	0.69	13.4	1.1	4.9	6.3	5.6	1.5	2.2	87.2
1930	47.0	0.73	12.8	—0.64	4.3	6.0	5.7	—0.67	2.1	77.3
1931	39.6	0.88	11.2	—2.0	3.0	4.6	5.7	—3.1	0.34	60.3
1932	30.7	0.98	9.7	—3.5	2.1	3.0	5.5	—4.8	—0.91	42.9
1933	28.2	1.9	9.0	—2.4	2.1	2.5	5.0	—4.0	—0.11	42.2
1934	32.1	2.8	9.1	—0.35	1.9	3.0	4.8	—3.3	—0.58	49.5
1935	35.0	2.9	9.5	0.23	2.1	3.8	4.6	—2.1	—1.7	54.4
1936	38.9	3.9	10.1	1.2	2.2	4.8	4.6	—0.71	—2.2	62.9
1937	43.5	4.0	11.2	0.44	2.6	4.9	4.7	—1.4	0.50	70.5
1938	39.7	4.7	11.1	0.27	2.6	3.5	4.6	—0.70	—0.18	65.5

B PERCENTAGE SHARES OF COMPONENTS

1919	57.2	0.68	18.4	8.5	6.2	4.5	5.0	1.6	—2.0	100.0
1920	58.4	0.77	18.2	2.1	5.8	4.3	4.9	3.0	2.6	100.0
1921	58.8	1.0	17.3	1.1	7.5	5.0	6.5	1.2	1.6	100.0
1922	60.0	0.99	17.8	—0.15	8.1	5.0	6.6	0.38	1.4	100.0
1923	59.6	0.86	15.8	1.6	7.2	5.4	5.9	1.4	2.2	100.0
1924	59.2	0.86	16.6	1.2	7.8	5.3	6.1	0.58	2.4	100.0
1925	58.4	0.80	16.4	2.1	7.2	5.8	6.0	1.1	2.1	100.0
1926	58.1	0.76	15.3	2.5	6.3	5.8	5.8	2.8	2.6	100.0
1927	59.7	0.81	15.8	1.3	6.3	6.3	6.2	0.70	2.9	100.0
1928	59.6	0.81	15.8	1.1	6.0	6.7	6.5	1.1	2.3	100.0
1929	59.1	0.79	15.3	1.2	5.6	7.2	6.4	1.8	2.6	100.0
1930	60.8	0.94	16.5	—0.83	5.5	7.8	7.4	—0.86	2.7	100.0
1931	65.6	1.5	18.6	—3.4	5.0	7.7	9.5	—5.1	0.57	100.0
1932	71.6	2.3	22.7	—8.1	4.9	7.0	12.8	—11.1	—2.1	100.0
1933	66.8	4.4	21.4	—5.6	5.0	5.9	11.9	—9.5	—0.27	100.0
1934	64.8	5.6	18.4	—0.71	3.8	6.1	9.8	—6.6	—1.2	100.0
1935	64.3	5.4	17.5	0.43	3.9	6.9	8.5	—3.9	—3.2	100.0
1936	61.8	6.2	16.1	2.0	3.5	7.7	7.3	—1.1	—3.5	100.0
1937	61.7	5.7	15.9	0.62	3.7	7.0	6.7	—2.0	0.70	100.0
1938	60.6	7.1	16.9	0.41	3.9	5.3	7.0	—1.1	—0.27	100.0

[1] Includes Social Security contributions of employers and is adjusted for the effects on net savings of corporations and other business firms of gains and losses from sales of capital assets; of inventory revaluations; and of the use of cost rather than reproduction basis for depreciation charges. In all other tables in this chapter the unadjusted series excluding Social Security contributions of employers is used.

[2] Includes balance of international payments.

TABLE 22 (concl.)

C PERCENTAGE SHARES OF SUBTOTALS OF COMPONENTS

	SERVICE INCOME				PROP. INCOME		AGGREGATE PAYMENTS	
	EMPL. COMP.	ENTREP. INCOME	Excl. entrep. savings	Incl. entrep. savings	Incl. rent	Excl. rent	Excl. entrep. savings	Incl. entrep. savings
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1919	57.8	26.9	76.2	84.7	15.7	9.5	91.9	100.4
1920	59.1	20.3	77.3	79.4	15.0	9.3	92.3	94.4
1921	59.8	18.4	77.1	78.2	19.0	11.5	96.1	97.2
1922	61.0	17.6	78.7	78.6	19.6	11.6	98.4	98.2
1923	60.5	17.4	76.3	78.0	18.4	11.2	94.8	96.4
1924	60.1	17.8	76.7	77.9	19.2	11.4	95.8	97.0
1925	59.2	18.6	75.6	77.8	19.0	11.8	94.7	96.8
1926	58.9	17.8	74.2	76.7	17.9	11.6	92.0	94.6
1927	60.5	17.1	76.3	77.6	18.8	12.5	95.1	96.4
1928	60.4	16.9	76.2	77.3	19.2	13.2	95.4	96.5
1929	59.9	16.6	75.2	76.4	19.3	13.6	94.5	95.7
1930	61.8	15.7	78.3	77.5	20.7	15.1	99.0	98.1
1931	67.1	15.2	85.7	82.3	22.2	17.2	107.9	104.5
1932	73.8	14.6	96.5	88.4	24.7	19.9	121.3	113.2
1933	71.2	15.8	92.6	87.1	22.7	17.7	115.4	109.8
1934	70.4	17.7	88.8	88.1	19.7	15.9	108.5	107.8
1935	69.7	17.9	87.2	87.6	19.4	15.5	106.6	107.1
1936	68.1	18.1	84.2	86.1	18.5	15.0	102.7	104.6
1937	67.4	16.5	83.3	84.0	17.3	13.7	100.7	101.3
1938	67.8	17.3	84.6	85.1	16.3	12.3	100.9	101.3

As explained in Chapter 2 (Sec. 3), our classification does not follow faithfully any of the principles mentioned. Even in separating actual payments from an accrual item such as net savings, there is considerable blurring, not only because it is difficult to separate entrepreneurial withdrawals from net savings, but also because the estimates of dividends and interest include portions that do not reach the ultimate income recipients directly but are credited to their accounts in insurance companies, savings banks, and similar 'associations of individuals'. In differentiating among payments to various production factors the classification also leaves much to be desired, if only because it includes entrepreneurial income, which necessarily includes compensation of more than one production factor, as a single category. Moreover, employee compensation includes some items, such as payments to principal corporation executives, that can hardly be considered reward for labor alone; and dividends are presumably a mixture of a 'pure' return on capital with some return to enterprise. Finally, the classification by type is obviously defective as a grouping of returns to recipients at significantly different average income levels. Employee compensation is paid to some people with high incomes; a substantial portion of interest goes to low income groups; while entrepreneurial incomes are scattered among people in income groups at diverse levels.

These defects can be partly overcome by a cross-classification of income types with the several industrial divisions, and by a segregation, whenever data are available, of principal corporation officers' salaries. Even with these refinements, the distribution by type still retains some weaknesses, stemming from the institutional lines our estimates perforce follow. Nevertheless, it does reflect, if sometimes obscurely, various bases: temporal differences in levels in the distribution within industries roughly approximate differences between payments and net savings, among compensation of various production factors, and among payments to groups of recipients at significantly different average income levels.

As in the distribution by industrial source, we discuss the distribution by type of income largely in percentage terms. Conversion to percentages eliminates the changes in the totals treated in Chapter 4, and reveals more clearly the relative importance of various production factors and of payments to groups receiving incomes of varying size and description. In Table 22 B and C the percentages are of national income alone, and are adequate for a preliminary study of the distribution by type. But subsequently we discuss the distribution of aggregate payments by type as well. The chief reason for basing a percentage distribution on aggregate payments is that in measuring the relative importance of payments to various groups it is the distribution of aggregate payments, not of national income, that is desired. Net savings of enterprises, especially of corporations and of other non-personal organizations, cannot be assigned to any one group of income recipients; and if they are considered, as perhaps they should be, of equal relative importance to the fortunes of all income recipients attached to an industry, their percentage distribution becomes identical with that of aggregate payments. Since we have two variants of aggregate payments, one including and the other excluding entrepreneurial savings, we have two variants of the percentage distribution. In both, net savings are taken into account and, like all types of payments, expressed as percentages of aggregate payments.

The distribution in Table 22 B reveals obvious shifts in the percentage shares in national income. The share of wages and salaries rises; that of other employee compensation rises even more, reflecting the marked increase in work and other relief payments in the 1930's and the inclusion of Social Security contributions of employers. The share of entrepreneurial withdrawals declines, as do the shares of entrepreneurial net savings and rent. The share of dividends rises, and that of interest, even more. The shares of corporate and government net savings decline.

These categories, the most detailed in the distribution of

national income by type, are combined into broader divisions in Table 22 C. The share of total employee compensation, a sum of wages, salaries, and other compensation, rises markedly. The share of entrepreneurial income, a sum of withdrawals and savings, declines markedly. Total service income, a sum of compensation of employees and of entrepreneurs, seems to rise in relative importance, although not markedly when entrepreneurial savings are included. The share of property income excluding rent rises markedly; but when rent is included, the rise becomes negligible. Aggregate payments, whether including or excluding entrepreneurial savings, are smaller than national income during the first decade and larger during the second—a direct reflection of the fact that net savings of enterprises were positive during the 1920's and negative during the 1930's.

The shares of these various components in aggregate payments may behave quite differently from their shares in national income. Furthermore, analysis of the percentage distribution of any income flow cannot be confined to the comprehensive totals. We now consider the distribution within each division of the nation's productive system and attempt to survey its aspects in a manner similar to that followed in the analysis by industrial source. First, the average distribution for the entire period is examined; next, changes over the period; finally, changes during business cycles.

2 *Average for the Period*

Table 23 presents distributions of net income originating for the country as a whole and for individual industries, based upon the arithmetic means of the totals for 1919–38. Similar distributions could be presented for total payments including or excluding entrepreneurial savings, but since for the period as a whole they would differ little from the distributions of net income, we omit them.

In Table 23 rent is included in property income under real estate largely because it cannot be allocated by industrial divi-

TABLE 23

Net Income Originating in Industrial Divisions, Percentage Distribution by Type, Based on Average Values for 1919–1938

	EMPL. COMP.	ENTREPRENEURIAL		DIVIDENDS	INTEREST	PROP. INCOME INCL. RENT	AGG. PAY. TO INDIV. EXCL. ENTREP. NET SAVINGS	NET SAVINGS OF	
		Withdr.	Net income					Corp. & gov.	All enterprises
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Agriculture	16.4	80.6	76.9	0.27	6.4	6.6	103.7		—3.7
Mining	94.4	1.6	1.6	14.9	2.7	17.6	113.6	—13.6	—13.6
Manufacturing	83.0	2.4	2.7	12.9	1.1	14.0	99.4	0.24	0.56
Food & tobacco	72.3	6.5	6.6	17.5	2.0	19.6	98.4	1.5	1.6
Text. & leather	90.7	3.4	3.9	7.0	0.22	7.2	101.3	—1.8	—1.3
Constr. mat. & furn.	89.4	2.3	2.8	8.9	0.81	9.7	101.4	—1.9	—1.4
Paper	82.1	0.88	1.2	11.8	2.8	14.5	97.5	2.1	2.5
Printing	85.7	3.6	4.4	7.4	0.74	8.2	97.4	1.8	2.6
Metal	83.5	0.52	0.74	13.1	0.95	14.0	98.0	1.8	2.0
Chemical	66.2	1.3	1.5	33.1	2.5	35.7	103.2	—3.4	—3.2
Misc. & rubber	84.4	1.6	1.8	11.5	1.7	13.2	99.1	0.64	0.86
Construction	84.7	12.9	13.8	1.4	0.30	1.7	99.4	—0.24	0.65
Transp. & other pub. util.	70.1	0.08	0.10	13.3	13.8	27.0	97.2	2.8	2.8
Elec. light & power	35.2	0.18	0.18	31.4	24.6	56.0	91.4	8.6	8.6
Mfd. gas	55.3			32.0	21.5	53.5	108.8	—8.8	—8.8
Steam rr., Pull., & exp.	77.3			6.7	13.3	20.0	97.3	2.7	2.7
Street rwy.	71.8			7.3	21.3	28.6	100.4	—0.44	—0.44
Water transp.	94.0	0.74	0.96	5.3	2.2	7.4	102.2	—2.4	—2.2
Pipe lines	29.2			63.0	1.0	64.0	93.2	6.8	6.8
Telephone	71.4			19.7	5.8	25.5	97.0	3.0	3.0
Telegraph	85.1			7.8	2.0	9.8	94.8	5.2	5.2

Trade	70.0	23.2	25.3	4.7	0.45	5.1	98.3	—0.42	1.7
Finance	26.1	2.5	2.5	5.7	19.2	73.4	102.0	—2.0	—2.0
Banking	61.6			33.2		33.2	94.8	5.2	5.2
Insurance	84.0	18.9	18.9	3.6	—2.2	1.4	104.4	—4.4	—4.4
Real estate	10.3			1.8	25.9	92.4	102.7	—2.7	—2.7
Service	61.9	34.0	37.5	0.93	0.79	1.7	97.6	—1.1	2.4
Government	73.8				17.6	17.6	91.5	8.5	8.5
Miscellaneous	74.6	15.8	16.8	8.1*	7.4	15.4	105.8	—6.8	—5.8
Total	63.1	17.1	17.6	6.2*	7.1	19.0	99.2	0.31	0.82
CLASSIFICATION A BY CHARACTER OF PRODUCTIVE FUNCTION									
Commodity prod.	65.2	22.9	22.2	9.5	3.5	13.0	101.1	—0.40	—1.1
Commodity transp. & distr.	72.4	15.8	17.3	5.9	4.0	9.9	98.1	0.42	1.9
Services	56.7	12.4	13.6	3.3	11.8	28.8	98.0	0.90	2.0
CLASSIFICATION C BY TYPE OF BUSINESS ORGANIZATION									
With large proportion of individual firms	49.5	31.0	31.9	2.5	6.5	20.0	100.5	—1.4	—0.52
Private corp.	84.1	2.3	2.6	13.1	1.3	14.4	100.8	—1.0	—0.76
Semi-public corp.	70.9	2.4	2.4	14.2	10.3	24.5	97.8	2.2	2.2
Public	73.8				17.6	17.6	91.5	8.5	8.5

In those instances in which employee compensation includes 'other' payments to employees, the percentage of wages and salaries is:

Transp. and other pub. util.	68.9
Steam rr., Pull., & exp.	75.4
Telephone	70.2
Telegraph	82.6
Government	57.3
Total	61.0

CLASSIFICATION A BY CHARACTER OF PRODUCTIVE FUNCTION

Commodity transp. & distr.	71.9
Services	52.1

CLASSIFICATION C BY TYPE OF BUSINESS ORGANIZATION

Semi-public corp.	70.0
Public	57.3

* Includes balance of international payments.

sions. Also, the subdivisions of mining were not retained: for these five subdivisions the estimates of income other than wages and salaries for the years before 1929 were derived by distributing the totals for the mining group in proportion to wages and salaries. Since the percentage distribution among types of income within each subdivision of mining is not significant for the early years in the period, Classification B, which is subject to the difficulties mentioned in Chapter 5, is also omitted.

Employee compensation accounts, on the average, for slightly less than two-thirds of national income. But in agriculture, electric light and power, manufactured gas, pipe lines, and real estate its share is well below this average. These industries obviously belong to two distinct categories. In the first, represented by agriculture and real estate, the prevailing type of business organization is the unincorporated enterprise of small average size or the individual property holder. Hence entrepreneurial income or rent bulks so large in net income originating that employee compensation must necessarily be a relatively limited fraction. In the second, to which electric light and power, manufactured gas, and pipe lines belong, the dominant form of organization is corporate, and capital used in production is so large relative to direct labor that a major portion of net income is a return on the capital invested and only a small portion is compensation for the direct services of employees. On the other hand, in mining, textiles and leather, construction materials and furniture, printing, water transportation, and telegraph the share of employee compensation exceeds 85 per cent. In these industries the entrepreneur either does not appear or plays a minor role; and the use of capital is small relative to that of direct labor.

In agriculture, service, and trade the proportion of entrepreneurial withdrawals is above the average for the country, 17.1 per cent; in government, the public utilities, finance, manufacturing, mining, and construction, below. We have already mentioned the industries with a large proportion of property income. In general, industries in which entrepre-

neurs predominate, or in which the capital investment is small relative to direct labor, or in which entrepreneurs do not have to pay returns on past investment, or in which by definition there cannot be large property returns (such as insurance) have low ratios of property income to net income originating (agriculture, construction, trade, insurance, and service).

The average shares of dividends and of interest in national income are about the same, but within industries they differ markedly. In some industries, such as government and agriculture, dividends are absent or negligible, either because there are no private enterprises or because small private enterprises, for which credit without security and fixed interest obligation is impracticable, predominate. As industries approach either extreme—absence of a variable entrepreneurial revenue because of a controlled market or preponderance of small units —interest tends to constitute a relatively greater share than dividends. Public utilities, such as steam railroads, represent the first extreme; real estate, the second. On the other hand, in industries in which the private business enterprise is large and continuously active in a competitive market, the share of dividends tends to be relatively greater (mining, manufacturing).

The share of savings of enterprises for the country as a whole is, on the average, small, amounting to somewhat less than 1 per cent of national income. But the percentages vary strikingly among industries. In general, the industries that, as shown by our analysis in Chapter 5, rose in relative importance in the income structure, were the ones for which the ratio of net savings to net income was well above the average: food and tobacco, paper, printing, electric light and power, pipe lines, telephone, telegraph, service, and government. Most of the industries whose relative shares in the countrywide income totals declined were characterized by a lower than average ratio of net savings to net income originating: agriculture, mining, total manufacturing, and construction. Although not perfect, the correlation is nevertheless sufficient to suggest that the rela-

tive magnitude of net savings of enterprise is a fair index of the shift in an industry's share in national income and aggregate payments.

In Classification A the highest percentage of property income and the lowest percentage of employee compensation and entrepreneurial withdrawals are within the service industries; the commodity transporting and distributing industries are at the other extreme in these respects, except for entrepreneurial withdrawals; while the commodity producing group occupies an intermediate position. The share of dividends is highest in commodity producing industries and the share of interest lowest—the opposite being true of the service industries.

The greatest differences in the distribution by type are in Classification C. Industries in which entrepreneurs are still numerous are characterized by the largest share of entrepreneurial withdrawals, the smallest of employee compensation, and a share of property income close to that for the country as a whole. The largest share of employee compensation and the greatest dominance of dividends over interest are in industries in which private corporations predominate. In industries with a semi-public status, property income accounts for a larger proportion of income originating than elsewhere. The public category naturally does not have any entrepreneurial income or dividends.

3 *Changes over the Period*

A IN COMPREHENSIVE TOTALS

In studying changes in the distribution by type over the period we use averages of percentage shares free from the effects of the more transient cyclical fluctuations. As in the distribution by industrial source, we computed two sets of averages: one for the two decades, 1919–28 and 1929–38, the other for the terminal quinquennia, 1919–23 and 1934–38.

Again, as in the distribution by industrial source, our conclusions are summarized by differentiating broad classes by the sign and magnitude of the changes in the averages. A plus or

minus sign indicates that the share increases or decreases and that the change is in the same direction in both the decennial and quinquennial averages; if the two sets of averages disagree in this respect, no definite direction is assigned the movement over the period and the entry is 0. Changes are classified as minor if the estimates for both the decennial and the quinquennial averages rise or decline less than one-tenth of the average share for 1919–38 (denoted by 0+ or 0—); as significant if either estimate changes more than one-tenth of the average share for the period but not more than two-fifths (denoted by + or —); and as large if either estimate changes more than two-fifths of the average share for the period (denoted by +* or —*). Table 24 demonstrates the procedure and reveals several significant shifts in the shares of various income types in each of the three comprehensive income totals.

Wages and salaries increase significantly as a share in national income, but not in aggregate payments including entrepreneurial savings, i.e., when net savings of corporations and government are omitted from the comprehensive total. When we exclude from the latter entrepreneurial savings also, the share of wages and salaries declines slightly but unmistakably. The increase in this share in any of the three comprehensive income totals is thus due largely to the increase in wages and salaries relative to that in net savings of business enterprises and government.

The share of other compensation of employees in all three comprehensive income totals, however, increases owing primarily to the introduction of relief payments and Social Security contributions in the latter part of the second decade and to the maintenance, if not increase, of other types of compensation (pensions and compensation for injury). The share of total compensation, the sum of wages and salaries and other compensation, increases as a percentage of all three comprehensive totals; but the increase from the first to the second decade in its share in aggregate payments excluding entrepreneurial savings is so small as to be insignificant.

TABLE 24: National Income and Aggregate Payments to Individuals
Change over the Period in the Percentage Distribution by Type, 1919–1938

	PERCENTAGE OF NATIONAL INCOME			PERCENTAGE OF AGGREGATE PAYMENTS TO INDIVIDUALS					
				INCL. ENTREP. SAVINGS			EXCL. ENTREP. SAVINGS		
	CHANGE FROM			CHANGE FROM			CHANGE FROM		
	1919–28 to 1929–38	*1919–23 to 1934–38*	DIRECTION & MAGNITUDE OF CHANGE	*1919–28 to 1929–38*	*1919–23 to 1934–38*	DIRECTION & MAGNITUDE OF CHANGE	*1919–28 to 1929–38*	*1919–23 to 1934–38*	DIRECTION & MAGNITUDE OF CHANGE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Wages & salaries	+6.3	+3.2	+	+0.46	−0.38	0	−1.7	−1.3	0 −
Other comp. of empl.	+2.8	+4.4	+*	+2.6	+4.2	+*	+2.6	+4.2	+*
Empl. comp.	+9.1	+7.6	+	+3.1	+3.8	0 +	+0.89	+2.9	0 +
Entrep. withdr.	+1.6	−0.71	0	−0.07	−1.7	0 −	−0.72	−2.0	−
Entrep. savings	−3.7	−1.4	−*	−3.5	−1.5	−*	−3.5	−1.7	−*
Entrep. net income	−2.0	−2.1	−	−3.6	−3.2	−	−4.2	−3.8	−
Service inc. excl. entrep. savings	+10.7	+6.9	+	+3.0	+2.1	0 +	+0.17	+0.85	0 +
Service inc. incl. entrep. savings	+7.0	+5.5	0 +	−0.51	+0.60	0	−3.3	−0.87	0 −
Dividends	+1.6	+1.7	+	+1.0	+1.4	+	+0.84	+1.3	+
Interest	+3.0	+2.0	+*	+2.2	+1.6	+	+1.9	+1.5	+
Dividends & interest	+4.6	+3.7	+	+3.2	+2.9	+	+2.8	+2.8	+
Rent	−2.2	−3.2	−*	−2.7	−3.5	−*	−2.9	−3.7	−*
Prop. income incl. rent	+2.4	+0.44	+	+0.51	−0.60	0	−0.17	−0.85	0 −
Corp. net savings	−7.2	−3.3	−*	−6.7	−3.4	−*	−6.6	−3.5	−*
Gov. net savings	−2.2	−2.7	−*	−2.2	−2.6	−*	−2.2	−2.6	−*
Net savings of all enterprises	−13.1	−7.3	−*	−12.4	−7.5	−*	−12.4	−7.9	−*
Agg. pay. excl. entrep. savings	+13.1	+7.3	+	+3.5	+1.5	0 +			
Agg. pay. incl. entrep. savings	+9.4	+6.0	0 +				−3.5	−1.7	0 −
National income				−8.9	−6.0	0 −	−12.4	−7.9	−

The symbols are based upon the direction and magnitude of change in the average percentages from 1919–28 to 1929–38 and from 1919–23 to 1934–38: 0 means that the signs of change in the two comparisons are different; 0 + or 0 −, that the change, in the same direction for both comparisons, is in both less than 10 per cent of the average percentage for 1919–38; + or −, that the change in one or both comparisons is more than 10 per cent but less than 40 per cent of the average percentage for the period; +* or −*, that the change in one or both comparisons is more than 40 per cent of the average percentage for the period.

The share of entrepreneurial withdrawals in national income shows no definite movement but in both aggregate payments totals it decreases. Entrepreneurial savings, however, decrease drastically and constitute a decreasing share of all three comprehensive income totals. Hence, total entrepreneurial income, the sum of entrepreneurial withdrawals and savings, also accounts for a decreasing share of each.

Since employee compensation is far bigger than either entrepreneurial withdrawals or income it largely determines total service income. The share of the latter, excluding entrepreneurial savings, in all three comprehensive income totals increases, significantly as a share in national income and much less so as a share in aggregate payments. When entrepreneurial savings are included in service income, its share in national income still increases; its share in aggregate payments including entrepreneurial savings shows no definite change; and its share in aggregate payments excluding entrepreneurial savings actually decreases.

Of the three types of property income, the share of interest increases most and consistently in all three comprehensive income totals; that of dividends, somewhat less; that of rent decreases markedly. Hence total property income including rent, while accounting for an increasing share in national income, constitutes a decreasing share in aggregate payments excluding entrepreneurial savings. However, the decrease is small and is perhaps no more worth noting than the increase in the share of employee compensation from 1919–28 to 1929–38.

Since the shares of corporate, government, and entrepreneurial net savings in all three comprehensive income totals decrease markedly, the share of the combined total of net savings of all enterprises decreases markedly; and since these items of savings constitute the differences among the three comprehensive income totals, the movements of the latter are determined by these declines. The total that excludes all or any of these savings items increases relatively to the total that includes them.

For the distribution of aggregate payments excluding entrepreneurial savings we extend the analysis to 1909 by using King's estimates (Table 25). The shares of employee compensation and of interest increase not only from 1919–28 to 1929–38 but also from 1909–18 to 1919–28, the former much more from the first to the second decade than from the second to the third. Likewise, the shares of entrepreneurial withdrawals and rent decline from the first to the second decade, as they do from the second to the third, indeed much more. The only type of payment for which such consistency of movement is not true is dividends (and, consequently, dividends and interest): its share declines from 1909–18 to 1919–28, probably owing to the unusually high levels it attained during the war years 1914–18.

In Table 25 there is some suggestion of secular tendencies in the shares of employee compensation, entrepreneurial withdrawals, interest, and rent. The rise in the share of employee compensation and the decline in that of entrepreneurial withdrawals could be expected over long periods in view of the decrease in unincorporated firms and the corresponding increase in corporate and other forms of organization that pay wages, salaries, etc. The rise in the share of interest may well be associated partly with the waxing importance of industries (government, public utilities) in which this type of property income predominates; partly, for this specific historical period, with a declining price level and the naturally greater resistance of interest to reduction. The reason for the decline in the share of rent is not so clear, unless it is because the main source, residential housing, is not among the rapidly developing industries.

B IN TYPE OF INCOME TOTALS WITHIN INDUSTRIES

To determine shifts in the distribution by type within the industrial divisions we measure shares of various components in both net income originating and total payments. When used as a base for this relative distribution the latter ordinarily ex-

TABLE 25

Aggregate Payments to Individuals excluding Entrepreneurial Savings

Change over the Period in the Percentage Distribution by Type

King's and Present NBER Estimates, 1909–1938

	PERCENTAGE DISTRIBUTION 1919–23		CHANGES IN PERCENTAGES				DIRECTION AND MAGNITUDE OF CHANGE [1]			
	King	Present NBER	1909–18 to 1919–28	1919–28 to 1929–38	1909–18 to 1929–38	1909–13 to 1934–38	1909–18 to 1919–28	1919–28 to 1929–38	1909–18 to 1929–38	1909–13 to 1934–38
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Employee compensation	59.0	63.0	+8.4	+0.89	+9.3	+11.9	+	0+	+	+
Entrep. withdrawals	21.8	18.5	−5.8	−0.72	−6.5	−7.7	−	0−	−	−
Service income	80.9	81.5	+2.7	+0.17	+2.8	+4.2	0+	0+	0+	0+
Dividends	4.9	5.1	−0.66	+0.84	+0.17	+0.54	−	+	0+	+
Interest	4.3	4.5	+0.23	+0.89	+1.1	+0.85	0+	+	+	+
Dividends & interest	9.2	9.6	−0.44	+1.8	+1.4	+1.4	0−	+	+	+
Rent [2]	9.9	8.9	−2.2	−1.9	−4.1	−5.6	−	−	−*	−*
Property income incl. rent	19.1	18.5	−2.7	−0.17	−2.8	−4.2	−	0−	−	−

[1] See note to Table 24.
[2] Sum of rent received by individuals, imputed rent, and interest in the real estate industry.

clude entrepreneurial savings, but for the few industries in which unincorporated firms are numerous and the inclusion of entrepreneurial savings might affect the distribution, additional entries, with total payments including entrepreneurial savings as base, are given. The conclusions are summarized in Tables 26–29 by the symbols signifying positive and negative, and minor, significant, and large changes.

In mining, various subdivisions of manufacturing, construction, and steam railroads we can separate wages from salaries (Table 26). In other industries the combined total alone can be studied. In the former there are significant differences in the movement of the shares of wages and salaries in both net income originating and total payments. As shares in net income originating, wages rise in textiles and leather, construction materials and furniture, paper, and miscellaneous and rubber manufacturing; but as shares in total payments, they decline except in textile and leather manufacturing, in which they rise slightly. The share of salaries in both net income originating and total payments rises in most industries: in net income originating it declines in food and tobacco alone; and in total payments it declines only in food and tobacco and chemical manufacturing. Comparison of wages and salaries industry by industry indicates that the share of salaries in both net income originating and total payments either increases more or declines less in all industries except food and tobacco.

We can now test the showing of Table 24—that the share of wages and salaries in national income increased, whereas in aggregate payments excluding entrepreneurial savings it declined; and that the share of employee compensation in both totals rose—by observing whether similar movements occurred in each industry in Table 26.

The shares of wages and salaries and of employee compensation in net income originating do increase in total manufacturing, some of its subdivisions (textile and leather, construction materials and furniture, paper, printing, and miscellaneous and rubber), and in street railways, water transportation,

TABLE 26

Employee Compensation, Direction and Magnitude of Change * over the Period in its Share in Net Income and Total Payments, by Industrial Divisions, 1919–1938

	SHARE IN NET INCOME				SHARE IN TOTAL PAYMENTS EXCL. ENTREPRENEURIAL SAVINGS			
	Wages	Salaries	Wages & salaries	Empl. comp.	Wages	Salaries	Wages & salaries	Empl. comp.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Agriculture	a	a	—	—	a	a	—	—
Mining	o	+*	o	o	—	+	o—	o—
Manufacturing	o	+	+	+	o—	+	o—	o—
Food & tobacco	o—	—	—	—	o—	—	o—	o—
Text. & leather	+	+	+	+	o+	o+	o+	o+
Constr. mat. & furn.	+	+*	+	+	o—	+	o—	o—
Paper	o+	+	+	+	o—	+	o+	o+
Printing	o	+	o+	o+	—	+	o	o
Metal	o	+*	o	o	o—	+	o—	o—
Chemical	o	o	o	o	—	—	—	—
Misc. & rubber	+	+	+	+	o	+	o+	o+
Construction	o	+	o	o	—	+	—	—
Transp. & other pub. util.	a	a	—	—	a	a	—	—
Electric light & power	a	a	—	—	a	a	—	—
Mfd. gas	a	a	—	—	a	a	—	—
Steam rr., Pull., & exp.	—	+	o	o	—	+	o—	o—
Street rwy.	a	a	o+	o+	a	a	o—	o—
Water transp.	a	a	o+	o+	a	a	o—	o—
Pipe lines	a	a	—	—	a	a	—*	—*
Telephone	a	a	o—	o—	a	a	—	—
Telegraph	a	a	+	+	a	a	o+	o+
Trade	a	a	+	+	a	a	o	o
Finance	a	a	+*	+*	a	a	+*	+*
Banking	a	a	+*	+*	a	a	+	+
Insurance	a	a	o	o	a	a	o+	o+
Real estate	a	a	+*	+*	a	a	+	+
Service	a	a	o+	o+	a	a	o—	o—
Government	a	a	o	+	a	a	—	o+
Federal	a	a	a	a	a	a	—*	+
State	a	a	a	a	a	a	o+	—
County	a	a	a	a	a	a	o—	o—
City	a	a	a	a	a	a	o—	o—
Miscellaneous	a	a	+	+	a	a	o+	o+
Total	a	a	+	+	a	a	o—	o+
CLASSIFICATION A BY CHARACTER OF PRODUCTIVE FUNCTION								
Commodity producing	a	a	o	o	a	a	o—	o—
Commodity transp. & distr.	a	a	o+	o+	a	a	o—	o—
Services	a	a	+	+	a	a	o+	+

TABLE 26 (concl.)

	SHARE IN NET INCOME				SHARE IN TOTAL PAYMENTS EXCL. ENTREPRENEURIAL SAVINGS			
	Wages (1)	Salaries (2)	Wages & salaries (3)	Empl. comp. (4)	Wages (5)	Salaries (6)	Wages & salaries (7)	Empl. comp. (8)
CLASSIFICATION C BY TYPE OF BUSINESS ORGANIZATION								
With large proportion of individual firms	a	a	+	+	a	a	o+	o+
Private corp.	a	a	+	+	a	a	o−	o−
Semi-public corp.	a	a	o−	o−	a	a	−	o−
Public	a	a	o	+	a	a	−	o+

Supplementary data for industries in which individual firms predominate:

	SHARE IN TOTAL PAYMENTS INCL. ENTREP. SAVINGS Employee Compensation		SHARE IN TOTAL PAYMENTS INCL. ENTREP. SAVINGS Employee Compensation
Agriculture	−	Real estate	+
Construction	o	Service	o+
Trade	o+	Miscellaneous	+

* See note to Table 24. An entry of 'a' means that the corresponding type of income is either absent, has not been estimated, or is less than 0.1 per cent of net income or total payments.

telegraph, trade, finance, service, and miscellaneous; but in several important industries (agriculture, food and tobacco, the transportation and public utility total, electric light and power, manufactured gas, telephones, and pipe lines) they decline. As shares in total payments, wages and salaries and employee compensation decline in many more industrial divisions (mining, total manufacturing and several of its subdivisions, construction, almost all the public utility subdivisions, and service). The rise in the shares of wages and salaries and of employee compensation in national income is thus not uniformly true of the distribution of net income originating for all industries; nor is the increase in the share of employee compensation in aggregate payments true of the share in total payments in most industries; and the mild decline in the share of wages and salaries in aggregate payments becomes marked in the share in total payments in several industries.

In general the shares of both wages and salaries and employee compensation tend to increase less or decline more in the commodity producing industries and the public utilities than in the comprehensive totals; and in the service industries

they increase more or decline less than in the comprehensive totals. Thus in Classification A the shares in both net income originating and total payments for the service group rise more than the shares for the commodity producing and transporting and distributing groups (if the latter rise at all). In Classification C it is the semi-public group, primarily public utilities, that is characterized by declining shares of wages and salaries and of employee compensation. For the other groups in Classification C the changes in the shares in net income and total payments differ, and in the public industry group the change in the shares of wages and salaries in net income and total payments differs from that in the shares of employee compensation. The reasons for these divergences are obvious. The effect of negative business savings in the 1930's on the distribution of net income originating in the group in which private corporations predominate (i.e., mining and manufacturing) causes the share of employee compensation to rise; when we omit net savings the share in total payments declines. In the public category it is the addition of relief and other compensation that causes the share of total employee compensation to rise; the share of wages and salaries alone does not rise. Finally, if we omit net savings from income originating in the group in which unincorporated firms are still numerous, the rise in the share of employee compensation becomes smaller.

The shares of entrepreneurial withdrawals and net income in the comprehensive income totals decline; and when we examine their shares in net income originating and total payments industry by industry we find that the decline is fairly widespread (Table 27). Only in agriculture and finance do the shares of entrepreneurial income in net income originating and of withdrawals in total payments rise, and for agriculture even these rises are mild. In construction and service the share of withdrawals in total payments rises also, that in construction markedly. In all other industries in which entrepreneurial income and withdrawals exist, the component constitutes a declining share in net income originating and in total

TABLE 27

Entrepreneurial and Service Incomes, Direction and Magnitude of Change * over the Period in their Shares in Net Income and Total Payments, by Industrial Divisions, 1919–1938

	SHARE IN NET INCOME			SHARE IN TOTAL PAYMENTS EXCL. ENTREP. SAVINGS	
		SERVICE INCOME			Service income
	Entrep. income	Incl. savings	Excl. savings	Entrep. withdr.	excl. savings
	(1)	(2)	(3)	(4)	(5)
Agriculture	o+	o	o	o+	o−
Mining	−*	o	o	−	o−
Manufacturing	−*	+	+	−*	o−
Food & tobacco	−	−	−	−*	−
Textile & leather	−*	+	+	−*	o+
Constr. mat. & furn.	−*	+	+	−*	o−
Paper	−*	+	+	−*	o+
Printing	−*	o+	o+	−*	o−
Metal	−*	o	o	−*	o−
Chemical	−	o	o	−*	−
Misc. & rubber	−*	+	+	−	o+
Construction	o	o+	+	+*	o−
Transp. & other pub. util.	a	−	−	a	−
Elec. light & power	−*	−	−	−*	−
Manufactured gas	a	−	−	a	−
Steam rr., Pull., & exp.	a	o	o	a	o−
Street rwy.	a	o+	o+	a	o−
Water transp.	−	o	o	−*	o−
Pipe lines	a	−	−	a	−*
Telephone	a	o−	o−	a	−
Telegraph	a	+	+	a	o+
Trade	−	o	+	−	o−
Finance	+*	+*	+*	+*	+*
Banking	a	+*	+*	a	+
Insurance	o−	o	o	o−	o+
Real estate	a	+*	+*	a	+
Service	o−	o+	+	+	o−
Government	a	+	+	a	o+
Federal	a	a	a	a	+
State	a	a	a	a	−
County	a	a	a	a	o−
City incl. pub. educ.	a	a	a	a	o−
Miscellaneous	o	+	+	+	o+
Total	−	o+	+	−	o+

	SHARE IN NET INCOME			SHARE IN TOTAL PAYMENTS EXCL. ENTREP. SAVINGS	
		SERVICE INCOME			Service income excl. savings
	Entrep. income	Incl. savings	Excl. savings	Entrep. withdr.	
	(1)	(2)	(3)	(4)	(5)
CLASSIFICATION A BY CHARACTER OF PRODUCTIVE FUNCTION					
Commodity producing	o—	o	o	—	o—
Commodity transp. & distr.	—	o+	+	o	o—
Services	o—	+	+	+	+
CLASSIFICATION C BY TYPE OF BUSINESS ORGANIZATION					
With large proportion of individual firms	o—	o+	+	o	o+
Private corp.	—*	o	o	—*	o—
Semi-public corp.	+	o	o	+	o—
Public	a	+	+	a	o+

Supplementary data for industries in which individual firms predominate:

	SHARE IN TOTAL PAYMENTS INCL. ENTREPRENEURIAL SAVINGS	
	Entrepreneurial net income	Service income incl. savings
Agriculture	o+	o
Construction	o	o—
Trade	—	o—
Real estate	a	+
Service	—	o—
Miscellaneous	—	o+

* See notes to Tables 24 and 26.

payments. This is reflected in Classifications A and C where the only increase is in entrepreneurial withdrawals as a share in total payments in the service industries and as a share in both income totals in the semi-public industries (entrepreneurs in the latter are so few that the entries for this group can be discounted).

The share of service income, including or excluding entrepreneurial savings, in net income originating rises in most industries but declines in food and tobacco and several public utilities. Its share in aggregate payments rises slightly, and in total payments, declines in the majority of industries. Indeed, the increase in its share in the comprehensive total is due largely to the increase in its share in the service category; in the commodity producing and transporting and distributing

categories its share declines. Thus the share of service income, like that of employee compensation and unlike that of entrepreneurial income or withdrawals, shows considerable diversity of movement, with a preponderance of declines in the several industries as a share in total payments, in contrast to its mild rise as a share in the comprehensive total.

The share of dividends in net income originating increases in most industries as well as for the country as a whole (Table 28). The few industries in which it does not—textiles and leather, paper, miscellaneous and rubber manufacturing, steam railroads, telegraph, finance and its subgroups—are, for the most part, industries that are losing weight in the industrial structure (see Ch. 5). As a share in total payments, dividends do not rise so consistently from industry to industry but the exceptions are not many more than for the share in net income originating. In all groups of Classifications A and C, except service (in which dividends are small) and public industries (in which they do not exist), the share of dividends in both net income originating and total payments rises.

The increase in the share of interest is as widespread among industries as that in the share of dividends. In the share in net income originating it does not occur in only nine industries: agriculture, food and tobacco, textiles and leather, miscellaneous and rubber manufacturing, construction, telephone, insurance, government, and miscellaneous; and in at least two, interest is a rather important item. In total payments the share of interest fails to rise in one or two more industries. But Table 28 conveys the definite impression that the pronounced rise in the share of interest in all three comprehensive totals is characteristic of most industries. In Classification C this increase in the share of interest in net income originating is absent in the public industries alone; and in its share in total payments, only in the commodity transporting and distributing group of Classification A and the public industry group of Classification C.

Since the shares of both dividends and interest in net income

TABLE 28

Property Income, Direction and Magnitude of Change * over the Period in its Share in Net Income and Total Payments, by Industrial Divisions, 1919–1938

	SHARE IN NET INCOME			SHARE IN TOTAL PAYMENTS EXCL. ENTREP. SAVINGS		
	Dividends	Interest	Dividends & interest	Dividends	Interest	Dividends & interest
	(1)	(2)	(3)	(4)	(5)	(6)
Agriculture	+*	o	o	+*	o	+
Mining	+*	+*	+*	+*	+*	+*
Manufacturing	+	+*	+	+	+*	+
Food & tobacco	+*	o	+*	+*	−	+*
Text. & leather	−	−*	−	−	−*	−
Constr. mat. & furn.	+*	+*	+*	+	+*	+
Paper	o −	+*	+	−	+*	o −
Printing	+	+*	+	+	+*	+
Metal	+*	+*	+*	+	+*	+
Chemical	+*	+*	+*	+	+*	+
Misc. & rubber	o	o	o	−	o	−
Construction	+*	o	+*	+*	o	+*
Transp. & other pub. util.	+*	+	+*	+*	+	+*
Elec. light & power	+	+	+	+	o +	+
Mfd. gas	+*	+*	+*	+	+*	+
Steam rr., Pull., & exp.	o −	+	+	−	+	+
Street rwy.	+	+	+	+	+	+
Water transp.	+*	+*	+*	+*	+*	+*
Pipe lines	+*	+*	+*	+	+*	+
Telephone	+*	−	+*	+*	−	+*
Telegraph	−*	+*	o	−*	+*	−
Trade	+*	+*	+*	+	o	+
Finance	o	+*	+*	−	+*	+*
Banking	o	a	o	−	a	−
Insurance	−	o −	−*	−	−	−*
Real estate	o −	+*	+*	−	+*	+*
Service	+	+*	+*	o	+*	+*
Government	a	−	−	a	−	−
Federal	a	a	a	a	−*	−*
State	a	a	a	a	+*	+*
County	a	a	a	a	o +	o +
City incl. pub. educ.	a	a	a	a	+	+
Miscellaneous	+	o	o	−	−*	−
Total	+	+*	+	+	+	+

TABLE 28 (concl.)

	SHARE IN NET INCOME			SHARE IN TOTAL PAYMENTS EXCL. ENTREP. SAVINGS		
	Dividends	Interest	Dividends & interest	Dividends	Interest	Dividends & interest
	(1)	(2)	(3)	(4)	(5)	(6)
CLASSIFICATION A BY CHARACTER OF PRODUCTIVE FUNCTION						
Commodity producing	+*	+*	+*	+*	+*	+*
Commodity transp. & distr.	+	+	+	+	o	+
Services	o	+	+	−	+	o+
CLASSIFICATION C BY TYPE OF BUSINESS ORGANIZATION						
With large proportion of individual firms	+	+*	+*	+	+	+
Private corp.	+	+*	+	+	+*	+
Semi-public corp.	+	+	+	+	+	+
Public	a	−	−	a	−	−

* See notes to Tables 24 and 26.

originating and total payments rise in most industries, the share of their combined total also rises in most industries. As all rent is assigned to real estate this sum of dividends and interest is the one total of property income that can be studied for the several industries. Thus the inclusion of rent under property income affects the distribution by type only for real estate and for groups of industries including it. The effect is of course great: whereas in real estate the share of interest and dividends together in net income originating and total payments rises markedly, total property income including rent rises slightly as a share in net income originating and declines slightly as a share in total payments.

Thus, while the share of property income including rent in aggregate payments tends to decline over the period, its share in national income and for most industries in both net income originating and total payments rises. This difference may be partly due to our inability to apportion rent among the various industries in which it may originate. Yet, compared with interest and dividends combined, rent is probably a small item in many industries, for most rent originates in connection with residential housing. It is therefore reasonable to assume that

even if we could distribute rent among the industries in which it originates the share of property income in total payments in most industries would still rise, while in aggregate payments it declines—obviously because the declining property income component (rent) is concentrated in one or two industries and the rising property income components (dividends and interest) are distributed widely among industries.

We conclude the survey of changes over the period in the distribution by type within industries by observing the share of net savings in net income originating and total payments (Table 29). To complement net savings we record the share of total payments (exclusive of all net savings) in net income originating.

As a share in net income originating and total payments net savings of corporations and government decline significantly in practically all industries, industrial divisions, and Classifications A and C. The two exceptions are food and tobacco and insurance, both growing industries not too sensitive to cyclical disturbances. This widespread decline is characteristic also of net savings of all enterprises (including entrepreneurial savings).

Since the share of net savings of all enterprises in net income originating declines in practically all industries and industrial groups, the share of total payments must rise.

C EFFECTS OF INTRA- AND INTER-INDUSTRY SHIFTS

The share of any component, such as wages and salaries or entrepreneurial income, in a comprehensive income total is the product of two factors: (1) the share of the component in net income or total payments originating in each industry; (2) the share of net income or total payments originating in each industry in national income or aggregate payments. Changes in the distribution of comprehensive totals by type may, therefore, be due to changes in the distribution by type of net income or total payments originating in each industry; or, with a constant distribution by type within each industry but dif-

TABLE 29

Savings and Total Payments, Direction and Magnitude of Change [1] over the Period in their Shares in Net Income and of Savings in Total Payments, by Industrial Divisions, 1919–1938

	SHARE IN NET INCOME			SHARE IN TOTAL PAYMENTS EXCL. ENTREP. SAVINGS	
	NET SAVINGS		Total payments excl. entrep. savings	NET SAVINGS	
	Corp. & gov.	All enterprises		Corp. & gov.	All enterprises
	(1)	(2)	(3)	(4)	(5)
Agriculture	a	o	o	a	o
Mining	—*	—*	+	—*	—*
Manufacturing	—*	—*	+	—*	—*
Food & tobacco	o	o	o	—*	o
Textile & leather	—*	—*	+	—*	—*
Constr. mat. & furn.	—*	—*	+	—*	—*
Paper	—*	—*	+	—*	—*
Printing	—*	—*	+	—*	—*
Metal	—*	—*	+	—*	—*
Chemical	—*	—*	+	—*	—*
Misc. & rubber	—*	—*	+	—*	—*
Construction	—*	—*	+	—*	—*
Transp. & other pub. util.	—*	—*	o +	—*	—*
Electric light & power	—*	—*	o +	—*	—*
Mfd. gas	—*	—*	+	—*	—*
Steam rr., Pull., & exp.	—*	—*	o +	—*	—*
Street rwy.	—*	—*	+	—*	—*
Water transp.	—*	—*	o +	—*	—*
Pipe lines	—*	—*	+	—*	—*
Telephone	—*	—*	o +	—*	—*
Telegraph	—*	—*	+	—*	—*
Trade	—*	—*	+	—*	—*
Finance	—*	—*	o +	—*	—*
Banking	—*	—*	+*	—*	—*
Insurance	o	o	o	o	o
Real estate	—*	—*	o +	—*	—*
Service	—*	—*	+	—*	—*
Government	—*	—*	+	—*	—*
Miscellaneous	—*	—*	+	—*	—*
Total	—*	—*	+	—*	—*
CLASSIFICATION A BY CHARACTER OF PRODUCTIVE FUNCTION					
Commodity producing	—*	o	o	—*	—*
Commodity transp. & distr.	—*	—*	+	—*	—*
Services	—*	—*	+	—*	—*
CLASSIFICATION C BY TYPE OF BUSINESS ORGANIZATION					
With large proportion of individual firms	—*	—*	+	—*	—*
Private corp.	—*	—*	+	—*	—*
Semi-public corp.	—*	—*	o +	—*	—*
Public	—*	—*	+	—*	—*

Supplementary data for industries in which individual firms predominate:

	SHARE IN NET INCOME Total payments incl. entrep. savings
Agriculture	..[2]
Construction	o +
Trade	o +
Real estate	o +
Service	o +
Miscellaneous	+

[1] See notes to Tables 24 and 26.
[2] Net income and total payments including entrepreneurial savings are identical.

ferent distributions from industry to industry, to changes in the relative importance of industries as measured by their shares in national income or aggregate payments; or to both.

As we have seen, changes in the distribution of income by type occurred over the period not only in national income and aggregate payments but also in net income and total payments originating in each industry. Yet it is not clear whether the intra-industry shifts account fully for the changes in the distribution by type of national income and aggregate payments or whether shifts in the relative importance of industries also contribute. This question is analogous to that raised in Chapter 5 (Sec. 3) where we indicate that changes in the industrial distribution could be due to changes in the industrial distribution of each component or to shifts in the relative importance of income types, or to both. We did not implement these alternatives by analysis, since it did not seem to us that the relation could be conceived as extending from the distribution of the comprehensive income total by type as a cause to the industrial distribution as an effect; nor that there were mechanisms by which efforts would be made to maintain or alter the relative distribution among income types with consequences to the distribution by industrial source. But the question concerning the effects of inter- and intra-industry shifts upon the distribution of comprehensive income totals by type does seem realistic enough to warrant further investigation.

The active units in economic life are attached to and operate within the framework of individual industries; there is inter-

industry competition, i.e., conscious or unconscious attempts on the part of one industry to gain at the expense of other industries; industries differ markedly in their responses to economic conditions; given inter-industry shifts as cause, changes in the distribution by type of comprehensive income totals may well be treated as effects. Moreover, attachment to industries does give rise to significant differences among groups of income recipients, and the distribution by type within individual industries is of considerable interest.

On the basis of the analysis already carried through in the preceding sections of this chapter and Chapter 5 the simplest way to explore more directly the effects of intra- and inter-industry shifts on changes over the period in the distribution of comprehensive income totals by type is the following. We measure the change from 1919–28 to 1929–38 in the average share in national income (or aggregate payments) of the various income components. This change can be viewed as the product of the changes in the shares of each within the several industries and the changes in the shares of the respective industries in national income (or aggregate payments). But instead of weighting the change in the share of a given income type in each industry by *changes* in the shares of the respective industries in national income (or aggregate payments), we can weight them by the *average share* for 1919–38 of the respective industries, and divide the sum of the products by 100, i.e., the sum total of the weights. By this method we approximate the change from 1919–28 to 1929–38 in the share of the given income type in national income (or aggregate payments), on the assumption that the relative importance of industries remained constant over the period, i.e., that there were no shifts in the industrial distribution. If this result is subtracted from the change in the share of this income type shown in Table 24, the residual approximates the change in the share of the given income type in national income (or aggregate payments) that is due exclusively to shifts in the relative importance of various industries.

TABLE 30

Effects of Inter- and Intra-Industry Shifts upon the Change over the Period in the Distribution of National Income by Type, 1919–1938

	CHANGE FROM 1919–28 TO 1929–38			CHANGE FROM 1919–23 TO 1934–38		
		CHANGE DUE TO			CHANGE DUE TO	
	TOTAL CHANGE (1)	Intra-industry shifts (2)	Inter-industry shifts (1 − 2) (3)	TOTAL CHANGE (4)	Intra-industry shifts (5)	Inter-industry shifts (4 − 5) (6)
Wages & salaries	+6.3	+7.7	−1.4	+3.2	+1.8	+1.4
Employee compensation	+9.1	+9.6	−0.5	+7.6	+5.0	+2.6
Entrep. withdrawals	+1.6	+2.6	−1.0	−0.71	+0.20	−0.91
Entrep. net income	−2.0	−1.4	−0.6	−2.1	−1.1	−1.0
Service income excl. entrep. savings	+10.7	+12.2	−1.5	+6.9	+5.2	+1.7
Service income incl. entrep. savings	+7.0	+8.2	−1.2	+5.5	+3.9	+1.6
Dividends	+1.6	+1.8	−0.2	+1.7	+1.5	+0.2
Interest	+3.0	+2.6	+0.4	+2.0	+1.8	+0.2
Prop. income incl. rent	+2.4	+2.9	−0.5	+0.44	+1.7	−1.3
Agg. pay. excl. entrep. savings	+13.1	+15.2	−2.1	+7.3	+6.9	+0.4
Total net savings	−13.1	−15.2	+2.1	−7.3	−6.9	−0.4
Corp. & gov. net savings	−9.4	−11.1	+1.7	−6.0	−5.5	−0.5

Columns 1 and 4 of Table 30 measure changes in shares shown by the direct distribution of national income and are identical with the entries in Table 24. Columns 2 and 5 were obtained by weighting the changes for each industry (using the most detailed industrial classification) by the average share of the industries in national income (from Table 13) and dividing the sum of the products by 100. The entries show what would have been the changes in the shares of wages and salaries, employee compensation, etc. in national income if its industrial distribution were held constant year in, year out at the 1919–38 average level, and if, therefore, changes in the shares of income types in it were caused by changes in the distribution of net income by type within each industry alone. Columns 2 and 5 thus measure the effects of *intra-industry* shifts on changes in the distribution of national income by type. Columns 3 and 6, obtained by subtracting columns 2 and 5 from 1 and 4, measure the effects of shifts in the industrial composition of national income, i.e., of *inter-industry* shifts.

For the income components and their subtotals in Table 30 the conclusions concerning changes from 1919–28 to 1929–38 are clear. For all types of income, except interest and the two net savings items, the total change is algebraically smaller than the change ascribable to intra-industry shifts. This means that the shifts in relative importance among industries caused the shares in national income of all income types, except interest and net savings, to decline. In other words, industries in which the average shares of such components as wages and salaries, employee compensation, entrepreneurial withdrawals or net income, and dividends were above the countrywide average shares lost relatively to industries in which they were below. But for interest and net savings, the reverse occurred: industries in which the average shares of these two components were above the countrywide average shares gained relatively to industries in which they were below.

This conclusion can be checked by comparing the industries in Tables 23 and 14. However, correlating industries by two of their characteristics: (1) the excess or shortage of the average share of an income type in the net income originating in the various industries compared with its average share in national income; (2) the sign and magnitude of the change in the share of the industry in national income from 1919–28 to 1929–38, would mean a needless multiplication of detail and would merely demonstrate what must arithmetically follow from the differences between columns 1 and 2, Table 30. Even without such a demonstration the reason for the relations between columns 1, 2, and 3 of Table 30 is obvious. For example, a relative decline in net savings from the first to the second decade in any industry in excess of the decline for the country would reduce the weight of that industry in national income. It would tend also to give that industry a small average share of net savings in net income originating. Hence there would be positive correlation between a small share of net savings in an industry and the decline in the weight of that industry in national income; or between a large share of net savings in an industry

and the increase in the weight of that industry in national income. Similarly, the industries in which the share of interest in national income is relatively large have increased in weight: government, electric light and power, manufactured gas. Obviously this increase was insufficiently offset by a decline in the shares in national income of other industries with relatively large shares of interest (steam railroads, street railways, real estate) and was reenforced by the decline in the shares of industries in which interest is negligible (manufacturing, mining, and construction).

Changes from the first to the last quinquennium differ. Here again the effect of inter-industry shifts was to increase the share of interest in national income and to reduce the shares of entrepreneurial withdrawals and of net income. But these effects of shifts in the industrial composition of national income upon changes in its distribution by type were more moderate between 1919–23 and 1934–38 than between 1919–28 and 1929–38. Furthermore, the shift in the industrial composition tended to *reduce* the share of net savings and to *increase* the shares of wages and salaries and of dividends from the first to the last quinquennium, whereas it tended to increase the share of net savings and to reduce those of wages and salaries and of dividends from the first to the second decade. The increase in the share of wages and salaries from the first to the last quinquennium is due largely to the remarkable recovery in the last quinquennium of commodity producing industries with their large shares of wages and salaries and of employee compensation (mining, manufacturing, and construction); the loss in their share in national income was therefore much less when measured from 1919–23 to 1934–38 than from 1919–28 to 1929–38. As some industries with high ratios of wages and salaries and employee compensation declined less in relative importance and other industries with high ratios (government, trade, telephone) increased, inter-industry shifts between 1919–23 and 1934–38 raised the shares of wages and salaries and of employee compensation in national income.

In one respect the analysis of changes between the two decades and the two quinquennia in Table 30 yields similar results: the removal of the effects of inter-industry shifts and the confining of changes in the shares of income types to those caused by intra-industry shifts does not materially influence the changes in the distribution of national income by type. When we compare columns 1 and 2 for the changes from 1919–28 to 1929–38, not one income component or subtotal alters its sign. Thus were we to consider only intra-industry shifts in shares of income types, disregarding the effects of inter-industry shifts, the shares in national income of wages and salaries, employee compensation, entrepreneurial withdrawals, both totals of service income, dividends, interest, property income including rent, and aggregate payments excluding entrepreneurial savings would still rise significantly; and those of entrepreneurial net income and the various savings totals would still decline significantly. In the comparison for 1919–23 and 1934–38 the sign is reversed in the share of entrepreneurial withdrawals alone; but the change in its share in national income is minor anyway, whether inter- and intra-industry shifts are combined or the effects of intra-industry shifts alone are considered. In short, while shifts in the industrial composition of national income had some effect on changes in the distribution by type, it was moderate.

When changes over the period in the distribution by type of aggregate payments excluding entrepreneurial savings are similarly analyzed, the results are significantly different (Table 31). The entries in Table 31 were derived by a procedure analogous to that used in Table 30, except that changes within each industry were measured for shares in total payments and the weights used were the average share for 1919–38 of each industry in aggregate payments.

Changes in the industrial composition of aggregate payments, both from 1919–28 to 1929–38 and from 1919–23 to 1934–38, were such as to raise the shares of wages and salaries, employee compensation, total service income excluding entre-

TABLE 31

Effects of Inter- and Intra-Industry Shifts upon the Change over the Period in the Distribution of Aggregate Payments, excluding Entrepreneurial Savings, by Type, 1919–1938

	CHANGE FROM 1919–28 TO 1929–38			CHANGE FROM 1919–23 TO 1934–38		
		CHANGE DUE TO			CHANGE DUE TO	
	TOTAL CHANGE	Intra-industry shifts	Inter-industry shifts (1 − 2)	TOTAL CHANGE	Intra-industry shifts	Inter-industry shifts (4 − 5)
	(1)	(2)	(3)	(4)	(5)	(6)
Wages & salaries	−1.7	−2.4	+0.7	−1.3	−3.0	+1.7
Employee compensation	+0.89	−1.1	+2.0	+2.9	−0.87	+3.8
Entrep. withdrawals	−0.72	+0.69	−1.4	−2.0	+0.43	−2.4
Service income excl. entrep. savings	+0.17	−0.43	+0.60	+0.85	−0.44	+1.3
Dividends	+0.84	+0.65	+0.19	+1.3	+1.2	+0.1
Interest	+1.9	+0.17	+1.7	+1.5	+1.3	+0.2
Prop. income incl. rent	−0.17	+0.43	−0.60	−0.85	+0.44	−1.3
Total net savings	−12.4	−13.3	+0.9	−7.9	−8.2	+0.3
Corp. & gov. net savings	−8.8	−9.5	+0.7	−6.2	−6.2	0.0

preneurial savings, dividends, and interest. In other words, industries characterized by larger than average shares of these income components gained compared with industries characterized by smaller than average shares. Shifts in the industrial composition tended to depress the shares of entrepreneurial withdrawals and of property income including rent. By and large, the effects of inter-industry shifts upon changes in the distribution of aggregate payments by type are greater than the effects of shifts within industries; and also than the total change in the distribution of aggregate payments by type.

Consequently, for several income type components in Table 31 the total change in the share in aggregate payments is in the opposite direction to that caused by the change in the distribution by type within industries (col. 1, 2, 4, and 5). Thus in the comparisons for both decades and quinquennia the total change in the share of employee compensation in aggregate payments is upward, while in the distribution by type within industries the share of employee compensation declines; and only shifts in industrial composition raise it in the comprehensive total. Likewise, the decline in the share of entrepre-

neurial withdrawals in aggregate payments is due exclusively to shifts in industrial composition in favor of industries characterized by small shares; intra-industry shifts alone would cause a small rise. There are similar reversals in the sign of the change characterizing the share of total service income excluding entrepreneurial savings. Finally, the total change in the share of property income including rent is negative, but only because of shifts in the industrial composition of aggregate payments. Within industries changes in the distribution by type cause a small rise in the share of property income including rent.

In the light of Table 31 the conclusions concerning shifts in the distribution of aggregate payments by type may be restated. In the countrywide distribution the rise in the shares of employee compensation and of service income excluding entrepreneurial savings and the decline in the shares of entrepreneurial withdrawals and of property income including rent are due exclusively to shifts in the industrial composition of aggregate payments. If these shifts were removed and only the change within industries taken into account, the shares of wages and salaries, employee compensation, and total service income would decline; and the shares of entrepreneurial withdrawals, dividends, interest, and total property income including rent, would rise.

4 *Changes during Business Cycles*

A IN COUNTRYWIDE TOTALS

As in the analysis of changes in national income and in its industrial distribution during business cycles we are concerned here with answering two questions. First, how do the various income type components, either in the country at large or within industries, change during expansions and contractions in the country's economic activity? Second, are there any significant differences among the components, either country-

wide or within industries, in the intensity with which they respond to changes associated with business cycles?

The cyclical behavior of income type components is analyzed by a procedure strictly analogous to that used in Chapters 4 and 5: the chronology of reference periods is the same, as is the method of scoring. We therefore introduce Table 32 without further explanation.

The totals were studied in Chapter 5 and require no comment. We merely note that by and large the countrywide type of income totals rise fairly consistently during expansions; decline somewhat less consistently during contractions; and that in most, the differential movement is consistently negative. Nevertheless, significant differences appear in the behavior of the totals themselves. For example, wages conform to business cycles more consistently than salaries; employee compensation, than entrepreneurial withdrawals. The most conspicuous lack

TABLE 32

Direction of Movement during Business Cycles in Types of Income and in their Percentage Shares of National Income and Aggregate Payments, 1919–1938

	TOTAL			% OF NATIONAL INCOME			% OF AGG. PAY. EXCL. ENTREP. SAVINGS		
	Expansion (1)	Contraction (2)	Differential (3)	Expansion (4)	Contraction (5)	Differential (6)	Expansion (7)	Contraction (8)	Differential (9)
Wages & salaries	+5	−3	−5	−1	+3	+3	+3	−5	−5
Wages *	+5	−5	−5	−3	+3	+3	+1	−5	−5
Salaries *	+5	−1	−3	−1	+5	+5	−3	+5	+5
Employee compensation	+5	−3	−5	−1	+3	+3	+3	−3	−5
Entrep. withdrawals	+5	−1	−3	−3	+5	+3	−5	+1	+3
Entrep. net income	+3	−3	−5	−1	−1	−1	+1	−1	−3
Service income excl. entrep. savings	+5	−1	−5	−3	+5	+3	+3	−1	−1
Service income incl. entrep. savings	+5	−3	−5	−5	+5	+5	+1	−3	−3
Dividends	+5	−3	−5	+1	+1	+1	+3	−1	−3
Interest	+3	+1	+1	−1	+5	+5	−3	+5	+5
Dividends & interest	+5	−1	−5	+1	+3	+5	−1	+3	+1
Rent	+1	−1	−1	−3	+1	+5	−5	+1	+3
Property income incl. rent	+5	+1	−3	−1	+3	+5	−3	+1	+1
Net savings	+3	−5	−5	+3	−5	−5	+3	−5	−5

* Based on data for mining, manufacturing, construction, and steam railroads, Pullman, and express, the only industries for which this breakdown is possible.

of conformity is in interest, an income type whose character and industrial source (government, agriculture, and real estate are the important sources) make it less responsive to short term fluctuations in economic conditions.

The movements of the shares in national income indicate which income type components respond to business cycles with a wider amplitude and which with a narrower. For reasons repeatedly indicated, the differential movement is the measure of behavior during business cycles least affected by longer term changes. Net savings, which fluctuate violently, so dominate the movements of the other components of national income that most have narrower amplitudes than national income (col. 6). In other words, net savings affect conforming fluctuations in national income during business cycles so much that, by comparison, conforming fluctuations of the other income components seem to have narrower amplitudes. The only exception is entrepreneurial net income, a component itself affected by entrepreneurial savings.

Only by excluding net savings and studying the movements in the percentage distribution of aggregate payments can we discover which type of payment components are most responsive to business cycles (col. 9). Wages and salaries, employee compensation, wages (but not salaries), and dividends have conforming fluctuations of wider amplitudes than aggregate payments. Salaries, entrepreneurial withdrawals, interest, and rent have consistently narrower amplitudes. The insignificant scores for the more inclusive totals, such as service income or property income including rent, indicate such inconsistency in the movement of their percentage shares that it is difficult to say whether on the whole their conforming fluctuations have wider or narrower amplitudes than aggregate payments. This is, of course, because the subtotals include components that behave in different ways during business cycles: service income includes the responsive and sensitive wages and the less responsive salaries and entrepreneurial withdrawals;

property income includes the responsive and sensitive dividends and the less responsive interest and rent.

The differences in amplitude of conforming fluctuations among the income type components are not unexpected. But we must test them by studying the behavior of income type components within industries as well. We consider first the totals, then the percentage distribution by type of net income originating in each industry, and finally the percentage distribution of total payments by type within industries.

B IN TYPE OF INCOME TOTALS WITHIN INDUSTRIES

The consistency of movement during business cycles of income type totals by industries and major industrial groups is analyzed in Chapter 5.[1] Tables 18 and 19 can be used here to establish the movements of the totals within industries.

Table 19 shows that, on the whole, similarities and differences observed for countrywide income type totals (in Table 32) persist within the groups of Classifications A and C. The differential movement indicates that net savings conform most consistently to business cycles; interest, least consistently; indeed, in most industrial groups the latter rises from expansion to contraction. Dividends, wages and salaries, and entrepreneurial withdrawals move in conformity with business cycles, but not as consistently as net savings.

The differences among the groups reflect essential differences in sensitivity to business cycles among industrial groups (e.g., commodity producing on the one hand and service industries on the other; private corporations and public industries, etc.) superimposed upon essential differences in such sensitivity among income type components. Measured again by the differential movement, wages and salaries reflect business cycles quite consistently in the commodity producing and com-

1 Entrepreneurial net income and corporate and government savings, rather than entrepreneurial withdrawals and net savings of enterprises, are given in Tables 18 and 19, but the movements are similar. Presentation of similar tables here, which would duplicate much of the material, was considered superfluous.

modity transporting and distributing groups, but much less consistently in the service industries. Also, wages and salaries have scores of high positive conformity in the first three groups of Classification C but not in the group of public industries (for which the entry + 3 for the differential movement indicates inverse conformity). Entrepreneurial income conforms well in all the groups in which it exists, except the commodity transporting and distributing group in Classification A. Dividends also conform fairly consistently in all groups except the semipublic in Classification C. Interest, which conforms poorly or inversely in most groups, conforms fairly well and positively in the public industries group of Classification C. Finally, net savings conform closely in all groups.

The components of our more detailed industrial classification move on the whole in consistent conformity with business cycles. Table 18 lists the industries and components that *do not show* significant conformity to business cycles (i.e., are measured by differential scores other than — 5 or — 3). All components, with the sole exception of interest, in most industries conform significantly to business cycles. But interest in many does not: in agriculture, mining, manufacturing and most of its subdivisions, transportation and public utilities and most of its subdivisions, construction, trade, finance, service, and government. The widespread conformity of wages and salaries, entrepreneurial withdrawals, dividends, and net savings is thus confirmed, as well as the lack of definite conformity of interest in almost all industries.

C IN PERCENTAGE SHARES OF NET INCOME ORIGINATING

For most groups in Classifications A and C the shares of the various income types as percentages of net income originating decline during expansions, rise during contractions, and their differential movements are positive (Table 33). The outstanding exception is net savings of enterprises, whose share moves in consistent positive conformity to business cycles. Obviously the amplitude of their conforming fluctuations so influences

TABLE 33

Direction of Movement during Business Cycles in Percentage Shares of Types of Income in Net Income Originating Broad Industrial Divisions, 1919–1938

	CLASSIFICATION A			CLASSIFICATION C			
	Commodity producing	Commodity transp. & distr.	Services	With large proportion of indiv. firms	Private corp.	Semi-public corp.	Public
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
EXPANSION							
Wages & salaries	−3	0	−1	+1	−3	−3	−3
Entrep. withdrawals	−3	−3	+1	−3	−5	+1	
Dividends	+1	+1	+3	+3	+1	+1	
Interest	−3	−3	−3	+1	−1	−5	−5
Net savings	+3	+1	+3	+1	+3	+3	+3
CONTRACTION							
Wages & salaries	+3	+5	+5	+3	+5	−1	+5
Entrep. withdrawals	+5	+5	+1	+3	+5	+5	
Dividends	+1	+1	−1	−1	+3	+5	
Interest	+5	+3	+3	+5	+5	+5	−1
Net savings	−5	−5	−5	−5	−5	−5	−1
DIFFERENTIAL MOVEMENT							
Wages & salaries	+5	+1	+5	+1	+5	+3	+5
Entrep. withdrawals	+5	+3	+3	+3	+5	+3	
Dividends	+3	+1	+1	−1	+3	+3	
Interest	+5	+5	+5	+5	+5	+5	+1
Net savings	−5	−3	−5	−3	−5	−3	−5

net income originating that the amplitudes of conforming movements in all other income components must be narrower. In this respect Table 33 corroborates Table 32.

But the responses of the various income type components within the industrial groups differ. Wages and salaries in the commodity transporting and distributing group of Classification A and in the first group of Classification C do not show consistently narrower conforming amplitudes than net income originating. The same is true of dividends in all except the commodity producing group of Classification A. Apparently therefore, at least in some groups, wages and salaries and dividends fluctuate in conformity with business cycles with sufficient amplitude even in comparison with net savings to cause, in at least some cycles, their percentage shares to show positive conformity.

Not many shares of income type components in net income originating in the individual industries conform consistently, positively or negatively (i.e., with a score of either + 5 or + 3 or — 5 or — 3). We therefore list in Table 34 the industries and components for which adequate positive or negative conformity in the differential movement is recorded. As might have been expected, all components except net savings have largely entries with positive scores, indicating that the amplitudes of their conforming movement during business cycles are narrower than in net income originating in the industry and still narrower than in net savings. The negative entries under net savings indicate that consistent positive conformity is established only because this component fluctuates in conformity with business cycles uniformly more violently than net income originating.

In almost every industry interest, if it responds to business cycles, has an amplitude narrower than net income originating; net savings just as consistently respond with wider amplitude than net income originating. For wages and salaries, entrepreneurial withdrawals, and dividends, industries with consistent scores are fewer, and the last-mentioned component in several industries responds to business cycles with wider amplitude than net income originating. Most of the industries with consistently negative scores are of the type that do not respond sensitively to business cycles (insurance, finance, textiles and leather, printing, water transportation, real estate, service). It is tempting to infer that among the industries with positive scores under wages and salaries, entrepreneurial withdrawals, and dividends, the preponderant majority would be of the type that is sensitive to business cycles: mining; manufacturing and such of its divisions as metals, chemicals, miscellaneous and rubber; steam railroads, etc. A positive score would indicate that conforming fluctuations in the three income type components are of narrower amplitude than in net income originating and it might well be expected that conforming fluctuations in wages and salaries, entrepreneurial withdrawals, and

TABLE 34

Industrial Divisions whose Shares of Types of Income in Net Income Originating Conform Adequately to Business Cycles (Based on the Differential Movement), 1919–1938

WAGES & SALARIES (1)	ENTREP. WITHDRAWALS (2)	DIVIDENDS (3)	INTEREST (4)	NET SAVINGS (5)
Mining (+)	Finance (—)	Text. & leather (—)	Agriculture (+)	Agriculture (—)
Mfg. (+)	Insurance (—)	Printing (—)	Mining (+)	Mining (—)
Food & tobacco (+)	Agr. (+)	Water transp. (—)	Mfg. (+)	Mfg. (—)
Constr. mat. & furn. (+)	Mining (+)	Finance (—)	Food & tobacco (+)	Food & tobacco (—)
Paper (+)	Mfg. (+)	Real estate (—)	Constr. mat. & furn. (+)	Constr. mat. & furn. (—)
Printing (+)	Food & tobacco (+)	Service (—)	Paper (+)	Paper (—)
Metal (+)	Constr. mat. & furn. (+)	Mfg. (+)	Printing (+)	Printing (—)
Chemical (+)	Paper (+)	Metal (+)	Metal (+)	Metal (—)
Misc. & rubber (+)	Printing (+)	Chemical (+)	Chemical (+)	Chemical (—)
Transp. & other pub. util. (+)	Metal (+)	Transp. & other pub. util. (+)	Misc. & rubber (+)	Misc. & rubber (—)
Steam rr., Pull., & exp. (+)	Chemical (+)	Pipe lines (+)	Construction (+)	Transp. & other pub. util. (—)
Water transp. (+)	Misc. & rubber (+)	Telephone (+)	Transp. & other pub. util. (+)	Elec. light & power (—)
Gov. (+)	Construction (+)	Banking (+)	Elec. light & power (+)	Mfd. gas (—)
Misc. (+)	Elec. light & power (+)	Misc. (+)	Mfd. gas (+)	Steam rr., Pull., & exp. (—)
	Trade (+)		Steam rr., Pull., & exp. (+)	Street rwy. (—)
	Service (+)		Street rwy. (+)	Water transp. (—)
	Misc. (+)		Water transp. (+)	Pipe lines (—)
			Telephone (+)	Telephone (—)
			Telegraph (+)	Telegraph (—)
			Trade (+)	Trade (—)
			Insurance (+)	Service (—)
			Service (+)	Gov. (—)
			Misc. (+)	Misc. (—)

(+) means that the amplitude of conforming fluctuations is narrower than in net income originating.

(—) means that the amplitude of conforming fluctuations is wider than in net income originating.

dividends would have narrower amplitudes than in net income originating chiefly in industries in which net income originating is itself highly sensitive to business cycles. But such a conclusion is barred since among the industries with components that have narrower amplitudes than net income originating not a few are none too sensitive (agriculture, service, etc.). Apparently, therefore, the responsiveness of income type totals cannot be interpreted solely in terms of differences among industries in sensitivity to business cycles.

D IN PERCENTAGE SHARES OF TOTAL PAYMENTS

Changes in the percentage distribution of total payments (excluding entrepreneurial savings) by type within broad industrial groups indicate that wages and salaries, dividends, and of course net savings have conforming fluctuations of wider amplitudes than total payments; entrepreneurial withdrawals and interest, on the contrary, have conforming fluctuations of narrower amplitudes (Table 35).

However, the amplitudes of conforming fluctuations in various income type components are different in different groups. For example, wages and salaries have wider amplitudes than total payments in the commodity producing and commodity transporting and distributing groups in Classification A; in the group of service industries the indication of wider amplitude is not significant. In the group with a large proportion of unincorporated firms and in the semi-public group, but not in the public industry group or in that in which private corporations predominate, in Classification C, wages and salaries have a wider amplitude than total payments. Entrepreneurial withdrawals usually have a narrower amplitude than total payments; but in the service industries group in Classification A, in which entrepreneurial withdrawals are substantial, their amplitude is wider. The amplitude of conforming fluctuations in the share of dividends is narrower than in total payments in the commodity transporting and distributing group in Classification A, the first group in Classification C

TABLE 35

Direction of Movement during Business Cycles in Percentage Shares of Types of Income in Total Payments
Broad Industrial Divisions, 1919–1938

	CLASSIFICATION A			CLASSIFICATION C			
	Commodity producing	Commodity transp. & distr.	Services	With large proportion of indiv. firms	Private corp.	Semi-public corp.	Public
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
EXPANSION							
Wages & salaries	+3	+5	+1	+5	−1	−1	−1
Entrep. withdrawals	−5	−3	+1	−5	−5	+3	
Dividends	+3	+3	+3	+5	+3	+1	
Interest	−1	−5	+1	−1	−1	−3	−1
Net savings	+3	+1	+3	+1	+3	+3	+3
CONTRACTION							
Wages & salaries	−5	−3	−1	−3	−1	−3	−1
Entrep. withdrawals	+3	+3	+1	+1	+3	+5	
Dividends	−1	+1	−1	−1	−1	+3	
Interest	+5	+3	+1	+5	+5	+3	−3
Net savings	−5	−5	−5	−5	−5	−5	−1
DIFFERENTIAL MOVEMENT							
Wages & salaries	−5	−5	−1	−5	+1	−5	+1
Entrep. withdrawals	+5	+5	−3	+3	+5	+1	
Dividends	−3	+1	−5	−1	−3	+1	
Interest	+5	+5	+1	+5	+5	+5	−3
Net savings	−3	−3	−5	−3	−5	−3	−5

(in which, however, such payments are negligible), and the semi-public group.

These differences can perhaps be explained in terms of the differing sensitivity of industrial groups and of their income type components to business cycles. In the commodity transporting and distributing group public utilities are important, and for various reasons their dividend disbursement policy is none too sensitive to shorter business cycles; hence the positive scores for differential movements in dividends in both the second group in Classification A and the semi-public group in Classification C. The third group in Classification A comprises governments and some public utilities that are not too sensitive to business cycles, as well as private service industries with many entrepreneurs whose incomes are more sensitive. As a result, wages and salaries in this group are not too respon-

sive, since they originate to a large extent in governments and the cyclically insensitive public utilities; and the scores are low for the differential movements of wages and salaries in both this and the public industries groups. Entrepreneurial withdrawals in the service group, coming from its private industry sector, are more sensitive than total payments. Finally, the peculiarly low score for wages and salaries in the second group in Classification C (mining and manufacturing) may be due to the extreme sensitivity of dividends originating in these two industries; but this explanation may be inadequate.

In observing the shares of income type components in total payments industry by industry we again list only industries for which the behavior of the given share is fairly consistently in one direction (Table 36). Table 36 confirms the indication of Table 34: in almost all industries conforming movements of interest are of an amplitude narrower than in total payments; those in net savings are just as consistently of a wider amplitude. But there is one negative entry under interest: in government, significantly enough, the conforming fluctuations in interest are of wider amplitude than in total payments.

Again as we might have expected, most of the entries under wages and salaries and dividends are negative, and those under entrepreneurial withdrawals, positive. However, in some industries wages and salaries and dividends conform with narrower amplitudes than total payments; and entrepreneurial withdrawals, with a wider amplitude. Most of the industries in which wages and salaries and dividends respond with narrower amplitudes and entrepreneurial withdrawals with wider are rather insensitive to business cycles (finance, insurance, water transportation, pipe lines). On the other hand, we cannot say with assurance that industries in which wages and salaries and dividends had conforming fluctuations with consistently wider amplitudes than total payments and in which the conforming fluctuations in entrepreneurial withdrawals were of narrower amplitudes than in total payments are necessarily characterized by sensitivity to business cycles; for agricul-

TABLE 36

Industrial Divisions whose Shares of Types of Income in Total Payments Conform Adequately to Business Cycles (Based on the Differential Movement), 1919–1938

WAGES & SALARIES (1)	ENTREP. WITHDRAWALS (2)	DIVIDENDS (3)	INTEREST (4)	NET SAVINGS (5)
Agriculture (−)	Transp. & other pub. util. (−)	Mfg. (−)	Government (−)	Agriculture (−)
Construction (−)	Finance (−)	Text. & leather (−)	Agriculture (+)	Mining (−)
Transp. & other pub. util. (−)	Insurance (−)	Constr. mat. & furn. (−)	Mining (+)	Mfg. (−)
Elec. light & power (−)	Agriculture (+)	Printing (−)	Mfg. (+)	Food & tobacco (−)
Steam rr., Pull., & exp. (−)	Mining (+)	Water transp. (−)	Food & tobacco (+)	Constr. mat. & furn. (−)
Pipe lines (−)	Mfg. (+)	Finance (−)	Constr. mat. & furn. (+)	Paper (−)
Telephone (−)	Food & tobacco (+)	Real estate (−)	Printing (+)	Printing (−)
State gov. (−)	Text. & leather (+)	Service (−)	Metal (+)	Metal (−)
Misc. (−)	Printing (+)	Pipe lines (+)	Chemical (+)	Chemical (−)
Constr. mat. & furn. (+)	Metal (+)	Telephone (+)	Misc. & rubber (+)	Misc. & rubber (−)
Water transp. (+)	Chemical (+)		Construction (+)	Transp. & other pub. util. (−)
Insurance (+)	Misc. & rubber (+)		Transp. & other pub. util. (+)	Elec. light & power (−)
	Construction (+)		Elec. light & power (+)	Steam rr., Pull., & exp. (−)
	Trade (+)		Mfd. gas (+)	Street rwy. (−)
	Misc. (+)		Steam rr., Pull., & exp. (+)	Water transp. (−)
			Street rwy. (+)	Pipe lines (−)
			Water transp. (+)	Telephone (−)
			Telephone (+)	Service (−)
			Telegraph (+)	Gov. (−)
			Trade (+)	Misc. (−)
			Finance (+)	
			Service (+)	
			Misc. (+)	

(+) means that the amplitude of conforming fluctuations is narrower than in total payments.

(−) means that the amplitude of conforming fluctuations is wider than in total payments.

ture, construction, and real estate are included as well as manufacturing and some of its sensitive subdivisions. Apparently then, there are differences in the responsiveness of wages and salaries and dividends on the one hand and of entrepreneurial withdrawals on the other, apart from the differences in the cyclical responsiveness of industries in which these types of payment are prominent.

5 Summary

a) During 1919–38 wages and salaries accounted on the average for 61 per cent of national income; employee compensation, for 63 per cent; entrepreneurial withdrawals, for 17 per cent; and entrepreneurial net income including savings, for 17.6 per cent. Thus total service income constituted on the average about 81 per cent of national income. Total property income including rent was slightly less than one-fifth of national income. Of the three types, dividends averaged 6 per cent of national income, interest, 7, and rent, 6. Net savings of corporations and government averaged (algebraically) less than one-half of one per cent of national income, and net savings of all enterprises, less than one per cent.

The average percentage distribution by type of aggregate payments, including or excluding entrepreneurial savings, was similar to the distribution of national income.

b) The average distribution of both net income originating and total payments by type varied among industries. Organizational characteristics affect the share of entrepreneurial income or of interest compared with dividends; technological characteristics of the production processes affect the share of compensation for direct labor (wages, salaries, etc.) compared with payments for capital (interest, dividends, rent); various other characteristics (accessibility to sources of capital supply, relative importance of different types of labor or capital, etc.) determine the relative importance of different types of income. Because of such differences in the type of income structure among industries, shifts in the industrial composition of the

countrywide income totals are bound to influence greatly changes in their distribution by type.

c) The shares of both wages and salaries and employee compensation in national income increased significantly over the period. In most industries, a similar increase occurred in their shares in net income originating although in several the shares declined. The effects of shifts in industrial composition upon changes in these shares were minor: wages and salaries and employee compensation would have increased relatively to national income even had there been no shifts in its industrial composition.

d) The share of employee compensation in aggregate payments, including or excluding entrepreneurial net savings, increased; but the share of wages and salaries decreased slightly. In the majority of industries the shares of both wages and salaries and employee compensation in total payments including or excluding entrepreneurial savings decreased. Shifts in the industrial composition of aggregate payments excluding entrepreneurial savings tended to raise the shares of wages and salaries and of employee compensation in aggregate payments; were the effects of these inter-industry shifts removed, the shares of both would decrease.

e) For the few industries for which wages and salaries could be separated the share of salaries in both net income originating and total payments increased significantly more or declined significantly less than the share of wages. Hence, in these industries, with the single exception of food and tobacco manufacturing, the distribution changed markedly in favor of salaries.

f) The share of entrepreneurial withdrawals in national income showed no definite movement over the period; its share in both totals of aggregate payments declined. The share of entrepreneurial income (i.e., withdrawals plus savings) in both national income and aggregate payments declined. Were the effects of inter-industry shifts removed, the conclusions concerning movements in the shares of both entrepreneurial withdrawals and income in national income would remain the

same. But were the shifts in the industrial distribution of aggregate payments excluding entrepreneurial savings removed, the share of entrepreneurial withdrawals in aggregate payments would rise instead of decline.

g) The share of interest and dividends in national income and both aggregate payments totals increased significantly over the period in the preponderant majority of industries. Even were we to correct for the effect of changes in industrial composition, the rise would still remain significant.

h) The share of rent in national income and both aggregate payments totals declined. When this component is added to interest and dividends to form total property income, the share of the latter in national income still increases; but in aggregate payments excluding entrepreneurial savings it decreases.

Since all rent is assigned to one industry, real estate, the share of total property income in both net income originating and total payments increased in the preponderant majority of industries. Were the effects of shifts in industrial composition removed, its share in both national income and aggregate payments would still rise.

i) Net savings constitute a strikingly declining share of national income and of both aggregate payments totals. It would not be much affected by allowance for the effects of shifts in industrial composition. In most industries a similar decline occurred in the share of net savings in both net income originating and total payments.

j) The countrywide totals of wages and salaries, entrepreneurial withdrawals, etc. show fairly consistent conformity to business cycles; i.e., they rise during expansions, decline during contractions, and their differential movement is negative. The one conspicuous exception is interest.

This generally conforming behavior of all income types except interest is true also of the components within industries. However, in some industries usually unresponsive to business cycles (e.g., government) even income types that ordinarily conform may not conform consistently.

k) The conforming fluctuations of net savings of enterprises are of especially wide amplitude. This type of income contributes so much to the variability during business cycles of net income originating that the amplitudes of conforming fluctuations in any and all other types are, for the country as a whole and in most industries, narrower than in net income originating.

l) When net savings are omitted and we compare the amplitudes of conforming fluctuations in the various types of payment, we find that wages and salaries and dividends display conforming movements of wider amplitude than total payments both for the country as a whole and in most industries; and that entrepreneurial withdrawals and interest have narrower amplitudes than aggregate payments.

m) Since there is naturally some tendency for these differences in the amplitude of conforming changes of income types to be merged with the differences in the amplitude of conforming changes of various industries, we cannot say that one income type will always show conforming changes of wider amplitude than another. But in industries usually sensitive to business cycles the various types of income differ markedly and on the whole persistently in their responsiveness: net savings are especially sensitive, and interest, insensitive; wages and salaries and dividends are more sensitive than entrepreneurial withdrawals.

CHAPTER 7

Distribution by Type of Final Product

CHAPTERS 5 and 6 deal with the origin of national income in the country's industrial system and the distribution of the monetary counterpart among types of income and payment. We now consider the various categories of final goods turned out and ascertain how national income, originating in various industries and distributed in various types of payment or accruals, is utilized.

By final goods we mean commodities and services in the form in which, without further modification or movement, they are used by ultimate consumers in households or by consumers of durable equipment in business and other economic enterprises. They include fully finished consumer goods reaching ultimate consumers, fully finished construction of all types, and durable capital equipment reaching the economic enterprises that use it in the production process. The gross value of fully finished consumer goods reaching households during the year is consumers' outlay, an item already measured and discussed in Chapter 4. The values of construction and durable equipment are net, i.e., the remainder left after an allowance has been made for the construction and equipment consumed during the year, and constitute the major part of net capital formation. But the gross value of finished consumer goods reaching ultimate consumers and the net value of construction and durable equipment reaching the economic enterprises that use them do not exhaust the

full contents of national income. Unfinished commodities may be produced in excess of their consumption, making net additions to inventories in the hands of economic enterprises. And more goods may be transferred from domestic consumers to foreign countries than are received by domestic consumers from foreign countries, making net additions to claims against foreign countries. Hence, net capital formation includes net changes in inventories of all economic enterprises (but not of households) and net changes in claims against foreign countries as well as the net value of construction and producers' durable equipment. National income is by definition equal to the sum of consumers' outlay and net capital formation.

It is theoretically possible to subdivide both consumers' outlay and net capital formation into various categories. In consumers' outlay commodities could be separated from services; various groups of either according to their place in consumers' scales of wants, the characteristics of demand for them, the distinctive features of the goods themselves such as durability, divisibility into small units, and mobility. For net capital formation under each of the four categories—construction, durable equipment, inventories, and claims against foreign countries—numerous subdivisions could be introduced separating more specific commodity groups, the various industries or countries to whose stock of goods capital formation adds, and the like. But such detailed analysis is barred by limitations of data, and the few divisions by type of final product in this chapter are the only ones possible with the combination of data and analysis utilized in the National Bureau's studies of national income and capital formation.

Unlike the distributions by industrial origin and type of income, the distribution by type of final product must use the results of both studies. Since the errors of estimate in the two studies are not likely to be in the same direction and, more important, cannot be appraised as accurately as errors attaching to estimates all made within the framework of one study, this chapter is subject to more severe qualification than the

preceding. Yet within these limitations, from the combined results of the two studies we can observe what shares net capital formation and its various components constitute of national income and how these shares change over time; how net capital formation is apportioned to various accounts; how consumers' outlay is distributed among various groups of goods; and finally, how national income itself is apportioned among various types of final product.

1 Capital Formation by Type of Product

Net capital formation as part of national income is discussed implicitly in Chapter 4, in the comparison of national income and consumers' outlay. In Table 37 we make a direct comparison, which reveals the level of net capital formation and its temporal fluctuations. The first impression conveyed by Table 37 is the smallness of the share of net capital formation in national income: in current and 1929 prices it accounts on the average for approximately 6 per cent. Thus for the period as a whole, real savings, i.e., savings that found embodiment in additions to the stock of equipment and commodities or to claims against foreign countries, amounted to appreciably less than one-tenth of national income. The year by year comparison of totals adjusted for price changes and thus relatively free from the distorting effects of fluctuating price levels indicates that net capital formation has not exceeded 15 per cent of national income.

[1] Capital formation is measured here on a *net* basis, after an allowance for depreciation, depletion, and regularly accountable obsolescence of capital equipment and construction. So far as new capital goods, whose value is offset by deductions for current consumption, may represent additions to productive power greater than the losses such deductions measure, even complete absence of net capital formation may mean a greater rather than constant productive power of durable capital. If it does, addition to the productive power of capital goods may be composed of two parts: (a) excess efficiency of new capital goods whose value is offset by the allowance for depreciation, etc.; (b) total efficiency of new capital goods, whose value constitutes net capital formation as here measured. It is exceedingly difficult to approximate the relative magnitudes of items (a) and (b), but it is likely that our estimates of net capital formation

TABLE 37

National Income and Capital Formation Current and 1929 Prices, 1919–1938

	CURRENT PRICES			1929 PRICES		
	National income[1] (billions of dollars)	Capital formation (billions of dollars)	Capital formation as % of national income	National income[1] (billions of dollars)	Capital formation (billions of dollars)	Capital formation as % of national income
	(1)	(2)	(3)	(4)	(5)	(6)
1919	64.2	10.3	16.0	57.0	8.1	14.1
1920	74.2	11.4	15.3	58.4	7.5	12.9
1921	59.4	3.3	5.5	56.5	2.9	5.1
1922	60.7	4.5	7.4	60.8	4.0	6.6
1923	71.6	8.6	12.0	70.7	8.2	11.5
1924	72.1	5.9	8.1	71.7	5.5	7.7
1925	76.0	9.3	12.2	73.9	8.9	12.0
1926	81.6	9.2	11.3	79.0	8.7	11.0
1927	80.1	8.2	10.2	79.6	8.0	10.1
1928	81.7	7.4	9.0	81.1	7.3	8.9
1929	87.2	10.0	11.5	87.1	10.0	11.5
1930	77.3	4.2	5.4	79.9	4.4	5.5
1931	60.3	0.1	0.2	69.3	0.2	0.2
1932	42.9	−1.2	−9.7	55.6	−5.5	−9.9
1933	42.2	−3.6	−8.6	56.7	−5.0	−8.8
1934	49.5	−2.6	−5.2	62.1	−3.6	−5.8
1935	54.4	0.7	1.3	65.6	0.4	0.6
1936	62.9	5.4	8.5	75.0	5.6	7.4
1937	70.5	6.1	9.0	80.8	6.4	7.9
1938	65.5	2.9	4.4	79.0	3.2	4.1
Average[2]						
1919–23	66.0	7.6	11.2	60.7	6.1	10.0
1924–28	78.3	8.0	10.2	77.1	7.7	9.9
1929–33	62.0	1.3	−0.2	69.7	0.8	−0.3
1934–38	60.6	2.5	3.6	72.5	2.4	2.8
1919–28	72.2	7.8	10.7	68.9	6.9	10.0
1929–38	61.3	1.9	1.7	71.1	1.6	1.3

[1] As in Chapter 4, but not as in Chapters 5 and 6, national income in this and other tables includes the Social Security contributions of employers and is adjusted for the effects on net savings of corporations and other business firms of gains and losses on sales of capital assets, of inventory revaluations, and of the use of a cost rather than a reproduction basis for depreciation charges. These adjustments are indispensable in establishing the comparability of national income and capital formation totals.

[2] As in all measures of change in percentage shares, we use here arithmetic means of percentages rather than percentages based on arithmetic means of totals. The alternative set of percentages (which can easily be computed from entries in col. 1 and 2, 4 and 5), would show movements in the same direction but more moderate from period to period.

Over the period as a whole the share of net capital formation in national income declines significantly. The decline, to be sure, is caused largely by the severe contraction of 1929–32, but even in the latest peak year, 1937, the share is smaller than in the 1920's. Subsequent analysis reveals the importance of construction, which is susceptible to pronounced cycles well over ten years in duration, in net capital formation. For these reasons, one cannot attribute much secular significance to estimated changes in the share of net capital formation in national income for a period as short as two decades.

Both national income and net capital formation conform closely to business cycles, but the fluctuations in capital formation are greater than in national income. In each of the five business cycles the share of net capital formation in national income falls markedly during contractions, and the amplitude of the swing is wide indeed. The timing of the cyclical fluctuations in net capital formation diverges once or twice from the chronology of cycles in general business conditions: for example, net capital formation (in 1929 prices) fails to rise from 1919 to 1920, reaches a peak in 1925 and a trough in 1928 rather than in 1926 and 1927 respectively. But these departures from reference cycle chronology, due primarily to the influence of construction which is subject to cycles of its own, are minor, and the violent fluctuations in net capital formation and in its share in national income increase the sensitivity of national income to cyclical swings.

There is a highly variable relation between changes in net capital formation and in national income. Indeed, in several years an increase in net capital formation is accompanied by a decrease in national income, or vice versa (1924, 1926, 1928, 1933, and others). While some of these divergences may be

undervalue relative additions to the productive power of the country's stock of capital. However, there is no reason to assume that the changes over time in items (a) and (b) are inversely related. If they are not, then rises and declines in new capital formation, as here estimated in 1929 prices, would indicate rises and declines in the rate of addition to the productive power of the stock of capital goods in the country.

due to crudities of the estimates, they are indicative of the looseness of correlation between changes in capital formation and in national income. The impression is the same when we compare only upward changes; for example, from 1921 to 1922 capital formation in current prices increased $1.2 billion, national income, $1.3 billion; from 1922 to 1923 the former increased $4.1 billion, the latter, $10.9 billion. Thus the ratio of the increase in national income to the increase in net capital formation was only 1.1 in 1921–22, and 2.7 in 1922–23. There are similar variations in the ratio in other years, which remain even if we compare changes in gross capital formation with changes in gross national income, i.e., include in both the allowance for consumption of capital goods, or if we omit certain items, such as changes in claims against foreign countries, from both capital formation and national income. The estimates in Table 37 fail to support an assumption of constancy in the ratio of *changes* in capital formation to *changes* in national income (or of capital formation to national income), in either the rising or declining phases of business cycles, a constancy that seems to be implicit in most discussions of 'the multiplier'.

Estimates of net capital formation enable us to separate: (a) net value of producers' durable equipment combined with the net value of business construction; (b) net value of residential construction; (c) net value of public construction, i.e., all construction done by and for the account of governmental agencies; (d) net changes in business inventories (excluding inventories of households and, for lack of data, inventories in the hands of non-business economic enterprises); (e) changes in claims against foreign countries. In Table 38 we can observe the shares formed by these various components of net capital formation in national income. The comparison is confined to estimates in 1929 prices, in order to reveal the movement of shares in real product; but if the estimates were computed in current prices the results would be roughly similar.

The most striking feature for the period as a whole is the large share of public construction and the small share of residential construction. Ranked in order of relative importance of the average share for the period are public construction, producers' durable goods and business construction, net flow to inventories, changes in claims against foreign countries, and residential construction. The ranking would be entirely

TABLE 38

Percentage Shares of Type of Product Components of Capital Formation in National Income 1929 Prices, 1919–1938

	PRODUCERS' DURABLE INCL. BUSINESS CONSTRUCTION	CONSTRUCTION		CHANGE IN BUSINESS INVENTORIES	CHANGE IN CLAIMS AGAINST FOREIGN COUNTRIES
		Residential	Public		
	(1)	(2)	(3)	(4)	(5)
1919	3.0	—0.4	2.8	4.9	3.7
1920	3.2	—1.1	1.0	7.2	2.5
1921	0.7	0.04	2.1	—0.1	2.3
1922	1.3	2.1	2.0	0.5	0.7
1923	3.3	2.5	1.4	4.0	0.3
1924	3.2	3.2	1.7	—1.3	0.9
1925	3.9	3.6	2.0	2.2	0.4
1926	4.3	3.2	1.8	1.5	0.1
1927	4.2	2.7	2.1	0.5	0.6
1928	4.2	2.2	2.2	—0.5	0.8
1929	4.9	1.3	2.1	2.8	0.5
1930	3.3	—0.1	2.8	—1.3	0.9
1931	—0.3	—1.0	3.2	—1.9	0.4
1932	—4.3	—2.8	2.8	—5.7	0.1
1933	—4.4	—3.1	1.5	—3.0	0.3
1934	—2.1	—3.2	2.3	—3.6	0.7
1935	—0.6	—2.4	1.9	2.0	—0.3
1936	1.9	—1.2	3.3	3.8	—0.5
1937	3.2	—0.7	2.4	3.2	—0.1
1938	0.7	—0.8	3.3	—0.1	1.3
Average					
1919–23	2.3	0.6	1.9	3.3	1.9
1924–28	4.0	3.0	2.0	0.5	0.6
1929–33	—0.2	—1.1	2.5	—1.8	0.4
1934–38	0.6	—1.7	2.6	1.0	0.2
1919–28	3.1	1.8	1.9	1.9	1.2
1929–38	0.2	—1.4	2.6	—0.4	0.3

See notes to Table 37.

different were components of gross capital formation compared, and it would be more trustworthy than that based upon Table 38, since the estimates of net values of residential and public construction are subject to especially wide errors because of conceptual and statistical difficulties in establishing the annual consumption of already existing construction. Also, the higher average share of *net* public construction is accounted for largely by its rise during the depressed decade of the 1930's. Nevertheless, the conclusion contains an undeniable kernel of significance: public construction had considerable weight in net capital formation during the last two decades while net residential construction was of relatively small weight.

The share of each component, except public construction, declined significantly from the first to the second decade. The quinquennial averages, and especially the annual figures (with due allowance for cyclical fluctuations), indicate that the movement of the shares of at least three components over the period is sufficiently consistent to claim secular significance. The rise in the share of public construction in both national income and capital formation is consistently suggested by the quinquennial averages, and there are many indications that, like the rise in the share of government in national income, it is in the nature of a secular tendency. Similarly, the share in national income of net flow to inventories declined fairly consistently, while the share of changes in claims against foreign countries did not regain the levels of 1919–20. In the shares of both inventories and claims against foreign countries the downward tilt is accentuated by the high levels attained immediately after the first World War. It is possible that this downward movement is a declining phase of a long cycle in inventory holdings (associated with a downward sweep of the price level) and in foreign trade (associated with a passing of the exceptional position of the United States in 1919–21 as the only large exporter in a weary and exhausted world).

The components of capital formation differ significantly in the degree to which their shares in national income reflect

cyclical fluctuations. The component whose share conforms perfectly to business cycles and whose amplitudes are widest is the net flow to business inventories. Its share rises during every expansion and declines during every contraction, the differential movement ranging well above 5 per cent of national income. Another component whose share moves in perfect conformity to business cycles is producers' durable goods plus business construction; and its fluctuations would be greater could we confine it to producers' durable equipment excluding business construction. For various reasons, the shares of the other three components conform much less closely and have narrower amplitudes; residential construction because of a pronounced cycle of its own, with a trough in 1920, a peak in 1925, and the next trough in 1934; public construction because of its lack of susceptibility to transient changes in general business conditions, not to mention its use as a counterbalance to severe depressions; and changes in claims against foreign countries because of their dependence upon business conditions, not only in the United States but also in other countries whose business cycles do not necessarily coincide with American.

In the light of Table 38 some of the conclusions derived from Table 37 concerning the behavior of the share of net capital formation in national income may be reinterpreted. The decline over the period is due solely to the decline in the shares of capital formation of private types, notably residential construction, net flow to inventories, and producers' durable equipment including business construction. The marked conformity of fluctuations in the share of capital formation to business cycles and their wide amplitude are due largely to two components: net flow to inventories and the net flow of producers' durable equipment plus business construction.

2 *Capital Formation by Various Savings Accounts*

So far we have compared capital formation with national income as congeries of final products or forms of the disposition

of real product. We now attempt to study capital formation as the investment of a share of the monetary equivalent of national income, i.e., part of the total flow of various types of payment and income distinguished in Chapter 6. Viewed in this way net capital formation and its share in national income remain, of course, as they appeared in Table 37, but the divisions of net capital formation are different from those in Table 38. Instead of forming *material* or *channel of utilization* categories, we now set up divisions according to the type of income that became embodied in capital formation, i.e., according to the groups to whose savings we should attribute various parts of capital formation—corporations, governments, and unincorporated business firms.

Since savings of enterprises were so estimated as to exclude items that do not represent a flow to or from the stock of capital goods as estimated in capital formation (i.e., gains and losses from sales of capital assets, book gains and losses due to revaluation of inventories, gains and losses due to the difference between cost and reproduction bases of depreciation charges), we can interpret them as parts of the current national product that became embodied in current capital formation. If corporate savings are positive, as they were in 1919 to the extent of $1.0 billion, we may say that of the national product, $1.0 billion of current corporate net income became embodied in net capital formation; and that the rest of net capital formation represents net savings of governments, of unincorporated firms, or of individuals. Negative corporate savings may likewise be interpreted as indicating that not only did current income contribute nothing to net capital formation but actually that a net draft was made upon the existing stock of durable goods.

By using our estimates of net savings and of net capital formation we can apportion net capital formation among various accounts, i.e., among the groups whose savings became embodied in additions to the stock of capital goods in the country or to claims against foreign countries (Table 39). By

TABLE 39

Capital Formation by Type of Savings, Current Prices 1919–1938 (billions of dollars)

	CAPITAL FORMATION	SAVINGS OF					
		Corp.	Gov.	Corp. & gov.	Indiv. & entrep.	Entrepreneurs	Individuals
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1919	10.3	1.0	—1.3	—0.3	10.6	5.5	5.1
1920	11.4	2.2	1.9	4.1	7.2	1.6	5.6
1921	3.3	0.7	1.0	1.7	1.6	0.6	1.0
1922	4.5	0.2	0.9	1.1	3.4	—0.1	3.5
1923	8.6	1.0	1.6	2.6	6.0	1.2	4.9
1924	5.9	0.4	1.7	2.1	3.7	0.9	2.9
1925	9.3	0.8	1.6	2.4	6.8	1.6	5.2
1926	9.2	2.3	2.2	4.4	4.8	2.1	2.7
1927	8.2	0.6	2.3	2.9	5.3	1.1	4.2
1928	7.4	0.9	1.9	2.8	4.6	0.9	3.6
1929	10.0	1.5	2.2	3.8	6.3	1.1	5.2
1930	4.2	—0.7	2.1	1.4	2.8	—0.6	3.4
1931	0.1	—3.1	0.3	—2.7	2.8	—2.0	4.9
1932	—4.2	—1.8	—0.9	—5.7	1.5	—3.5	5.0
1933	—3.6	—1.0	—0.1	—1.1	0.5	—2.4	2.9
1934	—2.6	—3.3	—0.6	—3.9	—1.3	—0.4	1.6
1935	0.7	—2.1	—1.7	—3.8	4.6	0.2	4.3
1936	5.4	—0.7	—2.2	—2.9	8.3	1.2	7.0
1937	6.4	—1.4	0.5	—0.9	7.3	0.4	6.8
1938	2.9	—0.7	—0.2	—0.9	3.7	0.3	3.5
Average							
1919–23	7.6	1.0	0.8	1.8	5.8	1.7	4.0
1924–28	8.0	1.0	1.9	2.9	5.0	1.3	3.7
1929–33	1.3	—2.2	0.7	—1.5	2.8	—1.5	4.3
1934–38	2.5	—1.6	—0.8	—2.5	5.0	0.4	4.7
1919–28	7.8	1.0	1.4	2.4	5.4	1.5	3.9
1929–38	1.9	—1.9	—0.05	—2.0	3.9	—0.6	4.5

subtracting corporate savings from net capital formation we obtain the savings by governments, entrepreneurs, and individuals that became embodied in capital formation. By subtracting savings of governments and entrepreneurs from the remainder we obtain the savings of individuals entering net capital formation.

Several qualifications must be stressed in order to avoid misinterpretation of the distributions in Tables 39 and 40. The first and most obvious is that the estimates are subject to fairly

wide margins of error. The second is that corporate, government, entrepreneurial, and individuals' savings that became embodied in capital formation should not be confused with the amounts that accrued to the stock of capital goods at the disposal of these various groups. A corporation may have sustained negative savings but the stock of real capital goods at its disposal may have increased by purchases with borrowed funds; and the same is true of governments, unincorporated firms, and individuals. On the other hand, a corporation may have enjoyed positive net savings without itself using the surplus to finance additions to its capital goods. Such savings may have been used by other enterprises to finance capital investment through direct or indirect loans or investments made by the saver corporation. Third, net savings of economic enterprises (corporate and unincorporated firms, governments) are defined here to exclude several items usually included under such savings, and to that extent differ from what the enterprises themselves consider their net savings to be. Finally, and most important, individuals' savings embodied in net capital formation are significantly different from what individuals conceive their savings to be and from savings as usually measured in estimates under that label. The estimates in Table 39 exclude all capital gains and losses, i.e., gains and losses on sales of capital assets. They are the remainder after the amounts allocated as depreciation charges (over and above regular maintenance charges) against residential and other property owned by individuals have been subtracted, an adjustment not usually made in estimates of individuals' savings. They include amounts accruing to individuals as depositors in savings banks and other savings institutions and as holders of policies in life insurance companies, whether or not these amounts have been distributed to the depositors or policyholders; but exclude insurance benefit payments. They exclude amounts individuals may consider savings but that have failed to find expression in capital formation, either because they were appropriated by the transmitting agencies or be-

cause some delay may have occurred in their being used to finance additions to the stock of capital goods or to claims against foreign countries.

But while the estimates in Table 39 differ significantly from what enterprises and individuals conceive their savings to be; while they cannot be used to gauge the propensity of enterprises and individuals to save, they do reflect approximately the shares of net capital formation, i.e., of real investment financed from the current income of different groups of enterprises and individuals. In that sense they measure the contribution of various types of savings from current income to additions to the stock of the nation's capital goods.

Because net capital formation totals themselves, and still more frequently some of the components in Table 39, are often negative, we cannot establish annual percentage distributions of capital formation among components financed by savings of various types. But from the decennial averages we can gain some idea of the relative importance of various categories. In the decade 1919–28, when capital formation was at a relatively high level, corporate net savings accounted for only one-eighth of it; and if savings of unincorporated firms were added, the share of all business savings would rise to somewhat less than one-third of the total. Net savings of governments accounted for somewhat over one-sixth; while the share of individuals' savings was the largest, amounting to one-half of net capital formation. In the next decade, when savings of enterprises were negative and average net capital formation was positive, individuals' savings were the sole source of financing capital formation.[2]

The same decennial averages, supplemented by quinquennial averages, reveal the marked contrast in movement over

[2] Although our estimates of savings of unincorporated firms are subject to a wide margin of error (see Ch. 12), we use them to separate this type of savings from individuals' savings embodied in capital formation. The total of savings of individuals and unincorporated firms combined (Table 39, col. 5), derived by subtracting from total net capital formation the savings of corporations and governments, is more reliable than that of either component.

the period between the shares of net capital formation attributable to individuals' savings and to savings of enterprises. Savings of corporate and unincorporated firms, and even of governments, decline markedly from the first to the second decade; and the average for the last quinquennium, 1934–38, is decidedly lower in all three series than for the first or second. No such decline occurs in capital formation attributable to individuals' savings, the average for 1929–38 being slightly higher than that for 1919–28, and the average for the last quinquennium, highest. The decline in net savings of enterprises needs no detailed comment. We note merely that with respect to them government has no advantage over private enterprise: changes in business conditions that affect private incorporated and unincorporated firms also affect tax and other revenue receipts of governments and hence their net savings. The absence of decline in individuals' savings embodied in capital formation is unexpected, but we postpone its discussion for a moment.

It is not surprising that savings of incorporated and of unincorporated firms fluctuate in close conformity to business cycles: they reflect clearly cyclical expansions (except that from 1919 to 1920 in entrepreneurial savings) and contractions (except that from 1937 to 1938 in corporate savings). And since government savings depend upon receipts that are largely determined by business conditions, we would expect them to reflect at least the more pronounced business cycles. Despite the wide margin of error and regardless of the movement in individuals' savings shown by the more customary indexes, individuals' savings embodied in capital formation also conform closely to fluctuations in general business conditions: the entries in column 7 reflect clearly the expansions of 1919–20, 1921–23, 1924–26, 1927–29, and 1932–37, although in the third and last the timing is somewhat different. Every contraction stands out.

We now turn to the intriguing question raised by the movement of the share of capital formation attributable to individu-

als' savings. As said, this share did not decline over the period and was highest in the last quinquennium, 1934–38. When we compare individuals' savings embodied in net capital formation with aggregate payments to individuals (Table 40, col. 1–4), both including savings of unincorporated firms, the results are not unlike those of the business savings series in Table 39: total savings and their share in aggregate payments decline over the period, and the average for the last quinquennium is lower than that for 1919–23. The percentage shares in columns 2 and 4 have a slightly higher average level than the percentages of net capital formation in national income in Table 37, ranging about 6.5 per cent. Even in this comparison the ratio of savings to aggregate payments in 1936 and 1937 was close to the peak (1919) and higher than during the 1920's.

The second comparison in Table 40 (col. 5–8), of savings of individuals, but not of unincorporated firms, embodied in net capital formation, with aggregate payments to individuals excluding entrepreneurial savings is more striking. As already indicated in Table 39, such savings in current prices rise slightly from the first to the second decade. As a percentage of aggregate payments, their share increases from the first to the second decade and is highest in the last quinquennium. When adjusted for price changes, they are considerably larger in the second than in the first decade, and their share in aggregate payments increases markedly.

The conclusion that they were larger during the depressed 1930's than during the prosperous 1920's, and that as a share in aggregate payments to individuals they were at least about the same during the last decade of depression and recovery as during the first decade of prosperity, is confirmed by a comparison of the recent years of cyclical expansion, 1936 and 1937, with the years of cyclical peaks in the 1920's. In 1929 prices individuals' savings embodied in capital formation were highest in 1936 and 1937; for their percentage shares in aggregate payments also, these were among the highest years.

TABLE 40

Individuals' and Entrepreneurial Savings Embodied in Capital Formation and their Percentage Share of Aggregate Payments to Individuals, 1919–1938
Current and 1929 Prices (absolute figures in billions of dollars)

	PAYMENTS AND SAVINGS INCL. ENTREPRENEURIAL SAVINGS				PAYMENTS AND SAVINGS EXCL. ENTREPRENEURIAL SAVINGS			
	CURRENT PRICES		1929 PRICES		CURRENT PRICES		1929 PRICES	
	Savings	Savings as % of agg. pay.	Savings	Savings as % of agg. pay.	Savings	Savings as % of agg. pay.	Savings	Savings as % of agg. pay.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1919	10.6	16.4	8.3	14.5	5.1	8.6	4.0	7.5
1920	7.2	10.3	4.8	8.6	5.6	8.2	3.7	6.9
1921	1.6	2.8	1.4	2.6	1.0	1.7	0.9	1.6
1922	3.4	5.7	3.1	5.1	3.5	5.8	3.1	5.3
1923	6.0	8.7	5.7	8.4	4.9	7.2	4.6	6.9
1924	3.7	5.3	3.5	5.0	2.9	4.1	2.7	3.9
1925	6.8	9.3	6.6	9.2	5.2	7.3	5.0	7.1
1926	4.8	6.2	4.5	6.0	2.7	3.6	2.6	3.5
1927	5.3	6.9	5.2	6.8	4.2	5.6	4.2	5.5
1928	4.6	5.8	4.5	5.7	3.6	4.7	3.6	4.6
1929	6.3	7.5	6.3	7.5	5.2	6.3	5.2	6.3
1930	2.8	3.6	2.9	3.7	3.4	4.4	3.6	4.5
1931	2.8	4.5	3.6	5.0	4.9	7.5	6.2	8.3
1932	1.5	3.1	2.0	3.1	5.0	9.6	6.6	9.7
1933	0.5	1.1	0.7	1.1	2.9	5.9	3.9	6.0
1934	1.3	2.4	1.7	2.6	1.6	3.0	2.2	3.3
1935	4.6	7.8	2.5	3.7	4.3	7.5	2.4	3.5
1936	8.3	12.6	8.6	11.0	7.0	10.9	7.3	9.5
1937	7.3	10.2	7.3	9.0	6.8	9.6	6.9	8.5
1938	3.7	5.6	4.2	5.3	3.5	5.3	3.9	4.9
Average								
1919–23	5.8	8.8	4.7	7.8	4.0	6.3	3.3	5.6
1924–28	5.0	6.7	4.9	6.5	3.7	5.1	3.6	4.9
1929–33	2.8	4.0	3.1	4.1	4.3	6.7	5.1	7.0
1934–38	5.0	7.7	4.9	6.3	4.7	7.3	4.5	5.9
1919–28	5.4	7.7	4.8	7.2	3.9	5.7	3.4	5.3
1929–38	3.9	5.8	4.0	5.2	4.5	7.0	4.8	6.4

Furthermore, even in the depressed years 1931–33 the share of individuals' savings in aggregate payments was as high as during the prosperous 1920's. As reiterated again and again, estimates of individuals' savings embodied in capital formation are subject to serious qualifications. But distortions caused by errors in estimates are not sufficiently great to invalidate the general import of the conclusion.

Even the statement that individuals' savings embodied in

capital formation, both absolutely and as percentages of aggregate payments were, in 1929 prices, at least about the same during the 1930's as during the more prosperous 1920's may seem inexplicable; yet such behavior might well have been expected. The assumption of large savings by individuals in prosperous times is contingent upon the inclusion of capital gains of various types and a disregard of the extent to which an increase in individuals' indebtedness (a common occurrence during recent expansions) means an increase in consumption that leaves small margin for savings. It is not unlikely that during the 1920's, especially in the later years of the decade, when speculative gains were enormous and people spent as if good times would continue indefinitely, 'real' savings, i.e., savings available for capital formation, were much smaller absolutely and relatively than they seemed. It is beyond doubt that a large portion of what individuals themselves considered savings were illusory capital gains, investments of the type that could never constitute real additions to capital goods; and that 'real' savings by consumers as a whole were materially offset by an increase in consumers' and individuals' indebtedness.

In the 1930's the situation was different. The pressure for liquidation of individuals' indebtedness must surely have been a powerful incentive to curtail consumption and save more, even on smaller incomes. The absence of speculative gains and a dull stock market were not conducive to spending at the expense of saving and greatly lessened the chance that individuals' monetary savings would be dissipated in stock market losses. With the passing of the banking crisis in 1933 the tendency to save must have been strengthened considerably by the experience of the depression and by a desire to attain greater security against future calamities. Thrift, together with fewer opportunities to pursue capital gains or speculate, might well explain why savings embodied in capital formation were not lower in the 1930's than in the 1920's, and were higher in the peak years 1936 and 1937, and why they consti-

tuted a larger proportion of aggregate payments to individuals. Above all, it must not be overlooked that aggregate payments per capita in the second decade (in 1929 prices) were slightly higher, not lower, than in the first; and that under such conditions, the change in the factors affecting the flow of individuals savings into capital formation might easily have given rise to the movements shown in Table 40. At any rate, the evidence must be accepted at least tentatively and as at least warranting a hypothesis that the relative level of individuals' 'real' savings was not lower and perhaps was slightly higher during the 1930's than during the 1920's.

3 Consumers' Outlay by Type of Product

The capital formation study yields estimates of consumers' outlay on perishable commodities, defined as lasting usually less than six months (food products, fuel, drugs, and the like); on semidurable, lasting between six months and three years (chiefly clothing, shoes, and some light household articles); and on durable, lasting more than three years (passenger cars, heavy household equipment such as washing machines, stoves, refrigerators, and furniture). The estimates are approximate in that no allowance is made for minor fractions of consumer goods sold to units other than ultimate consumers. But they do gauge roughly what consumers spend on these various categories of commodities; and by subtracting these amounts from total consumers' outlay we get a rough estimate of consumers' expenditures on services not embodied in new commodities (payments for rent, for professional and personal services, to governments, etc.).

In the annual apportionment of consumers' outlay among the four categories errors are substantial enough to cause year to year changes in the outlay on services that are not corroborated by other knowledge. For example, the estimated outlay on services not embodied in new commodities increases during all contractions except the very severe one from 1929 to 1932; probably because estimates of consumers' outlay on

commodities exaggerate their levels during expansions and underestimate them during contractions, since the shares of these commodities sold to enterprises (for which no allowance is made) are likely to be higher in prosperity than in depression. While these errors are minor compared with amounts spent on finished commodities or with total consumers' outlay, they loom large in the estimate of outlay on services, computed as the difference between consumers' outlay and the outlay on all commodities. For this reason we thought it best to confine the study of the apportionment of consumers' outlay to periods in which the effects of movements during cyclical swings could be averaged out—the five reference cycle periods, the four quinquennia, and the two decades (Table 41).

Expenditure on commodities accounts, on the whole, for about two-thirds of consumers' outlay, expenditure on services not embodied in new commodities, for one-third. This apportionment is not unlike that of national income between commodity producing and commodity transporting and distributing industries on the one hand (60 per cent) and the service industries on the other (40 per cent) (Ch. 5). However, the distribution of national income by type of productive operation need not resemble that of consumers' outlay by type of product: service industries may contribute to the value of commodities so far as services become embodied in new commodities, thereby raising the cost of the latter to ultimate consumers.

By far the largest part of consumers' outlay is on perishable commodities—about 40 per cent of total outlay. Somewhat more goes for semidurable than for consumers' durable, the former accounting for over 15 per cent of total outlay, the latter for slightly over 10 per cent.

In current prices the share of semidurable commodities decreases over the period; the share of services not embodied in new commodities increases. The share of perishable commodities shows no definite movement, although the averages for the first four reference cycles decline continuously. How-

TABLE 41

Consumers' Outlay and its Percentage Distribution by Type of Product

Current and 1929 Prices, Selected Periods, 1919–1938

	CURRENT PRICES					1929 PRICES				
	CONSUMERS' OUTLAY (billions of dollars)	PERCENTAGE SHARE				CONSUMERS' OUTLAY (billions of dollars)	PERCENTAGE SHARE			
		Perishable	Semi-durable	Consumers' durable	Services		Perishable	Semi-durable	Consumers' durable	Services
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Average										
1919–21	57.6	42.8	18.7	10.7	27.8	51.3	41.1	14.4	10.0	34.6
1921–24	60.4	37.4	17.3	11.4	33.9	59.4	39.8	15.1	10.6	34.5
1924–27	69.3	37.1	16.6	12.8	33.6	68.2	38.4	15.0	13.2	33.4
1927–32	67.3	36.9	15.5	10.9	36.7	71.2	38.5	15.6	11.0	35.0
1932–38	54.7	41.0	14.8	10.0	34.1	66.4	42.2	15.4	9.4	32.9
1919–23	58.4	40.6	18.4	11.1	29.9	54.4	40.4	15.0	10.5	34.1
1924–28	70.3	37.1	16.6	12.7	33.7	69.2	38.1	15.2	13.1	33.6
1929–33	60.7	37.4	14.8	9.9	37.9	68.7	40.1	15.2	9.6	35.1
1934–38	58.0	41.8	15.0	10.7	32.4	68.5	41.6	15.5	10.1	32.8
1919–28	64.4	38.8	17.5	11.9	31.8	61.8	39.3	15.1	11.8	33.9
1929–38	59.3	39.6	14.9	10.3	35.2	68.6	40.8	15.4	9.8	33.9

ever, in the last cycle the share is not significantly lower than at the beginning of the period. The share of consumers' durable commodities likewise shows no significant trend, the averages for the successive cycles first rising, then declining.

Adjustment for fluctuations in prices suggests that a substantial part of the change over the period in the apportionment of consumers' outlay in current prices is due to differences in price movements among the various commodity and service groups. In the apportionment in 1929 prices the share of perishable commodities again fails to reveal a trend, but even the changes in the cyclical and quinquennial averages are smaller than in the percentage distribution of totals in current prices. The share of semidurable commodities in 1929 prices does not decline, the averages for reference cycles and quinquennia suggesting, if anything, a slight rise. Consequently the decline in the share of semidurable commodities in current prices seems to be due to the greater decline in the prices of this group than in those of other commodity and service groups. The share of consumers' durable commodities in 1929 prices shows the same rise and decline as in current prices, and while the average for the second decade is lower than for the first, the decline over the period is not sufficiently consistent to be attributed much secular significance. Finally, the averages for both reference cycles and quinquennia of the share of services not embodied in new commodities in 1929 prices show no distinct movement over the period and there is no change from the first to the second decade.

Thus, when the differential movements in the price levels of various commodity and service groups are allowed for, there seem to be no significant shifts in the apportionment of consumers' outlay. Although our estimates are crude, the conclusion seems reasonable in the light of what little we know about the stability of the composition of consumers' budgets in terms of large categories of commodities and services. Greater use of durable commodities tends to be accompanied by larger outlay on such non-durable goods as are involved in their utilization; for

example, greater use of passenger cars means larger consumption of gasoline and oil, more demand for services not embodied in new commodities (repair services, etc.) and even for semidurable goods (such as tires and tubes). On the other hand, any increase in the relative importance of non-durable goods is limited in that a rising standard of living is ordinarily accompanied by an increase in the demand for durable goods. Indeed, consumers' demand for goods of varying durability is perhaps governed by the rather fixed patterns of life in general, patterns determined by persistent rhythms of daily, seasonal, and secular wants that do not allow for substantial shifts in relative weight among goods that must be consumed within periods of significantly varying length.

4 National Income by Type of Product

By combining the subdivisions under net capital formation and under consumers' outlay we get a twofold apportionment of national income (Table 42): one separating all non-durable types of final products, whether commodities or services, from durable; the other separating all commodities from services not embodied in new commodities. In the first, non-durable types comprise perishable and semidurable commodities and services not embodied in new commodities; and durable comprise construction, consumers' and producers' durable. This still leaves a minor portion of national income not allocated by durability, viz., net flow to inventories and changes in claims against foreign countries. In the second classification the commodities group comprises not only all categories of commodities and construction but also net flow to inventories; the group of services is naturally confined to services not embodied in new commodities; and the unallocable portion is represented by changes in claims against foreign countries, a mixture of commodity and service transactions. In Table 42 the percentages are shown for periods for which most of the cyclical swing is averaged out, since the crudeness of the estimate of services precludes valid annual comparisons.

TABLE 42

National Income, Percentage Distribution by Type of Product Current and 1929 Prices, Selected Periods, 1919–1938

	BY DURABILITY			BETWEEN COMMODITIES AND SERVICES		
	Non-durable (1)	Durable (2)	Unallocable (3)	Commodities (4)	Services (5)	Unallocable (6)
	CURRENT PRICES					
Average						
1919–21	78.4	12.8	8.8	72.0	24.6	3.4
1921–24	81.3	16.6	2.1	67.9	31.1	1.0
1924–27	78.2	20.5	1.4	69.4	30.0	0.5
1927–32	85.2	15.3	—0.5	64.3	35.2	0.5
1932–38	90.1	10.0	—0.1	65.4	34.4	0.2
1919–23	78.9	14.5	6.6	71.0	26.7	2.2
1924–28	78.5	20.3	1.2	69.1	30.3	0.6
1929–33	90.5	11.0	—1.4	61.5	38.1	0.4
1934–38	86.2	12.4	1.4	68.4	31.4	0.2
1919–28	78.7	17.4	3.9	70.1	28.5	1.4
1929–38	88.3	11.7	0.0	65.0	34.8	0.3
	1929 PRICES					
1919–21	80.5	12.7	6.8	66.2	30.9	2.8
1921–24	82.4	15.7	1.8	67.2	31.8	1.0
1924–27	78.0	20.8	1.2	69.5	30.0	0.5
1927–32	85.2	15.2	—0.5	66.0	33.4	0.6
1932–38	91.2	9.1	—0.3	66.6	33.2	0.2
1919–23	80.5	14.2	5.2	67.4	30.7	1.9
1924–28	78.3	20.7	1.1	69.2	30.3	0.6
1929–33	90.9	10.5	—1.4	64.5	35.1	0.4
1934–38	87.3	11.5	1.2	67.9	31.9	0.2
1919–28	79.4	17.4	3.1	68.3	30.5	1.2
1929–38	89.1	11.0	—0.1	66.2	33.5	0.3

The relative importance of non-durable types is quite high, averaging about 85 per cent of national income for the period. Thus the preponderant part of the economy's current product is consumed within a short time, an indication of the extent to which maintenance of current consumption depends upon maintenance of national income. The share of non-durable products increased over the period. Although the rise did not begin until the 1930's, still since the averages for the last reference cycle and quinquennium are higher than for the first,

and similar movements appear in the percentage shares even after adjustment for price changes, it attains some significance. It might be offset substantially by an allowance for the portion of non-durable products in the unallocable item, flow to inventories, and changes in claims against foreign countries. And, correspondingly, the share of durable commodities does not decline as much as the share of non-durable rises. The movement of the former, with the long cycle it seems to describe, suggests the influence of construction. Yet the five cyclical averages do indicate a rather significant drop in the share of durable commodities in national income. Whether this is transient, due to a lag in the recovery of the construction cycle and in general recovery from the 1929–32 contraction, or whether it is indicative of a more persistent trend toward an increasing share of non-durable products (especially services not embodied in new commodities) only the future can tell.

Roughly two-thirds of our current product assumes the form of commodities. In current prices the share declines markedly over the period, and the share of services not embodied in new commodities rises. Since the unallocated remainder is small, the relative loss in the share of commodities and the relative gain in the share of services would not be affected much, even if it were added fully to one or the other. The change in the apportionment in current prices is thus similar to that observed in Chapter 5 for the distribution of national income among industries classified by type of productive operation—a decline in the share of commodity producing industries and a rise in the share of service industries.

After adjustment for price changes, the decline in the share of commodities and the rise in the share of services become much less marked. Indeed, the averages for both business cycles and quinquennia indicate such a small decline in the share of commodities that it may be treated as insignificant. The share of services not embodied in new commodities still rises, but much less than the share in current prices. It would seem, therefore, that a major part of the shift in the shares of com-

modities and of services in national income in current prices is due to the differences in movement between prices of commodities and of services; and that after adjustment for price changes, the decline in the share of commodities and the rise in the share of services are so small as to be of doubtful significance.

5 Summary

a) Net capital formation averaged over the period about 6 per cent of national income; and it is this low fraction that measures the share of the economy's net current product that was added to the stock of capital goods in the country or to claims against foreign countries.

b) The share of net capital formation in national income declined over the period by reason of the extremely severe contraction in 1929–32 and the failure of capital formation to recover sufficiently to offset fully the effects of that contraction.

c) Net capital formation fluctuates more violently than national income during business cycles, causing its share in national income to fluctuate in close conformity to them.

d) The decline over the period in the share of capital formation in national income is accounted for by the decline in the share of private capital formation. The share of public construction, the only non-private component of capital formation that can be segregated, does not decline.

e) The great sensitivity of capital formation to business cycles is due largely to the close conformity of two of its chief components, net flow to inventories and net value of producers' durable goods, to business cycles. Of the other components, public construction and changes in claims against foreign countries are least responsive.

f) When net capital formation is apportioned among savings of various types, the share attributable even during 1919–28 to corporate savings amounts to less than 15 per cent; to savings of unincorporated firms, to about 20 per cent; to savings of governments, to more than 15 per cent; and to indi-

viduals' savings, to 50 per cent. This dominance of the share attributable to individuals' savings was even more marked in the second decade, when savings of enterprises became negative.

g) The decline from the first to the second decade in the shares of net capital formation attributable to savings of enterprises (private and public) is quite marked. There is a correspondingly sharp increase in the share attributable to individuals' savings.

h) The crude estimates of individuals' savings embodied in net capital formation suggest that, in 1929 prices, they were, on the average, not lower in the 1930's than in the 1920's; and their share in aggregate payments to individuals was at least about the same during the second as during the first decade. We did not attempt to estimate the amounts individuals think they saved, or individuals' savings as reflected by records of financial institutions, records that usually disregard several positive and negative components of savings in their bearing upon capital formation.

i) In the apportionment of consumers' outlay by type of product the share of perishable commodities averages over 40 per cent; of semidurable commodities, somewhat over 15 per cent; of durable commodities, about 11 per cent; and of services not embodied in new commodities, about 33 per cent.

j) In current prices the share of semidurable commodities in consumers' outlay declines over the period; that of services not embodied in new commodities, rises; that of perishable commodities shows no definite movement; and that of durable commodities declines, although far from consistently. Adjustment for price changes reduces these shifts appreciably and suggests that, since the first World War, there have been no significant long term changes in the apportionment of consumers' outlay in 1929 prices among the four categories of goods classified by durability.

k) Non-durable goods constitute the overwhelming proportion of national income, averaging about 85 per cent. In both

current and 1929 prices the share of non-durable goods seems to increase over the period; that of durable to decline.

l) Commodities seem to account on the average for two-thirds of national income; in current prices their share declines appreciably over the period; that of services not embodied in new commodities rises. With the adjustment for price changes the loss in the share of commodities and the gain in that of services are materially reduced, although there are still traces of a decline in the share of commodities and a somewhat more obvious indication of a rise in the share of services. However, the shifts are so minor that they cannot be attributed much significance.

Appendix to Chapter 7: Comparison with Published Estimates of Individuals' Savings

The crudeness of our estimates of individuals' savings embodied in capital formation, the importance of the subject, and the interest that attaches to any evidence that bears upon it led us to compare our estimates with others. Because of differences in concept and scarcity of reliable data, such comparisons cannot serve as valid checks upon the accuracy of any one set of estimates. But they should reveal the substantial differences, suggest reasons for them, and be conducive to more intelligent interpretation and use.

1 Consumer Expenditures Study Estimate for 1935–36

The most recent and perhaps most thorough estimate of individuals' savings in this country is for a year extending roughly from the middle of 1935 to the middle of 1936 by the National Resources Committee (*Consumer Expenditures in the United States;* Washington, 1939). Based largely upon

[1] I am indebted to A. G. Hart of Iowa State College, and Raymond Goldsmith and Irwin Friend of the Securities and Exchange Commission, for valuable suggestions in connection with parts of this Appendix.

a sample study of how families and individuals, including also entrepreneurs, spend their income, they are, except for items noted below, roughly comparable to our estimate of individuals' and entrepreneurs' savings embodied in capital formation.

Savings are defined in the report (p. 22) as "net change in assets and liabilities of the family (or single individual) during the year, exclusive of gains and losses from revaluation of assets". Appreciation and depreciation of assets, whether realized or not, are not allowed for in either income or savings; and it is stated that the definition of savings "conforms to the accepted rule that savings equals income less expenditures for current consumption and for gifts and personal taxes" (p. 22). However, profits and losses on assets bought and sold within the year are included in income and hence in savings.

After examining the questionnaire on changes in assets and liabilities and the description of various concepts involved in determining savings we concluded that savings as estimated by the National Resources Committee differ from our individuals' (including entrepreneurs') savings embodied in capital formation in the following important respects:

a) The N.R.C. estimate does not allow for the depreciation of residential real estate owned by individuals and inhabited by its owners. The imputed rental value was added to income and included again under expenditures. There seems to be no provision in the balance sheet of assets and liabilities for depreciation on real estate. To the extent that it is not allowed for, the N.R.C. total savings is larger than our savings embodied in net capital formation.

b) It is not clear whether in the N.R.C. estimate expenditures incurred in investment (brokerage fees, interest on loans made to carry securities) are allowed for and whether purchases of various types of assets on the positive side of the balance sheet include charges in addition to the net value of the asset. Consequently the N.R.C. estimate of savings may be inflated by using the cost of assets purchased instead of the net market value of assets.

c) If savings, expenditures, and family income were reconciled, and gains and losses from sales of assets were included in income, they must have been included also under savings (and no figures are given to indicate gains and losses or whether they were positive or negative).

d) Both family income and savings, in the case of entrepreneurs, include net profit or loss from business; and net profit and loss reported on the schedules presumably reflect customary practices of business accounting. Therefore, in contrast to our estimate of savings embodied in net capital formation, the N.R.C. estimate of individuals' savings is affected by gains and losses on sales of capital assets, revaluation of inventories, and the use of the cost basis in estimating depreciation. However, the N.R.C. report states explicitly that only quantity changes in farmers' inventories are taken into account (p. 22, footnote 27).

e) The treatment of savings in connection with life insurance, building and loan associations, and similar savings institutions suggests that the N.R.C. estimates omit an item included in ours—the accrual to individuals' savings derived from the excess of receipts, by life insurance companies and other associations, over and above current costs of operation. In the N.R.C. estimates, payments of premiums or new payments to associations are alone considered evidence of savings. While annuities and benefits are included in income, the balance sheets would not reveal payments of annuities or of benefits as a source of savings since there would be a corresponding reduction in assets outstanding. In our estimate such net receipts are included under individuals' savings, just as much as their actual in-payments (both, of course, so far as they are embodied in net capital formation).

When we try to express these differences in scope quantitatively, we find that there is no way, with the present data, of approximating costs of investment or savings and losses from purchases and sales of assets for 1935–36 (items b and c). But it

may reasonably be assumed that both amounts and their sum are small compared to total individuals' savings.

The other items may be roughly approximated: (a) Depreciation on owner-occupied residential real estate in 1935–36 is approximately $800 million (derived from an estimate of depreciation on all residential property, minus an allowance for residential property owned by corporations, the remainder apportioned on the basis of ratios of imputed to money rent received by individuals). (d) Estimated from the national income study to be about $120 million, the excess of the accounting measure of entrepreneurial net savings over adjusted net savings (average of items for 1935 and 1936). (e) Estimated to be roughly $1,000 million, the excess of receipts, by life insurance companies and other associations of individuals, of dividends, interest, rent, and all forms of property income over current costs of operation (wages, salaries, materials, and dividends to stockholders, but, of course, excluding payments of annuities and benefits).[2] The adjusted estimate of savings on the basis of the N.R.C. study for 1935–36 would then be, in millions of dollars:

Present N.R.C. estimate	5,978
Minus depreciation	800
Minus adjustment of entrepreneurial savings	120
Plus accruals of life insurance companies and similar institutions	1,000
Net total	6,058

Our estimates of individuals' savings embodied in capital formation are $4.6 billion for 1935 and $8.3 billion for 1936. If we average these totals in accordance with the distribution of monthly income payments, as shown for these two years in Department of Commerce reports, we obtain the following: ratio of the last six months in 1935 to the annual total, 0.518; ratio of the first six months in 1936 to the annual total, 0.473; total for 1935–36, $6.31 billion.

2 This is the estimate made in the N.R.C. report, in the reconciliation with the Department of Commerce national income total (see *Consumer Incomes in the United States*, p. 35, footnote 5.)

According to these calculations, our estimate exceeds that of the N.R.C. by at least $0.25 billion. The errors accounting for the difference may be in both sets of estimates. The N.R.C. estimates of income (and hence of savings) are some 3 per cent less than the comparable Department of Commerce estimates, excluding the shortage due to the failure to take into account accruals by insurance companies and similar institutions (see *Consumer Incomes in the United States,* p. 35); and this alone would lead us to raise the N.R.C. estimate of savings by another $200 million, thereby canceling the difference. It is also possible that savings embodied in net capital formation were much more heavily concentrated in the second half of 1936 than were monthly income payments, which would reduce our estimate of savings for 1935–36 to less than $6.31 billion.

It can therefore be said that comparison with the N.R.C. estimate does not reveal any significant evidence that our estimate of individuals' savings embodied in capital formation for 1935–36 is either too high or too low.

2 *The Brookings Estimate for 1929*

In *America's Capacity to Consume,* Maurice Leven estimates individuals' savings (including entrepreneurial) to be $17.8 billion for both families and unattached individuals in 1929 (see Tables 5, 6, 9, pp. 260, 261, 265). Our estimate of savings embodied in net capital formation (individuals' plus entrepreneurs') in 1929 is only $6.3 billion. A large proportion of this striking difference is easily accounted for. The Brookings estimate includes in individuals' income gains on sales of assets to the tune of $6.2 billion in 1929 (see Table 13, p. 163). Since such gains, even though affecting consumers' expenditures, cannot be included in the latter total, their appearance under income in the Brookings study means that they were included in the savings of families and individuals that had them (mostly in the higher income brackets). Accordingly, we subtract the capital gains from both income and savings, which reduces

distributed income to $86.8 billion and savings to $11.6 billion (for the former figure see Table 39, p. 229).

But even after this adjustment, the Brookings estimate of income is larger than our aggregate payments including entrepreneurial savings ($83.3 billion), owing chiefly to the inclusion of income from odd jobs, gardens, etc. (see Table 13, p. 163). If we assume that the proportion of this additional income saved is the same as of savings to total income after the exclusion of capital gains, the excess in savings is about 4 per cent, or $0.4 billion, reducing the Brookings estimate to $11.2 billion.

This residual Brookings estimate exceeds our estimate of individuals' savings embodied in capital formation for the following reasons: (a) So far as it is based upon consumer budget samples, it does not allow fully for depreciation on owner-occupied residential property, or even for depreciation on all residential property owned by individuals. Savings items reported in budget studies are ordinarily derived from financial data relating to the family without a careful calculation of costs or reconciliation of income and expenditures. (b) It does not allow for commissions on purchases of assets and losses on fraudulent securities. (c) It takes into account entrepreneurial net savings before the adjustments involved in making them comparable with net capital formation.

Item (a), for *all* residential property owned by individuals, may be estimated for 1929 as between $1.8 and $2.5 billion, with $2 billion as a roughly acceptable figure. Item (b) is estimated by Clark Warburton to be $2 billion (see *Studies in Income and Wealth,* Vol. One, p. 109). Item (c), however, is negative for 1929, about −$0.1 billion. The total adjustment for these three items in the Brookings figures is $3.9 billion; and the estimate is accordingly reduced to $7.3 billion.

Thus, after such adjustments as we can make, the Brookings estimate of savings for 1929 still exceeds our estimate of savings embodied in net capital formation by about $1 billion. Whether this excess is due to the assumption of too high a

savings ratio in the Brookings estimate (especially for the upper income groups, for which data were perforce scanty) or to deficiencies in our estimate, cannot be ascertained with the present data. The significant conclusion, however, is that the huge difference is to be ascribed largely to significant differences in scope; and that after adjustment the residual discrepancy is not more than 16 per cent of our total, a relatively small difference in view of the essential differences in the materials upon which the two estimates are based.

3 Lough's Estimates for 1919–31

In preparing his estimates of consumption and individuals' savings (*High Level Consumption,* McGraw-Hill, 1935) William H. Lough made some attempt to segregate the latter from those of business and government. But it is not clear to what extent savings of unincorporated firms were excluded from his estimates of savings proper. His estimates are based upon a study of movements in bank deposits, outstanding currency, issuance of securities, acquisitions, etc. Inspection of the procedures (see especially Table 33, pp. 284–5, which describes in detail the derivation of the savings estimate for 1929) suggests that, on the whole, savings of unincorporated firms must have been included with individuals' savings. However, it is likely that several forms of savings by firms (additions to inventories, reductions of debt, and the like) were not covered; other forms, such as acquisition of securities or additions to bank deposits and purchase of farms, on the other hand, probably were.

It seems reasonable to treat Lough's estimates as most nearly comparable with our estimates of individuals' savings, including those of unincorporated firms. The divergences in scope are as follows: (a) Lough's estimates, based upon records of financial institutions and study of the acquisition of assets, omit an adjustment for depreciation chargeable to all residential and other property held by individuals. (b) In estimating payments by individuals for securities, Lough uses the *Commercial and Financial Chronicle* series on non-refunding is-

sues, whereas, according to more recent studies, a considerable proportion of even these non-refunding issues does not represent flow into real investment and capital formation.[3] (c) Lough allows for changes in individuals' debts only in connection with real estate and in estimating security takings, and it is not clear that this allowance covers changes in consumer debt not connected with the purchase or holding of real estate securities. (d) Lough's estimates do not include savings of unincorporated firms in the form of additions to their stocks of goods (inventories or equipment) or changes in their debt. (e) Lough does not allow for accruals to individuals *via* life insurance companies, although he has taken such changes in building and loan associations and other savings organizations into account. In contrast to other estimates, Lough's seem to exclude from savings costs of investment transactions (since the net market value of securities and other assets purchased is used and divided between individuals and enterprises).

It is possible to adjust roughly for item (a) on the basis of depreciation attributable to residential real estate (and residential alone); for (b), since 1921, on the basis of the ratio of Moody's productive issues to the *Chronicle* total of non-refunding issues;[4] for (c), since 1924, by allowing for changes in consumers' debt. No allowance is possible for (d), for, while we have estimates of entrepreneurial net savings, we cannot divide them into the various forms in which they were embodied. Item (e) can be estimated roughly, but not as an annual series.

Lough's estimates, the various adjustments to them, and a comparison with our estimates of individuals' net savings embodied in net capital formation are shown in the accompanying table. The comparison, after all the adjustments, is still between estimates of which one (Lough's) excludes at least a substantial part of net savings of unincorporated firms and

[3] See 'Security Issues and Real Investment in 1929', by George A. Eddy, *Review of Economic Statistics*, May 1937.

[4] *Ibid.*, p. 91.

	LOUGH'S ESTIMATES[1] (1)	DEPRECIATION (2)	ALLOWANCE FOR NON-PRODUCTIVE ISSUES[2] (3)	CONSUMER CREDIT[3] (4)	TOTAL ADJUSTMENT (2 + 3 − 4) (5)	LOUGH'S ESTIMATES, ADJ. (1 − 5) (6)	NBER ESTIMATES (7)	DIFFERENCE (6 − 7) (8)
	(billions of dollars)							
1919	9.4	1.8					10.6	
1920	10.1	2.4					7.2	
1921	6.5	1.7	0.7		2.4	4.1	1.6	+2.5
1922	5.4	1.6	0.5		2.1	3.3	3.4	−0.1
1923	7.8	1.9	0.7		2.6	5.2	6.0	−0.8
1924	8.7	1.9	0.7	−0.3	2.9	5.8	3.7	+2.1
1925	10.6	1.9	1.9	−0.8	4.6	6.0	6.8	−0.8
1926	10.6	2.0	2.1	−0.6	4.7	5.9	4.8	+1.1
1927	10.4	2.1	2.3	−0.2	4.6	5.8	5.3	+0.5
1928	8.5	2.1	3.3	−0.8	6.2	2.3	4.6	−2.3
1929	9.3	2.2	4.7[4]	−1.0	7.9[4]	1.4[4]	6.3	−4.9
1930	8.5	2.1	1.8	+0.6	3.3	5.2	2.8	+2.4
1931	4.1	1.8	0.5	+1.1	1.2	2.9	2.8	+0.1

[1] *High Level Consumption*, Table 41, p. 306.
[2] Obtained by correcting Table 38 of *High Level Consumption*. The ratio of productive issues to total non-refunding issues (*Review of Economic Statistics*, May 1937, p. 91) was applied to lines 1, 4, and 11 and the new totals derived as outlined by Lough. The entries in col. 3 are the difference between Lough's original estimates of payments by individuals for securities and the new estimates of these values, derived, as just stated, by a further allowance for non-productive, non-refunding issues.
[3] Rolf Nugent, *Consumer Credit and Economic Stability* (Russell Sage Foundation, 1940), Table 10, p. 116.
[4] The Eddy figure for the *Chronicle* total issues less refunding series is $9.2 billion; the Lough, $7.8. In all other years the difference is slight. The use of the Eddy figure for 1929 would reduce the allowance for non-productive issues to $4.3 billion, making the total adjustment $7.5 billion, Lough's adjusted estimates $1.8 billion, and the difference (col. 8), −$4.5 billion.

accruals to the benefit of individuals on the books of life insurance companies.

In view of the crudeness of the adjustments and the consequently erratic annual movement of Lough's adjusted estimates, we may properly compare only the average level of the two series. For 1921–31 our estimates are only $0.2 billion larger than Lough's adjusted (col. 6), a truly insignificant difference. Correction for the accrual to individuals of assets on books of life insurance companies would make Lough's estimates about $0.4 billion *per year* more than ours; allowance for part of net savings of unincorporated firms might add to the average excess of Lough's estimates over ours. One may contend also that at least part of the change in consumers' credit (col. 4) has already been taken into account in Lough's estimates, and that the corresponding downward adjustment of Lough's estimates has, therefore, been too large. But it is

doubtful that the inclusion of these elements would make Lough's estimates more than $0.5 billion per year greater than ours. On the other hand, the adjustment for depreciation chargeable to real estate held by individuals is probably too small, since it excludes non-residential real estate owned by individuals; there is no allowance for an increase in individuals' indebtedness before 1924; and the adjustments are so crude that we should not ascribe any significance to an average difference of some $0.5 billion per year, which amounts to no more than about 10 per cent of the average value of either total.

The comparison therefore does not cast serious doubt upon the correctness of the average level or the general movement of our estimates. Nor does the movement of the differences between the two series suggest that our estimates are too low for the 1920's and too high for the 1930's.

4 Goldsmith's Estimates for 1933–37

In a report to the Conference on Research in Income and Wealth, Raymond Goldsmith presented in detail his estimates of savings for 1933–37 (see *Studies in Income and Wealth,* Vol. Three, pp. 217–315). Based upon an attempt to take into account movements in individuals' balances in banks, building and loan associations, insurance and pension reserves, absorption of securities and various forms of consumer goods, they measure also business savings of agriculture, but not of unincorporated enterprises in other industries.

Goldsmith's estimates of individuals' savings (excluding their savings invested in automobiles and other consumer durable goods, but including their savings invested in dwellings) plus savings in agriculture are strikingly lower than our estimates of individuals' savings (including entrepreneurial savings) embodied in capital formation. The difference may be due partly to a difference in scope: our estimates attempt to cover fully entrepreneurial net savings (crude and approximate as the estimates necessarily are), whereas Goldsmith's

	1933	1934	1935	1936	1937	Total
			(billions of dollars)			
Goldsmith (see p. 237)	−1.3	+0.5	+0.9	+6.7	+3.9	+10.7
Present NBER	+0.5	+1.3	+4.6	+8.3	+7.3	+22.0
Difference	−1.8	−0.8	−3.7	−1.6	−3.4	−11.3

Dr. Goldsmith has informed me that his estimates are being revised. The revised figures, however, were not available when this chapter went to press.

estimates of individuals' savings include some forms of entrepreneurial savings (cash, securities, etc.) and exclude others (inventories, debt, construction, fixtures, etc. for non-farmers). It is quite possible that during 1935, 1936, and 1937 there were substantial additions to the inventories and equipment of entrepreneurs that were not offset by increases in debt; and that for the period as a whole (1933–37) this item, omitted in Goldsmith's estimates, amounted to some two or three billion dollars. If this is true, adjustment for the difference in scope would reduce the difference in the years in which it is especially marked—1935, 1936, and 1937.

But even after this adjustment, a substantial difference would still remain between the two series. It may be due to an excess in our estimates, a shortage in the Goldsmith estimates, or to both. The excess in our series of individuals' savings embodied in capital formation may be due largely to an underestimate of corporate savings, arising from (a) the tendency of corporations to understate their net income to taxing authorities and to include under current maintenance the cost of certain capital goods which we include in gross capital formation; and (b) our failure to adjust corporate net savings properly for such items as gains and losses from sales of capital assets, effects of inventory revaluation, and the disparity between depreciation charges on cost and reproduction bases. Sources of underestimates of corporate savings (a) would not affect our estimates of capital formation; which means that individuals' savings embodied in capital formation (the difference between net capital formation and corporate and government savings) would be overestimated.

This possibility of an exaggeration of the average level of our estimates of individuals' savings embodied in capital formation would go far to explain the continuous excess of our estimates over Goldsmith's. Yet in the present state of our knowledge, such a possibility can only be conjectured; it can neither be demonstrated nor adjusted for. What is more to the point, this bias toward exaggerating individuals' savings embodied in capital formation would be most pronounced during periods of prosperity, when corporate net profits are high. Hence, the overestimate of individuals' savings, if there is one, should be greater in the 1920's than in the 1930's, and correction would only strengthen our conclusion that individuals' savings did not decline during the depressed 1930's.

On the other hand, as Dr. Goldsmith himself recognizes (see pp. 234–6), there are possible shortages in his estimates. Perhaps the most important source is that he does not take into account reductions in individuals' debts, except for the debt connected with passenger cars (directly) and real estate (see comments by A. G. Hart, *Studies in Income and Wealth,* Vol. Three, pp. 303–4). Hart mentions a decline of $6.2 billion (an admittedly crude guess) in individuals' short term debts during 1933–35; Goldsmith shows a few million dollars of increase in individuals' debt from changes in installment debt (for consumers' durable goods) and shrinkage in security loans. This enormous difference would account in large part for the difference between Goldsmith's and our estimates, although it probably would not affect years after 1935, in which the differences are substantial.

Why should estimates derived by a careful scrutiny of financial accounts run lower than those obtained by subtracting from net capital formation the net savings of corporations and governments? More data and study are obviously needed to effect a reconciliation, but even if there is some excess in our estimates of individuals' savings embodied in capital formation, the trend in this bias is only likely to confirm our tenta-

tive conclusion concerning the relative levels of these savings in the 1920's and the 1930's.

5 Other Estimates

We mention three other estimates, although no comparison with our estimates is possible or needed. The first is that of Mordecai Ezekiel, made largely by the application of the savings-income ratio in the Brookings study to the distribution of income in the upper brackets as shown by federal income tax returns (see 'An Annual Estimate of Saving by Individuals', *Review of Economic Statistics,* Nov. 1937). Since the estimates include capital gains, are subject to all the deficiencies of the income concept as defined in tax returns, and apply solely to savings of individuals who file income tax returns, they cannot be compared with any estimate of individuals' savings embodied in capital formation.

The second estimate is that recently published by Gainsbrugh and Osborne of the National Industrial Conference Board staff (see The Conference Board *Economic Record,* March 22, 1940 and April 22, 1940). Savings are shown separately for unincorporated enterprises and for individuals; for the latter the estimates are derived by methods essentially similar to those used by Goldsmith. But whereas individuals' savings are defined as "the difference between consumption expenditures of individuals and earned income received by individuals in that year" (see April 22 issue, p. 180), comparison of income received by individuals (Table 1, p. 181) with consumption expenditures (Conference Board *Economic Bulletin,* Aug. 24, 1939) indicates a total of individuals' savings significantly and inexplicably different from the total given directly and based upon financial and other records. The difference remains whether we consider individuals' savings alone or include also savings of unincorporated enterprises. Since it is not explained, we do not attempt a comparison of the estimates with ours.

Gordon S. Fulcher's method (*Review of Economic Statistics*, Feb. 1941) is essentially similar to ours, since he derives estimates of individuals' savings by subtracting corporate and government savings from capital formation. But by using estimates of gross capital formation and corporate and government gross savings he derives gross savings of individuals, somewhat modified (in comparison with our estimates) by a partial inclusion of capital gains. The general result of Fulcher's analysis is, however, quite similar to ours in indicating a level of individuals' savings in the 1930's not much lower than in the 1920's and a ratio of individuals' savings to total income in 1934–37 about the same as in 1926–29 (Fulcher's estimates cover only the years since 1926).

6 Concluding Comments

a) Only our estimates of individuals' savings, including savings of entrepreneurs, can be tested by comparison with other published estimates of individuals' savings. The reasons that make it difficult to estimate savings of unincorporated enterprises make it almost impossible to segregate entrepreneurial savings from other savings in any study based upon records of banking and savings institutions, absorption of securities, etc.

b) The closest comparison that can be made is between our estimates and those based upon a study of how income was spent or saved, provided, of course, that the income concepts are similar. Comparisons with estimates of savings based upon records of financial and other institutions are, however, unsatisfactory, because such records are not explicit concerning elements that may represent depreciation and other reserves rather than savings, and are necessarily incomplete in their coverage of unincorporated firms and of the individuals' complete network of claims and obligations.

c) As far as valid comparisons can be made, the difference between our estimates of individuals' savings embodied in capital formation and other estimates of individuals' savings is fairly small, after adjustments for differences in scope. There

is no significant evidence that the average level shown by our estimates is either too high or too low.

d) It is possible that our estimates of savings embodied in capital formation are somewhat too low in the second half of the 1920's and somewhat too high in the second half of the 1930's. But no evidence substantial enough to affect the broad conclusions in the text concerning the movement of individuals' savings (including entrepreneurial savings) embodied in capital formation has been uncovered.

Statistical Appendix to Part Two

National Income and its Components by Major Industrial Divisions, 1919–1938

TABLES 43–56

Whenever two entries are made for 1934 the first is comparable with those for preceding years in that the *Statistics of Income* data used are based on the old industrial classification; the second is comparable with those for succeeding years in that the *Statistics of Income* data used are based on the new industrial classification.

Net savings and net income, adjusted, exclude gains and losses from sales of capital assets, 1929–38, and from changes in inventory valuation, 1919–38. Net savings and net income without any specific designation are unadjusted, i.e., include these two types of gain and loss.

TABLE 43

Net Income Originating, Adjusted (millions of dollars)

	1919	1920	1921	1922	1923	1924	1925	1926	1927
Agr.	10,862	9,077	5,538	5,861	6,729	7,114	7,946	7,534	7,458
Mining	1,752	2,323	1,666	1,332	2,026	1,706	1,838	2,157	1,855
Mfg.	16,180	19,802	12,627	13,083	16,785	15,603	16,829	18,105	17,200
Constr.	2,002	2,642	1,984	2,327	3,337	3,732	3,957	4,264	4,111
Transp. & other pub. util.	5,958	7,418	6,337	6,209	7,057	7,094	7,600	7,905	7,829
Trade	10,205	11,472	9,527	8,630	10,143	9,813	10,166	11,516	10,568
Finance	6,819	7,418	7,770	8,255	8,809	9,608	9,762	9,837	10,312
Service	6,115	6,847	6,673	7,381	8,258	8,647	9,311	10,120	10,320
Gov.	3,768	7,017	6,205	6,136	7,042	7,277	7,365	8,113	8,483
Misc.	2,241	2,365	1,974	2,297	2,723	2,782	3,068	3,248	3,258
Total *	65,904	76,385	60,304	61,513	72,912	73,380	77,845	82,802	81,397

* Excluding Social Security contributions of employers.

TABLE 44

Net Income Originating (millions of dollars)

	1919	1920	1921	1922	1923	1924	1925	1926	1927
Agr.	10,862	9,077	5,538	5,861	6,729	7,114	7,946	7,534	7,458
Mining	1,723	2,488	1,352	1,456	1,975	1,697	1,886	2,172	1,749
Mfg.	17,082	17,702	9,814	13,455	16,914	15,427	16,880	17,323	16,817
Constr.	2,070	2,610	1,859	2,358	3,382	3,712	3,952	4,240	4,036
Transp. & other pub. util.	5,963	7,348	6,087	6,215	7,094	7,080	7,564	7,888	7,790
Trade	11,111	9,498	6,788	8,964	10,154	9,886	10,481	10,658	10,390
Finance	6,899	7,471	7,682	8,258	8,793	9,600	9,740	9,815	10,311
Service	6,129	6,852	6,652	7,382	8,260	8,644	9,306	10,114	10,318
Gov.	3,768	7,017	6,205	6,136	7,042	7,277	7,365	8,113	8,483
Misc.	2,245	2,341	1,954	2,303	2,722	2,782	3,072	3,247	3,258
Total *	67,854	72,408	53,934	62,390	73,068	73,223	78,195	81,107	80,613

* Excluding Social Security contributions of employers.

TABLE 45

Corporate and Government Net Savings,* Adjusted (millions of dollars)

	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Mining	14.1	—6.5	—155	—269	—245	—287	—114	—111	—174	—175
Mfg.	1,521	2,765	710	686	1,295	920	1,286	1,799	788	918
Constr.	—6.3	26.7	17.5	—1.2	9.7	54.8	43.3	61.7	76 3	28.4
Transp. & other pub. util.	121	175	317	221	410	386	680	704	481	684
Trade	314	910	622	174	456	275	253	646	261	348
Finance	201	43.1	80.4	22.6	1.6	83.5	104	161	307	408
Service	35.1	0.6	—4.0	24.9	40.9	47.2	60.5	29.1	—4.4	13.0
Gov.	—1,303	1,894	958	854	1,611	1,717	1,614	2,151	2,293	1,897
Misc.	182	94.7	—126	73.8	114	72.0	131	117	49.0	276
Total *	1,079	5,904	2,421	1,787	3,697	3,269	4,060	5,560	4,079	4,398

* Excluding net savings of agricultural corporations which are included with entrepreneurial net savings.

TABLE 43

Net Income Originating, Adjusted (millions of dollars)

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*		*1935*	*1936*	*1937*	*1938*
7,330	7,708	5,814	4,041	2,821	3,554	4,749	4,749	5,380	6,089	6,274	5,457
1,638	1,805	1,381	825	480	479	831	819	922	1,173	1,399	1,096
17,924	19,794	16,257	11,047	6,253	6,625	9,046	8,935	11,377	14,198	15,910	12,574
3,990	4,071	3,486	2,228	1,102	711	844	808	1,048	1,557	1,792	1,703
8,030	8,505	7,744	6,452	4,911	4,709	4,802	4,764	5,165	5,834	6,141	5,529
10,977	11,374	10,978	9,031	6,298	5,224	7,036	7,058	7,399	8,498	8,961	9,277
10,874	10,910	9,740	7,894	5,905	5,191	5,071	5,071	5,680	5,976	6,636	6,538
10,686	11,266	10,424	8,798	6,502	5,811	6,746	6,759	7,369	8,284	9,105	8,869
8,289	8,873	8,920	7,410	6,175	7,503	8,188	8,188	7,504	8,216	10,724	10,815
3,653	3,476	2,856	2,579	2,127	2,008	2,138	2,393	2,567	2,921	3,171	3,005
83,396	87,787	77,604	60,309	42,579	41,819	49,454	49,546	54,413	62,749	70,116	64,866

TABLE 44

Net Income Originating (millions of dollars)

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*		*1935*	*1936*	*1937*	*1938*
7,330	7,708	5,814	4,041	2,821	3,554	4,749	4,749	5,380	6,089	6,274	5,457
1,661	1,821	1,319	738	463	513	910	898	950	1,210	1,440	1,099
17,949	19,504	14,094	9,307	5,380	7,480	10,039	9,928	11,816	14,322	16,237	11,959
4,014	4,085	3,377	2,124	1,042	727	894	856	1,062	1,584	1,842	1,691
8,045	8,511	7,625	6,366	4,867	4,720	4,876	4,833	5,149	5,843	6,212	5,513
10,840	11,105	9,225	7,410	5,453	6,128	7,339	7,368	7,721	8,563	9,156	8,863
10,870	11,134	9,761	7,591	5,493	4,833	5,035	5,035	5,731	6,112	6,651	6,551
10,680	11,289	10,411	8,727	6,398	5,771	6,746	6,758	7,363	8,298	9,130	8,872
8,289	8,873	8,920	7,410	6,175	7,503	8,188	8,188	7,504	8,216	10,724	10,815
3,653	3,866	2,595	1,855	1,453	1,435	1,862	2,367	2,629	3,012	3,178	3,013
83,336	87,901	73,144	55,572	39,548	42,669	50,639	50,982	55,308	63,253	70,847	63,836

TABLE 45

Corporate and Government Net Savings,* Adjusted (millions of dollars)

1929	*1930*	*1931*	*1932*	*1933*	*1934*		*1935*	*1936*	*1937*	*1938*
—178	—245	—311	—290	—286	—190	—286	—236	—176	—177	—156
1,472	250	—1,206	—2,145	—1,722	—1,358	—1,363	—480	62.6	—171	219
31.6	19.5	—25.6	—105	—89.1	—55.9	—62.1	—34.7	—29.6	—32.5	1.6
751	250	—118	—431	—203	—291	—285	—203	203	50.6	—72.8
200	261	—207	—621	—778	—260	—294	—274	—32.0	—165	237
—153	—409	—639	—747	—600	—621	—621	—386	—176	—39.1	—121
—7.9	—67.2	—135	—372	—317	—239	—238	—206	—213	—194	—172
2,225	2,104	344	—906	—113	—575	—575	—1,736	—2,196	497	—175
—106	—478	—407	—345	—326	—251	—218	—269	—193	—177	—178
4,233	1,685	—2,708	—5,965	—4,436	—3,844	—3,945	—3,828	—2,750	—410	—417

TABLE 46

Entrepreneurial Net Savings,* Adjusted (millions of dollars)

	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Agr.*	2,275	−898	−1,443	−907	−645	−357	420	−115	−124	−237
Mining	10.1	14.1	0 8	−8.3	−3.4	−3.0	15.6	23.7	14.2	15.9
Mfg.	319	297	157	112	200	104	146	161	114	71.4
Constr.	141	94.0	52.2	22.4	47.7	209	208	175	159	82.1
Transp. & other pub. util.	8.2	5.4	−1.6	−0.5	0.1	0.6	1.1	1.3	0.2	1.2
Trade	1,830	1,491	1,195	381	833	449	364	815	380	437
Service	1,079	826	708	383	798	566	584	1,031	604	637
Misc.	157	127	101	25.1	88.3	53.7	52.3	111	50.6	45 9
Total *	5,820	1,958	770	8 0	1,319	1,023	1,792	2,206	1,199	1,052

* Including net savings of agricultural corporations.

TABLE 47

Corporate and Government Net Savings * (millions of dollars)

	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Mining	−12.9	147	−449	−153	−291	−295	−69.4	−97.9	−273	−154
Mfg.	2,305	914	−1,760	1,014	1,410	762	1,332	1,090	441	941
Constr.	21.7	11.7	−28.5	7.8	22.7	49.8	42.3	54.7	51.3	36.4
Transp. & other pub. util.	126	105	67.6	227	447	372	644	687	442	699
Trade	624	8.5	−462	306	460	305	393	235	173	278
Finance	281	96.1	−7.6	25.6	−14.4	75 5	82.3	139	306	404
Service	49.1	5.6	−25.0	25.9	42.9	44.2	55.5	23.1	−6.4	7.0
Gov.	−1,303	1,894	958	854	1,611	1,717	1,614	2,151	2,293	1,897
Misc.	186	70.7	−146	79 8	113	72.0	135	116	49.0	276
Total *	2,277	3,254	−1,853	2,388	3,803	3,103	4,231	4,401	3,478	4,385

* Excluding net savings of agricultural corporations which are included with entrepreneurial savings.

TABLE 48

Entrepreneurial Net Savings * (millions of dollars)

	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928
Agr.*	2,275	−898	−1,443	−907	−645	−357	420	−115	−124	−237
Mining	8.1	25.1	−19.2	−0.3	−6 4	−4.0	18.6	24.7	7.2	15 9
Mfg.	437	48.8	−184	156	214	86.6	151	88 8	78.7	73.4
Constr.	181	77.0	−26.8	44.4	79.7	194	204	158	109	98.1
Transp. & other pub. util.	8.2	5.4	−1.6	−0.5	0.1	0.6	1.1	1.3	0 2	1.2
Trade	2,426	419	−458	583	840	492	539	368	290	370
Service	1,079	826	708	383	798	566	584	1,031	604	637
Misc.	157	127	101	25.1	88.3	53.7	52.3	111	50.6	45.9
Total *	6,572	631	−1,324	284	1,369	1,032	1,971	1 670	1,016	1,005

* Including net savings of agricultural corporations.

TABLE 46

Entrepreneurial Net Savings,* Adjusted (millions of dollars)

1929	1930	1931	1932	1933	1934		1935	1936	1937	1938
77.0	−1,335	−1,780	−1,671	−491	340	340	639	1,045	624	−83.0
21.8	−12.4	−24.1	−29.5	−25.2	−13.4	−14.2	−11.7	−2.9	3.5	5.4
85.5	34.6	−60.3	−150	−81.1	−48.7	−52.1	27.5	120	34.3	15.9
89.2	24.2	−42.0	−195	−167	−127	−146	−80.3	−60.5	−59.3	8.4
1.9	−1.6	−1.8	−2.1	0.4	0.3	1.5	2.7	3.6	4.3	0.4
308	297	−2.0	−438	−534	−136	−132	−121	60.2	−28.0	182
518	383	−103	−935	−1,013	−318	−337	−195	105	−49.4	217
29.5	7.9	−31.0	−101	−91 5	−35.7	−37.3	−26.5	−9.0	−19.4	−5.7
1,132	−601	−2,044	−3,525	−2,403	−340	−378	234	1,261	510	340

TABLE 47

Corporate and Government Net Savings * (millions of dollars)

1929	1930	1931	1932	1933	1934		1935	1936	1937	1938
−166	−304	−392	−306	−253	−119	−213	−210	−142	−138	−153
1,209	−1,738	−2,812	−2,948	−935	−438	−447	−75.8	177	129	−316
36.5	−28 9	−70.6	−126	−84.1	−43.5	−49.2	−30.8	−21.8	−18.8	−0.7
756	131	−203	−475	−190	−217	−215	−218	211	120	−89.1
68.8	−640	−985	−1,037	−266	−65.8	−100	−71.2	11.7	−42.5	−29 0
70.4	−388	−943	−1,158	−957	−658	−658	−336	−39 6	−24.0	−108
15 1	−79.7	−206	−476	−357	−240	−239	−211	−199	−169	−169
2,225	2,104	344	−906	−113	−575	−575	−1,736	−2,196	497	−175
283	−739	−1,131	−1,018	−900	−527	−244	−207	−102	−169	−169
4,499	−1,684	−6,400	−8,453	−4,059	−2,886	−2,743	−3,097	−2,300	183	−1,241

TABLE 48

Entrepreneurial Net Savings * (millions of dollars)

1929	1930	1931	1932	1933	1934		1935	1936	1937	1938
77.0	−1,335	−1,780	−1,671	−491	340	340	639	1,045	624	−83.0
24.9	−15.7	−29.9	−31 5	−23.5	−6.4	−9.0	−9.5	−0 4	6.2	6.1
58.8	−139	−194	−221	−12.3	24.3	25.3	61.8	130	60.1	−33.0
98.6	−36.9	−101	−234	−155	−91.0	−110	−70.2	−41.7	−23.0	−1.3
2.0	−1.8	−2.6	−2.3	−0.4	0.4	1.5	0.8	3.8	4.5	0.4
171	−553	−846	−868	−141	−27.8	−17.9	−2.3	82.4	43.9	34.9
518	383	−103	−935	−1,013	−318	−337	−195	105	−49.4	217
29.5	7.9	−31.0	−101	−91.5	−35.7	−37.3	−26.5	−9.0	−19.4	−5.7
981	−1,691	−3,088	−4,067	−1,929	−114	−145	398	1,315	646	135

TABLE 49

Total Payments to Individuals (millions of dollars)

	1919	1920	1921	1922	1923	1924	1925	1926	1927
Agr.	8,587	9,975	6,981	6,768	7,374	7,471	7,526	7,649	7,582
Mining	1,727	2,315	1,820	1,609	2,273	1,997	1,937	2,245	2,015
Mfg.	14,339	16,739	11,760	12,284	15,289	14,578	15,396	16,143	16,296
Constr.	1,868	2,522	1,915	2,306	3,279	3,468	3,706	4,027	3,875
Transp. & other pub. util.	5,828	7,257	6,021	5,988	6,647	6,707	6,919	7,199	7,347
Trade	8,061	9,070	7,708	8,074	8,853	9,089	9,548	10,053	9,926
Finance	6,618	7,375	7,689	8,233	8,808	9,525	9,657	9,675	10,005
Service	5,000	6,020	5,968	6,973	7,419	8,033	8,666	9,059	9,720
Gov.	5,071	5,123	5,247	5,282	5,431	5,560	5,751	5,962	6,190
Misc.	1,901	2,143	1,999	2,198	2,520	2,656	2,884	3,019	3,158
Total *	59,004	68,523	57,111	59,718	67,895	69,088	71,992	75,035	76,119

* Excluding Social Security contributions of employers.

TABLE 50

Employee Compensation (millions of dollars)

	1919	1920	1921	1922	1923	1924	1925	1926	1927
Agr.	1,515	1,780	1,159	1,122	1,219	1,224	1,243	1,326	1,280
Mining	1,479	2,035	1,557	1,407	1,980	1,705	1,588	1,846	1,669
Mfg.	12,468	14,609	9,891	10,480	13,021	12,396	12,960	13,504	13,539
Constr.	1,608	2,253	1,651	1,963	2,929	3,030	3,070	3,556	3,398
Transp. & other pub. util.	4,607	6,026	4,807	4,630	5,166	5,100	5,170	5,382	5,339
Trade	5,430	6,052	5,171	5,682	6,389	6,531	6,986	7,423	7,200
Finance	1,379	1,651	1,729	1,745	1,816	1,973	2,028	2,241	2,434
Service	3,256	4,072	4,203	4,498	4,925	5,258	5,520	5,905	6,351
Gov.	4,026	3,877	3,982	3,956	4,099	4,281	4,467	4,680	4,936
Misc.	1,369	1,531	1,384	1,517	1,791	1,842	1,984	2,150	2,194
Total *	37,139	43,890	35,536	37,003	43,339	43,323	45,019	48,017	48,433

* Excluding Social Security contributions of employers.

TABLE 51

Employees * (thousands)

	1919	1920	1921	1922	1923	1924	1925	1926	1927
Agr.	2,091	2,144	2,045	2,036	1,985	1,945	1,935	2,036	1,975
Mining	1,078	1,197	889	879	1,116	1,014	1,016	1,155	1,061
Mfg.	9,866	9,756	7,574	8,351	9,492	8,890	9,144	9,364	9,228
Constr.	1,031	1,171	1,064	1,345	1,614	1,663	1,649	1,900	1,769
Transp. & other pub. util.	3,262	3,502	3,006	3,024	3,341	3,245	3,241	3,325	3,278
Trade	3,882	4,269	3,819	4,029	4,370	4,514	4,589	4,729	4,878
Finance	940	1,017	1,007	979	1,037	1,099	1,100	1,209	1,306
Service *	3,629	3,767	3,810	4,055	4,351	4,513	4,692	4,956	5,147
Gov.	3,497	2,820	2,787	2,685	2,715	2,826	2,891	2,937	3,007
Misc.	1,163	1,164	1,109	1,198	1,325	1,355	1,419	1,506	1,549
Total *	30,443	30,811	27,114	28,585	31,351	31,068	31,680	33,121	33,201

* Equivalent full-time units. Excluding salaried engineers and employees in hand trades and including entrepreneurs in automobile repair shops and garages.

TABLE 49

Total Payments to Individuals (millions of dollars)

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*		*1935*	*1936*	*1937*	*1938*
7,567	7,631	7,149	5,821	4,492	4,045	4,409	4,409	4,741	5,044	5,650	5,540
1,800	1,962	1,639	1,160	800	790	1,035	1,120	1,170	1,352	1,573	1,247
16,934	18,236	15,972	12,314	8,550	8,428	10,453	10,350	11,831	14,015	16,047	12,339
3,880	3,950	3,443	2,296	1,403	967	1,028	1,016	1,163	1,647	1,883	1,693
7,344	7,752	7,495	6,572	5,345	4,912	5,093	5,048	5,366	5,627	6,087	5,601
10,191	10,865	10,419	9,241	7,359	6,537	7,433	7,486	7,795	8,469	9,155	8,857
10,466	11,064	10,149	8,534	6,652	5,791	5,693	5,693	6,067	6,152	6,675	6,659
10,036	10,755	10,108	9,036	7,810	7,142	7,304	7,334	7,770	8,392	9,318	8,824
6,392	6,648	6,816	7,066	7,081	7,616	8,763	8,763	9,240	10,412	10,227	10,990
3,331	3,553	3,327	3,017	2,574	2,427	2,425	2,648	2,863	3,124	3,367	3,189
77,944	82,421	76,520	65,061	52,069	48,658	53,639	53,870	58,008	64,238	70,016	64,912

TABLE 50

Employee Compensation (millions of dollars)

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
1,268	1,284	1,134	847	584	517	558	639	690	794	758
1,481	1,530	1,325	962	664	666	875	932	1,080	1,223	992
13,863	14,911	12,795	9,918	7,024	7,019	8,800	9,897	11,217	13,205	10,521
3,438	3,441	2,945	1,976	1,157	764	801	897	1,261	1,487	1,290
5,308	5,489	5,073	4,310	3,302	3,040	3,272	3,508	3,877	4,280	3,937
7,521	8,012	7,644	6,644	5,136	4,513	5,293	5,502	5,848	6,450	6,258
2,637	2,856	2,650	2,385	1,967	1,743	1,858	1,952	2,017	2,120	2,149
6,433	6,893	6,390	5,574	4,415	3,919	4,395	4,792	5,304	5,914	5,610
5,152	5,385	5,549	5,788	5,716	6,154	7,194	7,751	8,874	8,546	9,301
2,256	2,409	2,259	2,061	1,731	1,684	1,837	2,057	2,311	2,550	2,413
49,361	52,214	47,767	40,468	31,699	30,054	34,888	37,929	42,484	46,574	43,231

TABLE 51

Employees * (thousands)

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
1,963	1,971	1,863	1,759	1,616	1,590	1,537	1,618	1,637	1,680	1,675
978	1,033	963	829	690	706	830	848	897	942	818
9,245	9,890	8,799	7,452	6,331	6,791	7,890	8,390	9,063	9,917	8,332
1,778	1,827	1,610	1,179	784	656	723	780	985	1,047	941
3,206	3,269	3,043	2,626	2,228	2,126	2,192	2,183	2,303	2,415	2,158
4,929	5,184	4,980	4,433	3,833	3,794	4,207	4,224	4,383	4,611	4,403
1,398	1,500	1,453	1,346	1,234	1,178	1,222	1,240	1,272	1,319	1,307
5,234	5,536	5,338	4,979	4,479	4,279	4,783	5,094	5,447	5,724	5,538
3,080	3,162	3,213	3,254	3,251	3,199	3,296	3,457	3,675	3,801	3,860
1,580	1,684	1,617	1,566	1,491	1,519	1,571	1,644	1,734	1,813	1,767
33,394	35,059	32,882	29,426	25,940	25,841	28,254	29,482	31,400	33,272	30,802

TABLE 52

Entrepreneurial Withdrawals (millions of dollars)

	1919	1920	1921	1922	1923	1924	1925	1926	1927
Agr.	6,699	7,749	5,316	5,120	5,630	5,745	5,806	5,859	5,828
Mining	30.9	39.7	32.1	29.5	31.7	28.0	26.3	25.6	24.4
Mfg.	523	534	404	388	385	374	371	369	365
Constr.	240	242	223	307	306	397	567	418	419
Transp. & other pub. util.	10.8	8.9	7.2	7.7	7.3	5.8	5.9	5.7	5.1
Trade	2,197	2,594	2,176	2,050	2,072	2,137	2,091	2,133	2,109
Finance	121	147	144	148	172	189	211	226	234
Service	1,699	1,853	1,681	2,404	2,397	2,691	3,012	3,000	3,199
Misc.	259	307	282	333	340	375	410	413	435
Total	11,781	13,477	10,269	10,788	11,345	11,945	12,503	12,452	12,621

TABLE 53

Entrepreneurs * (thousands)

	1919	1920	1921	1922	1923	1924	1925	1926	1927
Agr.	6,393	6,406	6,443	6,400	6,328	6,319	6,313	6,252	6,216
Mining	22.3	21.6	20.4	20.1	19.7	18.2	17 2	16 6	15 8
Mfg.	250	221	172	160	148	140	133	133	132
Constr.	96.7	90.3	74.4	108	126	159	198	174	166
Transp. & other pub. util.	2.5	2.4	2.3	2.2	2.0	1.7	1.5	1.3	1.0
Trade	1,149	1,179	1,210	1,240	1,270	1,300	1,330	1,361	1,391
Service *	1,222	1,229	1,220	1,250	1,284	1,324	1,361	1,396	1,433
Misc.	236	249	262	275	288	301	313	326	339
Total *	9,374	9,400	9,405	9,457	9,467	9,565	9,664	9,661	9,696

* Excluding entrepreneurs in insurance, estimates for which are not available, and entrepreneurs in automobile repair shops and garages; and including salaried engineers and employees in hand trades.

TABLE 54

Dividends (millions of dollars)

	1919	1920	1921	1922	1923	1924	1925	1926	1927
Agr.	16.0	16.0	16.0	16.0	16 0	15 0	18.0	16.0	29.0
Mining	194	209	193	139	223	212	269	326	278
Mfg.	1,261	1,488	1,325	1,310	1,763	1,652	1,910	2,118	2,227
Constr.	15.3	20.9	32.4	30.3	37.5	32.4	58.4	41.3	47.4
Transp. & other pub. util.	530	486	455	566	637	707	816	866	1,038
Trade	400	382	320	302	369	389	440	471	495
Finance	335	405	410	472	531	506	554	549	545
Service	29.0	80.4	65.7	48.8	68.0	71.2	92.1	105	106
Misc.	74.5	82.8	75.5	77.2	97.7	96.1	111	120	150
Total	2,857	3,172	2,894	2,962	3,745	3,683	4,270	4,615	4,918

TABLE 52

Entrepreneurial Withdrawals (millions of dollars)

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*		*1935*	*1936*	*1937*	*1938*
5,832	5,899	5,579	4,541	3,502	3,166	3,500	3,500	3,775	4,028	4,546	4,492
22.9	21.4	20.8	18.6	15.1	14.3	14.9	14.9	15.5	16 5	18.2	18.3
368	372	326	268	206	183	176	181	197	241	266	264
380	436	397	266	216	175	205	197	244	347	352	371
5.2	5.7	5.7	4.2	3.0	2.5	2.6	2.6	2.9	3.0	3.2	2 9
2,127	2,231	2,209	2,144	1,948	1,796	1,816	1,816	1,822	1,921	2,048	2,085
245	260	252	229	195	176	191	191	201	201	225	217
3,430	3,658	3,505	3,295	3,230	3,093	2,780	2,799	2,818	2,872	3,218	3,052
463	499	476	440	429	411	402	404	438	488	550	552
12,876	13,384	12,773	11,207	9,747	9,019	9,090	9,108	9,516	10,119	11,227	11,056

TABLE 53

Entrepreneurs * (thousands)

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
6,229	6,284	6,286	6,406	6,569	6,691	6,741	6,771	6,776	6,778	6,836
15.0	14.1	14.0	14.1	13.6	13.4	13.2	12.8	12 8	12 8	12 8
133	133	118	103	84.2	72.3	76.5	81.5	90.6	99.3	99.3
163	167	167	149	121	108	120	134	151	151	151
1.0	0.9	0.8	0.8	0.7	0.6	0.7	0.6	0.6	0.6	0.6
1,421	1,452	1,448	1,444	1,440	1,436	1,394	1,351	1,389	1,110	1,416
1,441	1,486	1,499	1,509	1,509	1,557	1,594	1,623	1,646	1,664	1,672
352	365	357	343	322	319	339	358	378	397	412
9,756	9,854	9,892	9,971	10,062	10,199	10,280	10,332	10,445	10,525	10,601

TABLE 54

Dividends (millions of dollars)

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
25.0	12.0	7.0	14.0	6.0	0.02	17.0	17 0	19.0	37 0	32 0	22.0
253	365	249	138	81.6	75.3	114	190	185	215	295	201
2,518	2,743	2,616	1,895	1,119	1,010	1,297	1,224	1,583	2,411	2,434	1,413
51.4	60.0	85.0	40.1	19.2	18.7	13.0	15.2	20.7	36.6	42.1	29.4
1,047	1,287	1,426	1,234	974	830	833	818	932	865	948	819
499	565	496	386	214	178	275	339	438	669	624	482
660	764	664	593	370	204	260	260	277	270	285	291
99.1	116	112	73.7	54.5	33.9	41.8	50.6	54.8	113	120	69 0
189	202	110	−30.7	−87.0	−100	−121	164	218	242	210	168
5,344	6,117	5,768	4,345	2,752	2,251	2,731	3,079	3,729	4,861	5,022	3,530

TABLE 55

Interest (millions of dollars)

	1919	1920	1921	1922	1923	1924	1925	1926	1927
Agr.	357	430	490	510	509	487	459	448	445
Mining	23.3	30.4	38.3	33.2	37.3	51.3	53.9	46.5	43.7
Mfg.	86.7	107	138	105	117	154	153	151	168
Constr.	4 0	4.9	7.8	4.4	6.0	7.8	10.4	11.0	11.3
Transp. & other pub. util.	679	714	751	784	835	893	926	945	965
Trade	33.1	41.7	40.0	39.2	22.0	30.7	30.7	24.6	30.8
Finance	815	882	935	970	1,121	1,223	1,396	1,516	1,712
Service	15.9	14.9	18.1	22.8	28.0	33.2	41.0	47.7	62 7
Gov.	1,044	1,246	1,264	1,326	1,331	1,279	1,284	1,281	1,254
Misc.	169	178	188	185	197	213	223	225	245
Total	3,228	3,652	3,872	3,979	4,206	4,374	4,579	4,698	4,935

TABLE 56

Property Income * (millions of dollars)

	1919	1920	1921	1922	1923	1924	1925	1926	1927
Agr.	373	446	506	526	525	502	477	464	474
Mining	217	240	231	172	260	263	323	373	321
Mfg.	1,348	1,595	1,463	1,416	1,881	1,806	2,064	2,270	2,391
Constr.	19.3	25.8	40 2	34.8	43.4	40.2	68.7	52.4	58.7
Transp. & other pub. util.	1,210	1,201	1,207	1,350	1,473	1,601	1,742	1,811	2,003
Trade	433	423	360	341	391	420	470	495	526
Finance *	5,117	5,576	5,816	6,339	6,818	7,361	7,417	7,208	7,336
Service	44.9	95.2	83.8	71.6	96.0	104	133	153	169
Gov.	1,044	1,246	1,264	1,326	1,331	1,279	1,284	1,281	1,254
Misc.*	273	304	332	347	388	438	488	455	528
Total *	10,082	11,155	11,306	11,925	13,211	13,818	14,469	14,565	15,065

* Including, under miscellaneous, international dividend and interest payments, and, under finance, rent received by individuals (cash and imputed)

TABLE 55

Interest (millions of dollars)

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*		*1935*	*1936*	*1937*	*1938*
442	436	429	419	400	362	334	334	308	289	278	268
42.0	44.7	44.5	41.7	39.5	34.1	30.0	39.2	37.0	40.6	35.8	31.4
184	209	233	231	200	185	179	144	152	145	141	140
10.0	13.2	15.3	13.5	10.3	8.6	8.2	1.7	1.2	1.9	2.0	2.0
985	970	990	1,023	1,065	1,038	984	954	923	882	854	812
43.0	55.6	68.7	66.1	60.5	49.1	47.0	36.3	32.1	30.1	31.5	31.3
1,981	2,266	2,316	2,298	2,028	1,552	1,478	1,478	1,493	1,475	1,465	1,426
73.0	87.0	99.0	93.7	110	95.3	86.9	88.7	104	101	95.6	92.9
1,240	1,263	1,266	1,278	1,364	1,461	1,568	1,568	1,489	1,537	1,681	1,689
272	258	256	246	236	211	199	135	107	104	102	99 0
5,272	5,604	5,720	5,712	5,515	4,999	4,915	4,780	4,648	4,608	4,688	4,593

TABLE 56

Property Income * (millions of dollars)

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*		*1935*	*1936*	*1937*	*1938*
467	448	436	433	406	362	351	351	327	326	310	290
295	410	293	180	121	109	144	229	222	255	331	236
2,703	2,952	2,849	2,127	1,319	1,196	1,476	1,368	1,736	2,556	2,576	1,553
61.4	73.2	100	53.6	29.5	27.3	21.2	16.9	22.0	38.4	44.1	31.4
2,031	2,257	2,416	2,257	2,039	1,869	1,818	1,773	1,855	1,747	1,803	1,661
542	621	565	452	274	227	322	375	470	699	656	513
7,585	7,947	7,246	5,918	4,489	3,870	3,644	3,644	3,913	3,933	4,329	4,293
172	203	211	167	164	129	128	139	159	215	215	161
1,240	1,263	1,266	1,278	1,364	1,461	1,568	1,568	1,489	1,537	1,681	1,689
611	643	591	516	413	331	185	407	367	324	267	223
15,707	16,822	15,978	13,384	10,622	9,585	9,661	9,873	10,562	11,633	12,214	10,654

National Income and Aggregate Payments by Type, 1919–1938

TABLES 57 AND 58

Whenever two entries are made for 1934 the first is comparable with those for preceding years in that the *Statistics of Income* data used are based on the old industrial classification; the second is comparable with those for succeeding years in that the *Statistics of Income* data used are based on the new industrial classification.

TABLE 57

Aggregate Payments [3] by Type of Payment (millions of dollars)

	1919	1920	1921	1922	1923	1924	1925	1926	1927
Empl. comp.[1, 2]	37,139	43,890	35,536	37,003	43,339	43,323	45,019	48,017	48,433
Entrep. withdr.[2]	11,781	13,477	10,269	10,788	11,345	11,945	12,503	12,452	12,621
Dividends	2,857	3,172	2,894	2,962	3,745	3,683	4,270	4,615	4,918
Interest	3,228	3,652	3,872	3,979	4,206	4,374	4,579	4,698	4,935
Div. and int., internat.	29.0	43.0	69.0	86.0	94.0	129	154	110	132
Net rent recd. by indiv.	3,966	4,287	4,470	4,896	5,165	5,631	5,465	5,141	5,078
Prop. income	10,082	11,155	11,306	11,925	13,211	13,818	14,469	14,565	15,065
Agg. pay. to indiv.	59,004	68,523	57,111	59,718	67,895	69,088	71,992	75,035	76,119

[1] Including entrepreneurial withdrawals in automobile garages and repair shops.
[2] Including compensation of salaried engineers and of employees in hand trades.
[3] Including Social Security contributions of employers.

TABLE 58

National Income,[4] Aggregate Payments, and Savings of Enterprises (millions of dollars)

	1919	1920	1921	1922	1923	1924	1925	1926	1927
Agg. pay. to indiv.	59,004	68,523	57,111	59,718	67,895	69,088	71,992	75,035	76,119
Net savings of enterprises [1]	8,850	3,885	−3,177	2,672	5,173	4,135	6,202	6,071	4,494
Nat. income [1]	67,854	72,408	53,934	62,390	73,068	73,223	78,195	81,107	80,613
Net savings of enterprises [2]	6,900	7,862	3,192	1,795	5,017	4,292	5,852	7,766	5,278
Nat. income [2]	65,904	76,385	60,304	61,513	72,912	73,380	77,845	82,802	81,397
Net savings of enterprises [3]	5,199	5,709	2,301	989	3,730	3,007	4,055	6,515	3,932
Nat. income [3]	64,203	74,232	59,412	60,707	71,626	72,095	76,047	81,551	80,051

[1] Unadjusted.
[2] Adjusted for gains and losses from sales of capital assets, 1929–38, and from inventory holdings, 1919–38.
[3] Including the adjustment for the difference between depreciation and depletion at cost and at current reproduction prices, and for gains and losses from sales of capital assets, 1919–28, in addition to the adjustments mentioned in footnote 2.
[4] Including Social Security contributions of employers.

TABLE 57

Aggregate Payments[3] by Type of Payment (millions of dollars)

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*		*1935*	*1936*	*1937*	*1938*
49,361	52,214	47,767	40,468	31,699	30,054	34,891	34,891	37,937	42,783	47,524	44,351
12,876	13,384	12,773	11,207	9,747	9,019	9,090	9,108	9,516	10,119	11,227	11,056
5,344	6,117	5,768	4,345	2,752	2,251	2,731	3,079	3,729	4,861	5,022	3,530
5,272	5,604	5,720	5,712	5,515	4,999	4,915	4,780	4,648	4,608	4,688	4,593
149	183	224	301	264	220	108	108	41.0	—23.0	—76.0	—44.0
4,941	4,917	4,265	3,026	2,090	2,114	1,905	1,905	2,143	2,186	2,579	2,575
15,707	16,822	15,978	13,384	10,622	9,585	9,661	9,873	10,562	11,633	12,214	10,654
77,944	82,421	76,520	65,061	52,069	48,658	53,643	53,874	58,015	64,537	70,966	66,061

TABLE 58

National Income,[4] Aggregate Payments, and Savings of Enterprises (millions of dollars)

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*		*1935*	*1936*	*1937*	*1938*
77,944	82,421	76,520	65,061	52,069	48,658	53,643	53,874	58,015	64,537	70,966	66,061
5,391	5,480	—3,375	—9,489	—12,520	—5,989	—3,000	—2,888	—2,699	—985	830	—1,105
83,336	87,901	73,144	55,572	39,548	42,669	50,642	50,985	55,316	63,552	71,797	64,955
5,451	5,365	1,084	—4,752	—9,490	—6,839	—4,184	—4,324	—3,594	—1,488	100	—76.3
83,396	87,787	77,604	60,309	42,579	41,819	49,458	49,550	54,421	63,049	71,066	65,985
3,733	4,813	799	—4,761	—9,137	—6,476	—4,141	—4,280	—3,610	—1,673	—472	—600
81,678	87,234	77,319	60,300	42,932	42,183	49,502	49,594	54,406	62,864	70,494	65,461

National Income and its Components
Percentage Distribution by Major and Minor Industrial Divisions, 1919–1938

TABLES 59–73

TABLE 59

National Income *

	1919	1920	1921	1922	1923	1924	1925	1926	1927
Total ($000,000)	67,855	72,409	53,934	62,390	73,069	73,224	78,195	81,108	80,614
Agriculture	16.0	12.5	10.3	9.4	9.2	9.7	10.2	9.3	9.3
Mining	2.5	3.4	2.5	2.3	2.7	2.3	2.4	2.7	2.2
Anth. coal	0.35	0.38	0.51	0.30	0.41	0.46	0.31	0.44	0.37
Bit. coal	1.2	1.7	1.4	1.2	1.5	1.1	1.0	1.1	0.92
Metal	0.50	0.53	0.23	0.26	0.31	0.30	0.39	0.33	0.29
Oil & gas	0.35	0.59	0.22	0.34	0.30	0.27	0.41	0.54	0.32
Other	0.19	0.29	0.14	0.20	0.23	0.23	0.29	0.29	0.26
Manufacturing	25.2	24.4	18.2	21.6	23.1	21.1	21.6	21.4	20.9
Food & tobacco	2.8	2.4	2.3	2.6	2.4	2.4	2.3	2.3	2.3
Textile & leather	5.4	4.2	4.4	4.8	4.6	3.7	3.9	3.5	4.0
Constr. mat. & furn.	2.8	3.2	2.4	2.9	3.3	3.0	3.0	3.0	2.7
Paper	0.57	0.76	0.48	0.55	0.59	0.56	0.56	0.60	0.60
Printing	1.1	1.3	1.6	1.5	1.4	1.5	1.5	1.6	1.6
Metal	9.2	9.3	5.1	6.2	7.9	7.3	7.6	7.6	7.0
Chemical	1.5	1.5	1.1	1.5	1.4	1.4	1.5	1.7	1.4
Misc. & rubber	1.7	1.7	0.92	1.5	1.6	1.3	1.3	1.2	1.2
Construction	3.1	3.6	3.4	3.8	4.6	5.1	5.1	5.2	5.0
Transp. & other pub. util.	8.8	10.1	11.3	10.0	9.7	9.7	9.7	9.7	9.7
Electric light & power	0.48	0.53	0.76	0.80	0.87	1.0	1.0	1.2	1.3
Mfd. gas	0.15	0.16	0.21	0.19	0.20	0.20	0.32	0.26	0.28
Steam rr., Pull., & exp.	5.8	6.7	7.1	6.1	6.1	5.8	5.7	5.8	5.5
Street rwy.	0.78	0.87	1.1	1.0	0.89	0.86	0.79	0.74	0.73
Water transp.	0.87	1.1	0.99	0.75	0.66	0.70	0.65	0.66	0.61
Pipe lines	0.10	0.13	0.13	0.16	0.14	0.15	0.17	0.16	0.19
Telephone	0.48	0.55	0.80	0.76	0.72	0.77	0.80	0.82	0.87
Telegraph	0.14	0.16	0.18	0.17	0.16	0.15	0.16	0.17	0.18
Trade	16.4	13.1	12.6	14.4	13.9	13.5	13.4	13.1	12.9
Finance	10.2	10.3	14.2	13.2	12.0	13.1	12.5	12.1	12.8
Banking	1.3	1.3	1.7	1.5	1.3	1.4	1.4	1.5	1.6
Insurance	1.0	1.0	1.4	1.3	1.1	1.2	1.3	1.4	1.6
Real estate	7.8	8.0	11.2	10.5	9.6	10.5	9.7	9.3	9.6
Service	9.0	9.5	12.3	11.8	11.3	11.8	11.9	12.5	12.8
Government	5.6	9.7	11.5	9.8	9.6	9.9	9.4	10.0	10.5
Miscellaneous	3.3	3.2	3.6	3.7	3.7	3.8	3.9	4.0	4.0

* Excluding Social Security contributions of employers.

TABLE 59

National Income *

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
83,336	87,902	73,145	55,572	39,549	42,670	50,811	55,309	63,253	70,847	63,836
8.8	8.8	7.9	7.3	7.1	8.3	9.3	9.7	9.6	8.9	8.5
2.0	2.1	1.8	1.3	1.2	1.2	1.8	1.7	1.9	2.0	1.7
0.36	0.30	0.36	0.37	0.35	0.29	0.30	0.23	0.20	0.15	0.12
0.76	0.73	0.68	0.65	0.58	0.59	0.79	0.78	0.81	0.78	0.67
0.33	0.41	0.21	0.07	—0.04	0.05	0.17	0.22	0.31	0.15	0.30
0.30	0.40	0.33	0.07	0.20	0.22	0.38	0.34	0.40	0.44	0.44
0.25	0.23	0.22	0.17	0.09	0.05	0.14	0.14	0.20	0.21	0.18
21.5	22.2	19.3	16.7	13.6	17.5	19.6	21.4	22.6	22.9	18.7
2.4	2.4	2.6	2.7	2.8	3.0	3.2	3.1	3.0	2.6	2.8
3.6	3.5	2.8	3.1	2.8	4.2	3.9	4.1	3.9	3.5	3.1
2.6	2.5	2.1	1.4	0.61	1.2	1.5	1.8	2.1	2.2	1.9
0.59	0.59	0.59	0.57	0.49	0.66	0.72	0.70	0.70	0.72	0.59
1.7	1.7	1.9	2.0	2.1	1.8	1.7	1.7	1.7	1.6	1.7
7.7	8.4	6.8	4.8	2.7	4.2	5.9	7.1	8.1	9.2	6.1
1.8	1.9	1.6	1.1	1.2	1.4	1.5	1.6	1.7	1.8	1.5
1.2	1.1	0.93	0.96	0.77	1.0	1.1	1.3	1.3	1.3	1.1
4.8	4.6	4.6	3.8	2.6	1.7	1.7	1.9	2.5	2.6	2.6
9.7	9.7	10.4	11.5	12.3	11.1	9.6	9.3	9.2	8.8	8.6
1.4	1.6	2.0	2.5	2.9	2.4	2.0	1.9	1.8	1.7	1.8
0.23	0.21	0.26	0.28	0.40	0.37	0.30	0.26	0.25	0.26	0.27
5.4	5.3	5.3	5.4	5.3	5.0	4.4	4.4	4.4	4.1	3.8
0.68	0.64	0.72	0.80	0.86	0.71	0.63	0.59	0.54	0.49	0.53
0.62	0.61	0.64	0.68	0.71	0.72	0.67	0.72	0.77	0.80	0.76
0.21	0.23	0.24	0.31	0.34	0.35	0.25	0.23	0.23	0.23	0.21
0.91	0.96	1.1	1.4	1.6	1.4	1.2	1.1	1.1	1.1	1.2
0.17	0.17	0.17	0.20	0.19	0.18	0.16	0.16	0.15	0.14	0.13
13.0	12.6	12.6	13.3	13.8	14.4	14.5	14.0	13.5	12.9	13.9
13.0	12.7	13.3	13.7	13.9	11.3	9.9	10.4	9.7	9.4	10.3
1.7	1.6	1.6	1.3	1.0	0.68	0.96	1.3	1.4	1.2	1.3
1.7	1.7	1.8	2.1	2.4	2.0	2.0	2.0	1.8	1.8	2.0
9.6	9.4	10.0	10.2	10.5	8.6	6.9	7.1	6.5	6.4	7.0
12.8	12.8	14.2	15.7	16.2	13.5	13.3	13.3	13.1	12.9	13.9
9.9	10.1	12.2	13.3	15.6	17.6	16.1	13.6	13.0	15.1	16.9
4.4	4.4	3.5	3.3	3.7	3.4	4.2	4.8	4.8	4.5	4.7

TABLE 60

Aggregate Payments including Entrepreneurial Savings *

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*	*1927*
Total ($000,000)	65,577	69,154	55,788	60,002	69,266	70,121	73,964	76,706	77,136
Agriculture	16.6	13.1	9.9	9.8	9.7	10.1	10.7	9.8	9.7
Mining	2.6	3.4	3.2	2.7	3.3	2.8	2.6	3.0	2.6
Anth. coal	0.36	0.38	0.56	0.32	0.47	0.52	0.34	0.47	0.42
Bit. coal	1.2	1.7	1.6	1.4	1.6	1.2	1.1	1.2	1.0
Metal	0.52	0 50	0.38	0.32	0.12	0.41	0.43	0.39	0.36
Oil & gas	0.37	0.56	0.40	0.43	0.42	0.38	0.46	0.61	0.51
Other	0.20	0.27	0.26	0.25	0.32	0.32	0.33	0.31	0.30
Manufacturing	22.5	24.3	20.7	20.7	22.1	20.9	21.0	21.2	21.2
Food & tobacco	2.6	2.6	2.6	2.5	2.1	2.4	2.2	2.2	2.3
Textile & leather	4.7	4.6	4.6	4.6	4.6	3.9	4.0	3.8	4.0
Constr. mat. & furn.	2.6	3.1	2.5	2.8	3.1	3.0	3.0	3.1	2.9
Paper	0.51	0.64	0.58	0.51	0.58	0.54	0.58	0.57	0.58
Printing	1.1	1.3	1.5	1.5	1.1	1.5	1.5	1.6	1.6
Metal	8.2	8.9	6.2	6.1	7.5	7.1	7.1	7.3	7.1
Chemical	1.4	1.6	1.5	1.4	1.4	1.3	1.4	1.4	1.4
Misc. & rubber	1.4	1.6	1.3	1.4	1.1	1.2	1.2	1.2	1.3
Construction	3.1	3.8	3.4	3.9	4.8	5.2	5.3	5.5	5.2
Transp. & other pub. util.	8.9	10.5	10.8	10.0	9.6	9.6	9.4	9.1	9.5
Electric light & power	0.11	0.49	0.66	0.72	0.81	0.95	1.0	1.1	1.2
Mfd. gas	0.20	0.20	0.22	0.20	0.20	0.21	0.24	0.24	0.21
Steam rr., Pull., & exp.	5.9	7.0	6.8	6.2	6.0	5.7	5.6	5.5	5.6
Street rwy.	0.79	0.88	1.0	1.0	0.90	0.88	0.82	0.78	0.75
Water transp.	0.86	1.1	1.0	0.81	0.72	0.71	0.68	0.69	0.65
Pipe lines	0.09	0.09	0.12	0.16	0.12	0.11	0.15	0.13	0.17
Telephone	0.47	0.56	0.74	0.71	0.71	0.77	0.78	0.79	0.83
Telegraph	0.12	0.15	0.16	0.15	0.11	0.11	0.11	0.16	0.16
Trade	16.0	13.7	13.0	11.1	11.0	13.7	13.6	13.6	13.2
Finance	10.1	10.7	13.8	13.7	12.7	13.6	13.1	12.6	13.0
Banking	1.0	1.1	1.5	1.1	1.3	1.3	1.3	1.3	1.4
Insurance	1 0	1.1	1.5	1.5	1.3	1.1	1.5	1.5	1.6
Real estate	8.1	8.4	10.8	10.9	10.2	10.9	10.3	9.8	10.0
Service	9.3	9.9	12.0	12.3	11.9	12.3	12.5	13.2	13.4
Government	7.7	7.1	9.1	8.8	7.8	7.9	7.8	7.8	8.0
Federal	4.9	4.3	4.9	4.3	3.7	3.6	3.4	3.3	3.3
State	0.28	0.32	0.47	0.11	0.12	0.17	0.13	0.37	0.40
County	0.29	0.32	0.47	0.47	0.41	0.17	0.17	0.48	0.49
City incl. pub. educ.	2.3	2.5	3.5	3.6	3.3	3.1	3.5	3.6	3.8
Miscellaneous	3.1	3.3	3.8	3.7	3.8	3.9	4.0	4.1	4.2

* Excluding Social Security contributions of employers

TABLE 60

Aggregate Payments including Entrepreneurial Savings *

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
78,950	83,402	74,829	61,972	48,002	46,729	53,625	58,407	65,551	70,663	65,078
9.3	9.2	7.8	6.5	5.9	7.6	8.9	9.2	9.3	8.9	8.4
2.3	2.4	2.2	1.8	1.6	1.6	2.0	2.0	2.1	2.2	1.9
0.39	0.33	0.35	0.35	0.33	0.29	0.30	0.25	0.21	0.18	0.17
0.85	0.82	0.76	0.68	0.60	0.65	0.81	0.79	0.83	0.82	0.69
0.37	0.48	0.36	0.24	0.15	0.15	0.18	0.23	0.33	0.16	0.33
0.41	0.48	0.45	0.32	0.34	0.38	0.51	0.47	0.46	0.51	0.51
0.28	0.27	0.25	0.24	0.19	0.17	0.19	0.25	0.24	0.26	0.23
21.5	21.9	21.2	19.6	17.4	18.0	19.4	20.4	21.6	22.8	18.9
2.1	2.4	2.6	2.6	2.7	2.8	3.0	2.8	2.8	2.7	2.8
3.9	3.8	3.1	3.5	3.2	3.8	3.8	3.9	3.7	3.6	3.2
2.8	2.7	2.1	1.9	1.4	1.4	1.6	1.8	2.0	2.2	1.8
0.59	0.58	0.60	0.60	0.58	0.61	0.67	0.66	0.66	0.70	0.62
1.6	1.7	1.9	1.9	1.9	1.7	1.7	1.6	1.6	1.6	1.6
7.5	8.0	7.2	5.9	1.8	4.7	5.9	6.7	7.6	8.8	6.1
1.6	1.6	1.9	1.9	1.7	1.8	1.6	1.7	1.8	1.8	1.6
1.2	1.2	1.2	1.2	1.0	1.1	1.1	1.2	1.2	1.3	1.1
5.0	4.9	4.6	3.5	2.1	1.7	1.7	1.9	2.4	2.6	2.6
9.3	9.3	10.0	10.6	11.1	10.5	9.5	9.2	8.6	8.6	8.6
1.3	1.4	1.7	2.1	2.3	2.2	1.8	1.7	1.6	1.6	1.7
0.23	0.24	0.28	0.31	0.16	0.13	0.35	0.33	0.29	0.28	0.30
5.2	5.1	5.2	5.1	4.9	1.6	4.3	4.2	4.1	4.1	3.8
0.71	0.68	0.69	0.71	0.79	0.71	0.65	0.60	0.56	0.52	0.56
0.65	0.62	0.66	0.66	0.66	0.69	0.67	0.78	0.77	0.81	0.78
0.17	0.20	0.25	0.28	0.40	0.31	0.24	0.32	0.19	0.19	0.21
0.86	0.90	1.0	1.2	1.1	1.1	1.2	1.1	1.0	1.0	1.2
0.16	0.17	0.20	0.20	0.18	0.16	0.16	0.15	0.14	0.14	0.14
13.4	13.2	13.2	13.5	13.5	13.7	13.9	13.3	13.0	13.0	13.7
13.3	13.3	13.6	13.8	13.9	12.4	10.6	10.1	9.4	9.4	10.2
1.4	1.4	1.6	1.7	1.7	1.4	1.3	1.2	1.1	1.0	1.1
1.7	1.7	1.9	2.1	2.3	2.2	2.0	1.9	1.7	1.7	1.9
10.1	10.1	10.1	9.9	9.8	8.9	7.4	7.3	6.6	6.7	7.2
13.5	13.5	14.0	14.1	14.3	13.1	13.0	13.0	13.0	13.2	13.9
8.1	8.0	9.1	11.4	14.8	16.3	16.3	15.8	15.9	14.5	16.9
3.2	3.1	3.5	4.4	5.8	7.7	8.9	8.8	9.3	7.9	9.4
0.42	0.41	0.50	0.65	0.87	0.89	0.82	0.82	0.78	0.80	0.92
0.52	0.55	0.62	0.76	0.97	0.93	0.81	0.76	0.70	0.67	0.75
4.0	3.9	4.5	5.6	7.1	6.8	5.8	5.4	5.1	5.1	5.8
4.3	4.3	4.5	4.8	5.2	5.0	4.7	4.9	4.8	4.7	4.9

TABLE 61

Aggregate Payments excluding Entrepreneurial Savings *

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*	*1927*
Total ($000,000)	59,004	68,523	57,112	59,718	67,896	69,088	71,993	75,036	76,119
Agriculture	14.6	14.6	12.2	11.3	10.9	10.8	10.5	10.2	10.0
Mining	2.9	3.4	3.2	2.7	3.3	2.9	2.7	3.0	2.6
Anth. coal	0.40	0.39	0.57	0.32	0.48	0.53	0.34	0.48	0.42
Bit. coal	1.3	1.7	1.6	1.4	1.7	1.2	1.1	1.2	1.0
Metal	0.58	0.50	0.37	0.33	0.42	0.42	0.44	0.40	0.37
Oil & gas	0.40	0.54	0.42	0.44	0.43	0.39	0.46	0.60	0.51
Other	0.22	0.27	0.26	0.25	0.32	0.33	0.33	0.32	0.30
Manufacturing	24.3	24.4	20.6	20.6	22.5	21.1	21.4	21.5	21.4
Food & tobacco	2.9	2.7	2.7	2.5	2.4	2.4	2.3	2.2	2.3
Textile & leather	4.8	4.7	4.5	4.5	4.5	4.0	4.0	3.9	4.0
Constr. mat. & furn.	2.9	3.1	2.5	2.8	3.1	3.1	3.1	3.1	2.9
Paper	0.56	0.63	0.57	0.54	0.59	0.55	0.59	0.58	0.59
Printing	1.1	1.3	1.4	1.5	1.4	1.5	1.5	1.6	1.6
Metal	9.0	8.9	6.1	6.1	7.6	7.2	7.2	7.4	7.2
Chemical	1.6	1.6	1.5	1.4	1.4	1.3	1.4	1.5	1.4
Misc. & rubber	1.5	1.6	1.3	1.4	1.4	1.2	1.2	1.3	1.3
Construction	3.2	3.7	3.4	3.9	4.8	5.0	5.1	5.1	5.1
Transp. & other pub. util.	9.9	10.6	10.5	10.0	9.8	9.7	9.6	9.6	9.7
Electric light & power	0.49	0.49	0.64	0.73	0.82	0.96	1.0	1.1	1.2
Mfd. gas	0.23	0.20	0.21	0.20	0.21	0.24	0.25	0.24	0.25
Steam rr., Pull., & exp.	6.6	7.1	6.7	6.2	6.1	5.8	5.7	5.6	5.6
Street rwy.	0.87	0.89	1.0	1.0	0.92	0.90	0.84	0.79	0.76
Water transp.	0.95	1.1	0.98	0.81	0.73	0.75	0.70	0.70	0.66
Pipe lines	0.10	0.09	0.12	0.16	0.12	0.11	0.15	0.13	0.17
Telephone	0.53	0.57	0.72	0.74	0.73	0.78	0.80	0.81	0.84
Telegraph	0.14	0.15	0.16	0.15	0.14	0.14	0.15	0.16	0.16
Trade	13.7	13.2	13.5	13.5	13.0	13.2	13.3	13.4	13.0
Finance	11.3	10.8	13.5	13.8	13.0	13.8	13.4	12.9	13.1
Banking	1.1	1.1	1.4	1.4	1.3	1.3	1.3	1.3	1.4
Insurance	1.1	1.2	1.5	1.5	1.3	1.4	1.5	1.6	1.7
Real estate	9.0	8.5	10.6	10.9	10.4	11.1	10.6	10.0	10.1
Service	8.5	8.8	10.5	11.7	10.9	11.6	12.0	12.1	12.8
Government	8.6	7.5	9.2	8.8	8.0	8.0	8.0	7.9	8.1
Federal	5.4	4.3	4.8	4.4	3.8	3.6	3.5	3.4	3.3
State	0.31	0.33	0.46	0.44	0.43	0.47	0.44	0.38	0.40
County	0.32	0.32	0.46	0.47	0.44	0.48	0.48	0.49	0.50
City incl. pub. educ.	2.5	2.5	3.4	3.6	3.3	3.5	3.6	3.7	3.9
Miscellaneous	3.2	3.1	3.5	3.7	3.7	3.8	4.0	4.0	4.1

* Excluding Social Security contributions of employers.

TABLE 61

Aggregate Payments excluding Entrepreneurial Savings *

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
77,945	82,121	76,520	65,061	52,070	48,659	53,755	58,009	64,238	70,016	64,912
9.7	9.3	9.3	8.9	8.6	8.3	8.2	8.2	7.9	8.1	8.5
2.3	2.4	2.1	1.8	1.5	1.6	2.0	2.0	2.1	2.2	1.9
0.39	0.34	0.35	0.33	0.31	0.28	0.30	0.25	0.22	0.18	0.17
0.86	0.83	0.74	0.66	0.56	0.63	0.81	0.80	0.85	0.82	0.69
0.38	0.49	0.35	0.23	0.14	0.15	0.18	0.24	0.33	0.46	0.33
0.40	0.46	0.46	0.34	0.36	0.40	0.52	0.48	0.47	0.51	0.50
0.28	0.27	0.25	0.24	0.18	0.17	0.19	0.25	0.24	0.27	0.23
21.7	22.1	20.9	18.9	16.4	17.3	19.4	20.4	21.8	22.9	19.0
2.4	2.4	2.5	2.6	2.6	2.7	2.9	2.8	2.8	2.7	2.8
3.9	3.8	3.4	3.5	3.1	3.6	3.8	3.9	3.8	3.7	3.2
2.8	2.7	2.4	1.9	1.4	1.4	1.6	1.8	2.1	2.2	1.8
0.59	0.58	0.59	0.58	0.54	0.61	0.67	0.66	0.67	0.70	0.63
1.6	1.7	1.8	1.8	1.8	1.6	1.7	1.6	1.6	1.6	1.7
7.5	8.1	7.1	5.7	4.4	4.6	5.9	6.7	7.7	8.9	6.1
1.6	1.6	1.9	1.8	1.6	1.8	1.6	1.7	1.8	1.8	1.6
1.2	1.2	1.2	1.1	0.99	1.0	1.1	1.2	1.3	1.3	1.1
5.0	4.8	4.5	3.5	2.7	2.0	1.9	2.0	2.6	2.7	2.6
9.4	9.4	9.8	10.1	10.3	10.1	9.4	9.3	8.8	8.7	8.6
1.3	1.4	1.7	2.0	2.2	2.1	1.8	1.7	1.6	1.6	1.7
0.23	0.25	0.28	0.32	0.43	0.41	0.35	0.34	0.29	0.28	0.30
5.3	5.2	5.1	4.9	4.5	4.5	4.3	4.2	4.2	4.1	3.8
0.72	0.68	0.68	0.70	0.73	0.68	0.64	0.60	0.57	0.53	0.56
0.66	0.63	0.64	0.63	0.61	0.67	0.67	0.79	0.78	0.81	0.78
0.18	0.20	0.24	0.27	0.36	0.30	0.24	0.32	0.19	0.19	0.21
0.87	0.91	1.0	1.1	1.3	1.3	1.2	1.1	1.0	1.0	1.2
0.16	0.17	0.19	0.18	0.16	0.15	0.16	0.15	0.14	0.14	0.14
13.1	13.2	13.6	14.2	14.1	13.4	13.9	13.4	13.2	13.1	13.6
13.4	13.4	13.3	13.1	12.8	11.9	10.6	10.5	9.6	9.5	10.3
1.5	1.4	1.5	1.6	1.6	1.3	1.3	1.2	1.1	1.1	1.2
1.7	1.7	1.9	2.0	2.2	2.1	2.0	1.9	1.8	1.8	1.9
10.2	10.3	9.9	9.5	9.0	8.5	7.3	7.3	6.7	6.7	7.2
12.9	13.0	13.2	13.9	15.0	14.7	13.6	13.4	13.1	13.4	13.6
8.2	8.1	8.9	10.9	13.6	15.7	16.3	15.9	16.2	14.6	16.9
3.3	3.1	3.4	4.2	5.3	7.4	8.9	8.9	9.5	8.0	9.4
0.42	0.42	0.48	0.62	0.80	0.86	0.82	0.82	0.80	0.81	0.93
0.52	0.55	0.61	0.72	0.89	0.89	0.81	0.77	0.71	0.68	0.76
4.0	4.0	4.4	5.4	6.6	6.5	5.8	5.5	5.2	5.1	5.9
4.3	4.3	4.3	4.6	4.9	5.0	4.7	4.9	4.9	4.8	4.9

TABLE 62

Wages and Salaries

	1919	1920	1921	1922	1923	1924	1925	1926	1927
Total ($000,000)	36,706	43,319	34,932	36,403	42,721	42,708	44,113	47,399	47,787
Agriculture	4.1	4.1	3.3	3.1	2.9	2.9	2.8	2.8	2.7
Mining	4.0	4.7	4.5	3.9	4.6	4.0	3.6	3.9	3.5
Anth. coal	0.61	0.58	0.86	0.50	0.72	0.80	0.51	0.71	0.62
Bit. coal	2.1	2.6	2.4	2.1	2.6	1.9	1.7	1.8	1.6
Metal	0.64	0.57	0.39	0.38	0.46	0.46	0.46	0.44	0.41
Oil & gas	0.46	0.64	0.47	0.54	0.51	0.46	0.52	0.62	0.55
Other	0.27	0.33	0.30	0.32	0.38	0.39	0.38	0.37	0.35
Manufacturing	31.0	33.7	28.3	28.8	30.5	29.0	29.2	28.5	28.3
Food & tobacco	3.6	3.3	3.1	3.2	2.9	2.9	2.7	2.6	2.7
Textile & leather	6.6	6.4	6.5	6.5	6.4	5.7	5.8	5.5	5 8
Constr. mat. & furn.	4.2	4.4	3.7	4.1	4.4	4.4	4.4	4.3	4.1
Paper	0.76	0.83	0.76	0.76	0.78	0.77	0.79	0.79	0.78
Printing	1.6	1.8	2.0	2.1	1.9	2.1	2.1	2.2	2.2
Metal	13.2	13.0	8.7	8.9	10.7	10.0	10.0	9.9	9.5
Chemical	1.9	1.9	1.6	1.6	1.6	1.5	1.5	1.5	1.5
Misc. & rubber	2.1	2.1	1.7	1.8	1.8	1.7	1.7	1.7	1.7
Construction	4.4	5.2	4.7	5.1	6.9	7.1	6.9	7.5	7.1
Transp. & other pub. util.	12.4	13.7	13.6	12.6	11.9	11.8	11.5	11.2	11.0
Electric light & power	0.38	0.41	0.53	0.53	0.59	0.70	0.70	0.75	0.77
Mfd. gas	0.21	0.19	0.22	0.22	0.22	0.24	0.24	0.23	0.24
Steam rr., Pull., & exp.	8.6	9.4	8.8	8.1	7.8	7.4	7.2	7.0	6.8
Street rwy.	1.0	1.1	1.3	1.2	1.0	1.0	0.98	0.91	0.88
Water transp.	1.4	1.6	1.5	1.2	1.1	1.2	1.1	1.0	0.99
Pipe lines	0.07	0.08	0.09	0.09	0.09	0.08	0.08	0.09	0 10
Telephone	0.64	0.71	0.92	0.96	0.90	0.98	0.98	0.97	1.0
Telegraph	0.19	0.22	0.23	0.22	0.20	0.20	0.21	0.22	0.21
Trade	14.8	14.0	14.8	15.6	15.0	15.3	15.7	15.7	15.3
Finance	3.8	3.8	5.0	4.8	4.3	4.6	4.6	4.7	5.1
Banking	1.0	1.1	1.5	1.4	1.3	1.4	1.4	1.4	1.4
Insurance	1.5	1.5	2.0	1.9	1.6	1.8	1.9	2.0	2.1
Real estate	1.3	1.2	1.5	1.4	1.4	1.5	1.3	1.4	1.6
Service	8.9	9.4	12.0	12.4	11.5	12.3	12.4	12.5	13.3
Professional	1.5	1.4	2.0	2.1	1.9	2.1	2.1	2.1	2.2
Personal	2.8	3.1	3.6	3.8	3.3	3.5	3.5	3.5	3.8
Domestic	3.1	3.0	4.1	4.3	4.0	4.2	4.3	4.2	4.3
Miscellaneous	1.4	1.9	2.4	2.2	2.3	2.5	2.6	2.7	3.0
Government	9.9	7.8	9.8	9.4	8.3	8.7	8.9	8.8	9.2
Federal	5.6	3.5	3.8	3.1	2.7	2.8	2.8	2.7	2.7
State	0.42	0.42	0.55	0.54	0.48	0.52	0.56	0.50	0.55
County	0.41	0.41	0.60	0.61	0.54	0.58	0.56	0.55	0.59
City incl. pub. educ.	3.5	3.5	4.9	5.1	4.6	4.9	5.0	5.0	5.3
Miscellaneous	3.7	3.5	4.0	4.2	4.2	4.3	4.5	4.5	4.6

TABLE 62

Wages and Salaries

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
48,703	51,521	47,010	39,587	30,721	28,194	32,124	34,998	38,863	43,503	39,693
2.6	2.5	2.4	2.1	1.9	1.8	1.7	1.8	1.8	1.8	1.9
3.0	3.0	2.8	2.4	2.2	2.4	2.7	2.7	2.8	2.8	2.5
0.58	0.49	0.52	0.50	0.47	0.41	0.47	0.38	0.32	0.28	0.25
1.3	1.2	1.1	1.0	0.88	1.0	1.3	1.3	1.3	1.3	1.1
0.39	0.40	0.36	0.26	0.18	0.19	0.22	0.26	0.32	0.43	0.33
0.44	0.55	0.52	0.40	0.42	0.49	0.55	0.53	0.54	0.56	0.59
0.33	0.29	0.30	0.27	0.22	0.22	0.23	0.24	0.26	0.27	0.24
28.5	28.9	27.2	25.1	22.9	25.0	27.1	28.3	28.9	30.1	26.5
2.8	2.7	2.8	2.9	3.0	3.4	3.5	3.1	3.2	3.2	3.4
5.5	5.5	5.0	5.2	4.9	5.8	5.9	6.0	5.6	5.3	4.9
3.9	3.8	3.3	2.7	2.0	2.2	2.1	2.6	2.9	3.1	2.7
0.78	0.78	0.80	0.80	0.79	0.90	0.95	0.93	0.92	0.92	0.92
2.3	2.1	2.6	2.7	2.7	2.5	2.5	2.1	2.3	2.3	2.1
10.0	10.6	9.3	7.6	6.3	6.9	8.5	9.1	10.3	11.9	8.8
1.5	1.6	1.7	1.6	1.6	1.8	1.9	1.8	1.8	1.8	1.8
1.7	1.7	1.6	1.6	1.5	1.6	1.7	1.7	1.7	1.8	1.5
7.1	6.7	6.3	5.0	3.8	2.7	2.5	2.6	3.2	3.4	3.2
10.7	10.5	10.6	10.7	10.5	10.5	10.0	9.8	9.8	9.6	9.7
0.82	0.84	0.96	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.1
0.22	0.20	0.21	0.21	0.24	0.27	0.25	0.23	0.22	0.21	0.23
6.5	6.3	6.1	5.9	5.5	5.5	5.3	5.2	5.3	5.1	4.9
0.84	0.80	0.81	0.85	0.88	0.81	0.74	0.68	0.62	0.56	0.60
0.99	0.93	0.96	0.96	0.95	1.1	1.0	1.1	1.1	1.2	1.1
0.10	0.10	0.09	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.12
1.1	1.1	1.3	1.3	1.5	1.4	1.3	1.2	1.2	1.2	1.3
0.22	0.23	0.25	0.26	0.25	0.24	0.24	0.22	0.21	0.21	0.21
15.4	15.6	16.3	16.8	16.7	16.0	16.5	15.7	15.0	14.8	15.8
5.4	5.5	5.6	6.0	6.1	6.2	5.8	5.6	5.2	4.9	5.1
1.4	1.4	1.5	1.6	1.8	1.7	1.5	1.4	1.3	1.2	1.4
2.2	2.2	2.4	2.7	3.0	3.0	2.7	2.6	2.4	2.3	2.6
1.8	1.9	1.7	1.7	1.6	1.5	1.5	1.5	1.4	1.3	1.4
13.2	13.4	13.6	14.1	14.1	13.9	13.7	13.7	13.6	13.6	14.1
2.4	2.4	2.6	3.1	3.7	3.8	3.3	3.2	3.1	2.9	3.3
3.6	3.8	4.0	4.1	4.2	3.9	4.1	4.1	4.1	3.9	4.2
4.2	4.2	3.9	3.6	3.4	3.3	3.3	3.2	3.2	3.4	3.3
3.1	3.1	3.1	3.2	3.0	3.0	3.0	3.1	3.3	3.3	3.3
9.1	9.3	10.1	12.6	15.7	15.5	14.0	14.0	13.7	12.9	14.8
2.8	2.7	3.0	3.6	4.1	4.3	4.4	4.8	4.9	4.4	4.9
0.58	0.58	0.67	0.85	1.1	1.2	1.1	1.1	1.1	1.1	1.3
0.62	0.63	0.72	0.91	1.1	1.1	1.0	0.96	0.92	0.88	1.0
5.4	5.4	6.0	7.2	9.0	8.9	7.5	7.2	6.9	6.5	7.6
4.6	4.7	4.8	5.2	5.6	6.0	5.7	5.9	5.9	5.9	6.1

TABLE 63

Employees (full-time equivalents)

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*	*1927*
Total (000)	30,444	30,811	27,114	28,586	31,351	31,068	31,680	33,121	33,202
Agriculture	6.9	7.0	7.5	7.1	6.3	6.3	6.1	6.1	5.9
Mining	3.5	3.9	3.3	3.1	3.6	3.3	3.2	3.5	3.2
Anth. coal	0.51	0.48	0.62	0.36	0.51	0.54	0.35	0.49	0.50
Bit. coal	1.9	2.2	1.7	1.6	1.9	1.6	1.6	1.7	1.5
Metal	0.48	0.47	0.29	0.36	0.42	0.42	0.42	0.40	0.37
Oil & gas	0.37	0.41	0.36	0.43	0.42	0.39	0.43	0.52	0.46
Other	0.28	0.33	0.30	0.32	0.36	0.36	0.36	0.34	0.34
Manufacturing	32.4	31.7	27.9	29.2	30.3	28.6	28.9	28.3	27.8
Food & tobacco	3.7	3.5	3.4	3.4	3.1	3.0	3.0	2.8	2.9
Textile & leather	7.3	7.1	7.4	7.5	7.5	6.8	6.9	6.7	6.8
Constr. mat. & furn.	4.3	4.2	3.9	4.6	4.6	4.6	4.6	4.5	4.2
Paper	0.77	0.83	0.77	0.77	0.79	0.78	0.80	0.79	0.77
Printing	1.4	1.5	1.5	1.6	1.5	1.6	1.6	1.5	1.6
Metal	10.9	10.7	7.5	8.0	9.2	8.5	8.6	8.5	8.1
Chemical	1.7	1.5	1.4	1.4	1.5	1.4	1.4	1.4	1.4
Misc. & rubber	2.1	2.0	1.7	1.8	1.8	1.7	1.7	1.7	1.7
Construction	3.4	3.8	3.9	4.7	5.1	5.4	5.2	5.7	5.3
Transp. & other pub. util.	10.7	11.4	11.1	10.6	10.7	10.4	10.2	10.0	9.9
Electric light & power	0.36	0.39	0.46	0.48	0.57	0.62	0.63	0.68	0.71
Mfd. gas	0.21	0.18	0.20	0.20	0.21	0.22	0.22	0.22	0.22
Steam rr., Pull., & exp.	7.0	7.3	6.9	6.3	6.6	6.3	6.1	6.0	5.8
Street rwy.	0.97	0.98	1.0	1.0	0.93	0.90	0.85	0.80	0.77
Water transp.	0.96	1.2	1.1	1.1	1.0	1.0	0.94	0.93	0.90
Pipe lines	0.06	0.06	0.07	0.08	0.08	0.07	0.08	0.08	0.09
Telephone	0.92	0.99	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Telegraph	0.25	0.25	0.27	0.24	0.24	0.25	0.26	0.26	0.25
Trade	12.8	13.9	14.1	14.1	13.9	14.5	14.5	14.3	14.7
Finance	3.1	3.3	3.7	3.4	3.3	3.5	3.5	3.6	3.9
Banking	1.0	1.1	1.3	1.2	1.1	1.2	1.2	1.2	1.2
Insurance	0.99	1.0	1.3	1.2	1.1	1.2	1.3	1.3	1.4
Real estate	1.1	1.1	1.2	1.1	1.1	1.2	1.0	1.2	1.3
Service	11.9	12.2	14.1	14.2	13.9	14.5	14.8	15.0	15.5
Professional	2.0	1.9	2.2	2.3	2.3	2.5	2.5	2.5	2.6
Personal	3.0	3.1	3.4	3.6	3.4	3.5	3.7	3.7	3.8
Domestic	5.6	5.5	6.4	6.4	6.3	6.5	6.6	6.5	6.7
Miscellaneous	1.4	1.7	2.0	1.8	1.9	2.1	2.1	2.2	2.4
Government	11.5	9.2	10.3	9.4	8.7	9.1	9.1	8.9	9.1
Federal	5.9	3.4	3.7	3.0	2.6	2.7	2.6	2.5	2.5
State	0.53	0.55	0.61	0.58	0.53	0.58	0.62	0.56	0.61
County	0.49	0.51	0.61	0.61	0.57	0.61	0.58	0.57	0.59
City incl. pub. educ.	4.6	4.7	5.4	5.2	5.0	5.2	5.3	5.2	5.4
Miscellaneous	3.8	3.8	4.1	4.2	4.2	4.4	4.5	4.5	4.7

TABLE 63

Employees (full-time equivalents)

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
33,394	35,059	32,882	29,426	25,941	25,842	28,254	29,483	31,400	33,272	30,802
5.9	5.6	5.7	6.0	6.2	6.2	5.4	5.5	5.2	5.0	5.4
2.9	2.9	2.9	2.8	2.7	2.7	2.9	2.9	2.9	2.8	2.7
0.48	0.44	0.44	0.44	0.40	0.35	0.37	0.33	0.30	0.28	0.26
1.4	1.4	1.4	1.5	1.4	1.5	1.6	1.5	1.5	1.4	1.4
0.35	0.36	0.34	0.28	0.21	0.21	0.24	0.27	0.32	0.39	0.32
0.37	0.17	0.42	0.33	0.35	0.40	0.46	0.44	0.45	0.45	0.46
0.33	0.31	0.31	0.31	0.28	0.28	0.30	0.29	0.29	0.28	0.26
27.7	28.2	26.8	25.3	24.4	26.3	27.9	28.5	28.9	29.8	27.1
2.9	2.9	3.0	3.0	3.1	3.4	3.6	3.5	3.4	3.4	3.5
6.6	6.5	6.2	6.5	6.6	7.5	7.4	7.5	7.3	7.1	6.7
4.0	3.9	3.4	2.9	2.4	2.6	2.8	3.0	3.2	3.4	3.1
0.76	0.76	0.78	0.77	0.79	0.87	0.92	0.90	0.88	0.89	0.89
1.6	1.6	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.7	1.7
8.3	8.8	8.0	6.9	6.3	6.6	7.7	8.2	8.7	9.6	7.7
1.4	1.5	1.5	1.4	1.4	1.6	1.7	1.6	1.6	1.5	1.5
1.7	1.6	1.6	1.6	1.5	1.7	1.7	1.8	1.7	1.8	1.6
5.3	5.2	4.9	4.0	3.0	2.5	2.6	2.6	3.1	3.1	3.1
9.6	9.3	9.3	8.9	8.6	8.2	7.8	7.4	7.3	7.3	7.0
0.75	0.78	0.85	0.88	0.87	0.83	0.80	0.78	0.78	0.77	0.80
0.21	0.18	0.19	0.18	0.18	0.19	0.18	0.17	0.17	0.16	0.16
5.5	5.2	5.0	4.8	4.4	4.2	4.0	3.8	3.8	3.8	3.4
0.73	0.69	0.68	0.68	0.67	0.61	0.56	0.52	0.48	0.44	0.44
0.89	0.83	0.84	0.81	0.80	0.88	0.84	0.84	0.84	0.86	0.83
0.09	0.08	0.08	0.08	0.07	0.08	0.08	0.08	0.08	0.08	0.08
1.2	1.2	1.3	1.2	1.3	1.2	1.1	1.0	0.97	0.98	1.0
0.26	0.27	0.28	0.28	0.26	0.25	0.25	0.23	0.23	0.23	0.22
14.8	14.8	15.1	15.1	14.8	14.7	14.9	14.3	14.0	13.9	14.3
4.2	4.3	4.4	4.6	4.8	4.6	4.3	4.2	4.1	4.0	4.2
1.2	1.2	1.2	1.2	1.2	1.0	1.0	0.92	0.86	0.84	0.91
1.4	1.4	1.5	1.7	1.9	1.8	1.7	1.7	1.6	1.5	1.7
1.5	1.6	1.6	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6
15.7	15.8	16.2	16.9	17.3	16.6	16.9	17.3	17.3	17.2	18.0
2.8	2.8	3.0	3.4	3.8	3.8	3.5	3.5	3.5	3.4	3.8
3.8	4.0	4.2	4.4	4.7	4.3	4.7	4.8	4.7	4.7	4.9
6.7	6.6	6.5	6.5	6.4	6.1	6.3	6.3	6.4	6.4	6.3
2.5	2.5	2.4	2.6	2.5	2.4	2.4	2.6	2.8	2.8	3.0
9.2	9.0	9.8	11.1	12.5	12.4	11.7	11.7	11.7	11.4	12.5
2.5	2.5	2.7	3.0	3.3	3.3	3.3	3.6	3.7	3.6	3.9
0.62	0.61	0.68	0.81	0.94	0.94	0.92	0.96	0.96	0.98	1.1
0.62	0.62	0.68	0.79	0.92	0.90	0.84	0.83	0.82	0.81	0.91
5.5	5.3	5.8	6.5	7.4	7.2	6.6	6.4	6.2	6.1	6.7
4.7	4.8	4.9	5.3	5.8	5.9	5.6	5.6	5.5	5.5	5.7

TABLE 64

Entrepreneurial Net Income

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*
Total ($000,000)	18,355	14,108	8,945	11,073	12,715	12,978	14,475	14,123
Agriculture	48.9	48.6	43.3	38.0	39.2	41.5	43.0	40.7
Mining	0.21	0.46	0.14	0.26	0.20	0.18	0.31	0.36
Anth. coal	...*	...*	...*	...*	...*	...*	...*	...*
Bit. coal	0.04	0.08	0.03	0.07	0.05	0.04	0.06	0.07
Metal	0.02	0.03	0.01	0.01	0.01	0.01	0.01	0.01
Oil & gas	0.14	0.32	0.09	0.17	0.12	0.12	0.21	0.24
Other	0.02	0.03	0.01	0.02	0.02	0.02	0.03	0.03
Manufacturing	5.2	4.1	2.5	4.9	4.7	3.6	3.6	3.2
Food & tobacco	1.1	0.79	0.55	1.2	1.1	1.1	0.85	0.91
Textile & leather	2.3	0.98	0.93	1.7	1.4	0.73	1.0	0.67
Constr. mat. & furn.	0.57	0.87	0.23	0.70	0.86	0.58	0.57	0.51
Paper	0.06	0.12	0.02	0.05	0.05	0.04	0.04	0.05
Printing	0.34	0.52	0.58	0.61	0.48	0.47	0.13	0.42
Metal	0.56	0.51	0.08	0.30	0.44	0.37	0.10	0.38
Chemical	0.17	0.11	0.05	0.15	0.14	0.13	0.13	0.15
Misc. & rubber	0.21	0.22	0.02	0.20	0.20	0.17	0.18	0.15
Construction	2.3	2.3	2.2	3.2	3.0	4.6	5.3	4.1
Transp. & other pub. util.	0.10	0.10	0.06	0.06	0.06	0.05	0.05	0.05
Electric light & power	0.02	0.02	0.04	0.03	0.02	0.02	0.02	0.01
Water transp.	0.09	0.08	0.02	0.04	0.04	0.03	0.03	0.04
Trade	25.2	21.4	19.2	23.8	22.9	20.3	18.2	17.7
Finance	0.66	1.0	1.6	1.3	1.4	1.5	1.5	1.6
Insurance	0.66	1.0	1.6	1.3	1.4	1.5	1.5	1.6
Service	15.1	19.0	26.7	25.2	25.1	25.1	24.8	28.6
Professional	8.5	9.5	13.0	15.7	15.2	15.8	16.5	18.5
Personal	4.6	6.3	9.3	6.1	6.7	6.2	5.6	7.1
Miscellaneous	2.0	3.2	4.4	3.3	3.3	3.1	2.8	3.0
Miscellaneous	2.3	3.1	4.3	3.2	3.4	3.3	3.2	3.7

* Less than 0.005 per cent.

TABLE 64

Entrepreneurial Net Income

1927	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
13,637	13,881	14,366	11,083	8,119	5,680	7,090	8,970	9,914	11,135	11,875	11,192
41.8	40.3	41.6	38.3	34.0	32.2	37.7	42.8	41.5	41.4	43.5	39.4
0.23	0.28	0.32	0.04	—0.14	—0.29	—0.13	0.08	0.06	0.14	0.21	0.22
...*	...*	...*	...*	...*	...*	...*	...*	...*	...*	...*	...*
0.05	0.05	0.06	0.01	—0.02	—0.03	—0.01	0.01	0.01	0.01	0.02	0.02
0.01	0.01	0.01	...*	...*	—0.01	...*	...*	...*	...*	0.01	0.01
0.16	0.20	0.23	0.03	—0.10	—0.23	—0.10	0.06	0.05	0.11	0.16	0.17
0.02	0.02	0.03	...*	—0.01	—0.02	—0.01	0.01	0.01	0.01	0.02	0.02
3.3	3.2	3.0	1.7	0.91	—0.28	2.4	2.3	2.6	3.3	2.7	2.1
0.90	0.96	0.93	1.0	0.94	0.84	1.0	1.2	1.1	1.2	0.88	0.83
1.0	0.76	0.65	—0.11	—0.24	—0.61	0.80	0.41	0.55	0.76	0.52	0.53
0.35	0.39	0.35	0.08	—0.18	—0.19	—0.03	0.08	0.16	0.32	0.33	0.15
0.05	0.04	0.04	0.03	0.01	—0.01	0.03	0.03	0.03	0.04	0.04	...*
0.40	0.42	0.40	0.37	0.31	0.29	0.40	0.30	0.31	0.34	0.31	0.24
0.29	0.34	0.38	0.19	—0.02	—0.26	0.01	0.08	0.22	0.34	0.39	0.12
0.12	0.14	0.14	0.12	0.10	0.08	0.12	0.12	0.13	0.15	0.14	0.09
0.14	0.13	0.11	0.02	—0.02	—0.11	0.04	0.07	0.14	0.16	0.14	0.12
3.9	3.4	3.7	3.3	2.0	—0.32	0.28	1.1	1.8	2.7	2.8	3.3
0.04	0.05	0.05	0.04	0.02	0.01	0.03	0.04	0.04	0.06	0.06	0.03
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.03	0.04	0.05	0.03	0.01	...*	0.02	0.03	0.03	0.05	0.06	0.02
17.6	18.0	16.7	14.9	16.0	19.0	23.3	20.0	18.4	17.5	17.6	18.9
1.7	1.8	1.8	2.3	2.8	3.4	2.5	2.1	2.0	1.8	1.9	1.9
1.7	1.8	1.8	2.3	2.8	3.4	2.5	2.1	2.0	1.8	1.9	1.9
27.9	29.3	29.1	35.1	39.3	40.4	29.3	27.5	26.5	26.0	26.7	29.2
18.0	19.7	19.8	23.7	26.4	27.7	20.3	18.1	17.6	17.3	18.1	19.6
7.0	6.7	6.5	8.0	8.9	8.6	6.0	6.6	6.3	6.3	6.0	7.0
2.9	2.9	2.7	3.4	4.0	4.2	3.0	2.8	2.6	2.5	2.6	2.6
3.6	3.7	3.7	4.4	5.0	5.8	4.5	4.1	4.2	4.2	4.5	4.9

TABLE 65

Entrepreneurial Withdrawals

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*
Total ($000,000)	11,782	13,477	10,269	10,789	11,345	11,946	12,503	12,452
Agriculture	56.9	57.5	51.8	47.5	49.6	48.1	46.4	47.1
Mining	0.26	0.30	0.31	0.27	0.28	0.24	0.21	0.20
Anth. coal	...*	...*	...*	...*	...*	...*	...*	...*
Bit. coal	0.04	0.05	0.07	0.07	0.07	0.05	0.04	0.04
Metal	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Oil & gas	0.18	0.20	0.20	0.17	0.17	0.15	0.14	0.14
Other	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Manufacturing	4.4	4.0	3.9	3.6	3.4	3.1	3.0	3.0
Food & tobacco	1.6	1.3	1.3	1.2	1.1	0.98	0.88	0.90
Textile & leather	1.2	1.0	1.1	1.0	0.92	0.84	0.85	0.84
Constr. mat. & furn.	0.48	0.52	0.45	0.45	0.42	0.40	0.40	0.39
Paper	0.04	0.05	0.05	0.04	0.04	0.03	0.03	0.03
Printing	0.34	0.40	0.45	0.42	0.38	0.37	0.35	0.34
Metal	0.38	0.34	0.28	0.25	0.26	0.25	0.23	0.22
Chemical	0.19	0.17	0.16	0.15	0.14	0.12	0.12	0.11
Misc. & rubber	0.16	0.16	0.15	0.14	0.13	0.13	0.12	0.12
Construction	2.0	1.8	2.2	2.9	2.7	3.3	4.5	3.4
Transp. & other pub. util.	0.09	0.07	0.07	0.07	0.06	0.05	0.05	0.04
Electric light & power	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02
Water transp.	0.06	0.04	0.04	0.04	0.04	0.03	0.03	0.03
Trade	18.6	19.3	21.2	19.0	18.3	17.9	16.7	17.1
Finance	1.0	1.1	1.4	1.4	1.5	1.6	1.7	1.8
Insurance	1.0	1.1	1.4	1.4	1.5	1.6	1.7	1.8
Service	14.4	13.7	16.4	22.3	21.1	22.5	24.1	24.1
Miscellaneous	2.2	2.3	2.7	3.1	3.0	3.1	3.3	3.3

* Less than 0.005 per cent.

TABLE 65

Entrepreneurial Withdrawals

1927	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
12,621	12,876	13,385	12,774	11,208	9,747	9,019	9,099	9,516	10,120	11,228	11,056
46.2	45.3	44.1	43.7	40.5	35.9	35.1	38.5	39.7	39.8	40.5	40.6
0.19	0.18	0.16	0.16	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.17
...*	...*	...*	...*	...*	...*	...*	...*	...*	...*	...*	...*
0.04	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
0.01	0.01	...*	...*	...*	...*	...*	...*	...*	0.01	0.01	0.01
0.13	0.12	0.11	0.12	0.13	0.12	0.12	0.13	0.13	0.13	0.13	0.13
0.02	0.02	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.02
2.9	2.9	2.8	2.6	2.4	2.1	2.0	2.0	2.1	2.4	2.4	2.4
0.95	0.99	0.98	0.92	0.90	0.82	0.73	0.72	0.67	0.78	0.83	0.86
0.81	0.75	0.72	0.64	0.61	0.48	0.52	0.50	0.54	0.61	0.55	0.54
0.34	0.34	0.33	0.28	0.23	0.17	0.15	0.17	0.19	0.24	0.25	0.24
0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03
0.34	0.32	0.30	0.30	0.29	0.34	0.34	0.26	0.29	0.31	0.30	0.31
0.21	0.20	0.21	0.18	0.15	0.11	0.11	0.13	0.16	0.20	0.21	0.20
0.11	0.10	0.11	0.10	0.10	0.08	0.08	0.08	0.10	0.11	0.10	0.11
0.11	0.12	0.11	0.11	0.10	0.08	0.08	0.08	0.10	0.11	0.11	0.11
3.3	3.0	3.3	3.1	2.4	2.2	1.9	2.2	2.6	3.4	3.1	3.4
0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.03	0.03	0.03	0.04	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
16.7	16.5	16.7	17.3	19.1	20.0	19.9	20.0	19.1	19.0	18.2	18.9
1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0
1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0
25.4	26.6	27.3	27.4	29.4	33.1	34.3	30.7	29.6	28.4	28.7	27.6
3.5	3.6	3.7	3.7	3.9	4.4	4.6	4.4	4.6	4.8	4.9	5.0

TABLE 66

Entrepreneurs

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*
Total (000)	9,374	9,401	9,405	9,457	9,468	9,566	9,664	9,662
Agriculture	68.2	68.1	68.5	67.7	66.8	66.1	65.3	64.7
Mining	0.24	0.23	0.22	0.21	0.21	0.19	0.18	0.17
Anth. coal	...*	...*	...*	...*	...*	...*	...*	...*
Bit. coal	0.04	0.04	0.04	0.05	0.05	0.04	0.04	0.04
Metal	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Oil & gas	0.15	0.15	0.14	0.14	0.13	0.12	0.12	0.11
Other	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Manufacturing	2.7	2.4	1.8	1.7	1.6	1.5	1.4	1.4
Food & tobacco	0.85	0.73	0.57	0.53	0.50	0.46	0.42	0.43
Textile & leather	0.43	0.41	0.38	0.36	0.34	0.32	0.29	0.30
Constr. mat. & furn.	0.55	0.45	0.27	0.25	0.22	0.22	0.22	0.20
Paper	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Printing	0.32	0.29	0.23	0.21	0.19	0.19	0.19	0.19
Metal	0.30	0.28	0.22	0.20	0.17	0.16	0.14	0.14
Chemical	0.07	0.06	0.05	0.05	0.04	0.04	0.04	0.04
Misc. & rubber	0.14	0.12	0.09	0.09	0.08	0.08	0.08	0.07
Construction	1.0	0.96	0.79	1.2	1.3	1.7	2.0	1.8
Transp. & other pub. util.	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.01
Electric light & power	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Water transp.	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Trade	12.3	12.5	12.9	13.1	13.4	13.6	13.8	14.1
Service	13.0	13.1	13.0	13.2	13.6	13.8	14.1	14.5
Professional	4.8	4.8	4.9	5.0	5.2	5.3	5.4	5.6
Personal	4.3	4.3	4.2	4.5	4.8	5.0	5.3	5.5
Miscellaneous	4.0	3.9	3.8	3.7	3.6	3.5	3.4	3.3
Miscellaneous	2.5	2.7	2.8	2.9	3.0	3.1	3.2	3.4

* Less than 0.005 per cent.

TABLE 66

Entrepreneurs

1927	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
9,696	9,757	9,854	9,893	9,971	10,062	10,199	10,280	10,333	10,445	10,525	10,601
64.1	63.8	63.3	63.5	64.2	65.3	65.6	65.6	65.5	64.9	64.5	64.5
0.16	0.15	0.14	0.14	0.14	0.14	0.13	0.13	0.12	0.12	0.12	0.12
...*	...*	...*	...*	...*	...*	...*	...*	...*	...*	...*	...*
0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.01
0.01	...*	...*	...*	...*	...*	...*	...*	...*	...*	...*	...*
0.11	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
1.4	1.4	1.4	1.2	1.0	0.84	0.71	0.74	0.79	0.87	0.94	0.94
0.44	0.44	0.45	0.41	0.35	0.30	0.25	0.24	0.24	0.29	0.34	0.33
0.31	0.29	0.27	0.24	0.20	0.16	0.14	0.14	0.14	0.15	0.15	0.15
0.18	0.21	0.24	0.19	0.15	0.10	0.07	0.09	0.11	0.12	0.13	0.13
0.01	0.01	0.01	0.01	0.01	0.01	...*	0.01	0.01	0.01	0.01	0.01
0.19	0.17	0.15	0.14	0.13	0.12	0.11	0.12	0.13	0.14	0.14	0.14
0.14	0.13	0.12	0.12	0.10	0.09	0.08	0.08	0.09	0.09	0.09	0.09
0.03	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.03
0.07	0.07	0.07	0.06	0.05	0.04	0.04	0.04	0.05	0.05	0.05	0.05
1.7	1.7	1.7	1.7	1.5	1.2	1.1	1.2	1.3	1.4	1.4	1.4
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
...*	...*	...*	...*	...*	...*	...*	...*	...*	...*	...*	...*
0.01	0.01	0.01	0.01	0.01	...*	...*	...*	...*	...*	...*	...*
14.3	14.6	14.7	14.6	14.5	14.3	14.1	13.6	13.1	13.3	13.4	13.4
14.8	14.8	15.1	15.2	15.1	15.0	15.3	15.5	15.7	15.8	15.8	15.8
5.8	6.0	6.1	6.3	6.4	6.5	6.5	6.6	6.7	6.8	6.9	7.0
5.8	5.7	6.0	5.9	5.8	5.8	6.0	6.2	6.3	6.3	6.2	6.2
3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.7	2.7	2.7	2.7	2.6
3.5	3.6	3.7	3.6	3.4	3.2	3.1	3.3	3.5	3.6	3.8	3.9

TABLE 67

Service Income including Entrepreneurial Savings *

	1919	1920	1921	1922	1923	1924	1925	1926
Total ($000,000)	55,495	57,998	44,482	48,077	56,055	56,302	59,494	62,140
Agriculture	18.9	14.9	11.3	11.1	11.1	11.7	12.6	11.4
Mining	2.7	3.6	3.5	3.0	3.6	3.1	2.7	3.1
Anth. coal	0.40	0.44	0.68	0.38	0.55	0.61	0.38	0.54
Bit. coal	1.4	1.9	1.9	1.6	2.0	1.4	1.3	1.4
Metal	0.43	0.44	0.31	0.29	0.36	0.35	0.35	0.34
Oil & gas	0.35	0.56	0.39	0.44	0.41	0.38	0.44	0.52
Other	0.18	0.26	0.24	0.24	0.30	0.30	0.29	0.29
Manufacturing	24.2	26.2	22.7	22.9	24.3	22.8	22.7	22.5
Food & tobacco	2.7	2.6	2.8	2.7	2.5	2.4	2.3	2.2
Textile & leather	5.1	5.0	5.3	5.3	5.2	4.5	4.6	4.3
Constr. mat. & furn.	2.9	3.5	2.9	3.2	3.5	3.5	3.4	3.4
Paper	0.52	0.65	0.60	0.59	0.60	0.60	0.60	0.61
Printing	1.2	1.5	1.7	1.7	1.6	1.7	1.7	1.8
Metal	8.9	9.8	6.8	6.8	8.3	7.6	7.6	7.6
Chemical	1.3	1.4	1.2	1.2	1.2	1.1	1.1	1.2
Misc. & rubber	1.5	1.6	1.4	1.4	1.4	1.3	1.3	1.3
Construction	3.7	4.4	4.2	4.8	5.9	6.4	6.5	6.7
Transp. & other pub. util.	8.3	10.4	10.8	9.6	9.2	9.1	8.7	8.7
Electric light & power	0.26	0.31	0.42	0.41	0.46	0.53	0.52	0.58
Mfd. gas	0.14	0.14	0.18	0.17	0.17	0.18	0.18	0.18
Steam rr., Pull., & exp.	5.7	7.2	7.0	6.2	6.1	5.7	5.5	5.4
Street rwy.	0.66	0.80	0.99	0.90	0.78	0.78	0.73	0.70
Water transp.	0.92	1.2	1.2	0.95	0.83	0.88	0.81	0.80
Pipe lines	0.05	0.06	0.07	0.07	0.07	0.06	0.06	0.07
Telephone	0.43	0.54	0.73	0.73	0.70	0.75	0.74	0.75
Telegraph	0.13	0.17	0.18	0.17	0.16	0.16	0.16	0.18
Trade	18.1	15.6	15.5	17.3	16.6	16.3	16.2	16.0
Finance	2.7	3.1	4.2	3.9	3.5	3.8	3.8	4.0
Banking	0.69	0.82	1.1	1.1	0.97	1.0	1.0	1.0
Insurance	1.2	1.4	1.9	1.8	1.5	1.7	1.8	1.9
Real estate	0.83	0.93	1.2	1.1	1.0	1.1	0.96	1.1
Service	10.9	11.6	14.8	15.2	14.5	15.1	15.3	16.0
Government	7.3	6.7	9.0	8.2	7.3	7.6	7.5	7.5
Federal	4.3	3.3	4.0	3.3	2.8	2.8	2.8	2.8
State	0.34	0.40	0.61	0.55	0.51	0.57	0.51	0.43
County	0.27	0.31	0.48	0.47	0.42	0.45	0.42	0.42
City incl. pub. educ.	2.3	2.6	3.9	3.9	3.6	3.8	3.8	3.9
Miscellaneous	3.2	3.4	4.0	3.9	4.0	4.0	4.1	4.3

* Excluding Social Security contributions of employers.

TABLE 67

Service Income including Entrepreneurial Savings *

1927	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
62,070	63,243	66,580	58,851	48,588	37,379	37,144	43,858	47,841	53,920	58,449	54,424
11.3	10.9	10.9	9.1	7.4	6.5	8.6	10.0	10.6	10.7	10.2	9.5
2.7	2.4	2.4	2.3	2.0	1.7	1.8	2.0	2.0	2.0	2.1	1.9
0.48	0.44	0.38	0.41	0.40	0.38	0.34	0.34	0.28	0.23	0.20	0.18
1.2	1.0	0.96	0.90	0.81	0.72	0.78	0.92	0.93	0.96	0.96	0.80
0.32	0.30	0.31	0.29	0.22	0.14	0.14	0.16	0.19	0.23	0.32	0.24
0.46	0.38	0.48	0.42	0.31	0.31	0.35	0.42	0.40	0.41	0.45	0.47
0.28	0.26	0.23	0.24	0.22	0.18	0.16	0.17	0.17	0.19	0.20	0.18
22.5	22.6	23.0	22.1	20.6	18.8	19.4	20.5	21.2	21.5	23.2	19.8
2.3	2.3	2.3	2.5	2.5	2.6	2.7	2.8	2.7	2.6	2.6	2.7
4.7	4.4	4.4	4.0	4.2	3.9	4.5	4.4	4.5	4.2	4.1	3.7
3.2	3.1	3.0	2.7	2.1	1.6	1.6	1.8	1.9	2.1	2.4	2.0
0.61	0.61	0.61	0.65	0.66	0.65	0.69	0.70	0.69	0.67	0.70	0.67
1.8	1.9	1.9	2.2	2.2	2.3	2.0	1.9	1.8	1.7	1.8	1.8
7.4	7.7	8.3	7.5	6.2	5.2	5.2	6.3	6.9	7.5	8.9	6.4
1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.3	1.4	1.4
1.4	1.4	1.3	1.3	1.3	1.2	1.2	1.2	1.3	1.3	1.3	1.1
6.3	6.2	6.0	5.6	4.4	3.0	2.1	2.1	2.2	2.9	3.1	3.1
8.6	8.4	8.3	8.6	8.9	8.8	8.2	7.5	7.3	7.2	7.3	7.2
0.60	0.64	0.65	0.77	0.87	0.94	0.86	0.79	0.76	0.74	0.76	0.81
0.18	0.17	0.15	0.17	0.17	0.20	0.20	0.18	0.17	0.16	0.16	0.17
5.4	5.1	5.0	5.0	4.9	4.7	4.4	4.0	4.0	3.9	4.0	3.8
0.68	0.64	0.62	0.65	0.69	0.72	0.61	0.54	0.49	0.45	0.42	0.43
0.77	0.77	0.73	0.77	0.78	0.78	0.82	0.75	0.81	0.83	0.88	0.84
0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
0.79	0.83	0.89	1.0	1.1	1.2	1.1	0.95	0.90	0.86	0.90	0.99
0.17	0.17	0.18	0.21	0.22	0.21	0.19	0.18	0.17	0.16	0.16	0.16
15.6	15.8	15.6	15.8	16.3	16.6	16.6	16.2	15.3	14.6	14.6	15.4
4.3	4.6	4.7	4.9	5.4	5.8	5.2	4.7	4.5	4.1	4.0	4.3
1.1	1.1	1.1	1.2	1.3	1.5	1.3	1.1	1.0	0.96	0.92	1.0
2.0	2.1	2.1	2.4	2.7	3.0	2.7	2.4	2.3	2.1	2.1	2.3
1.2	1.4	1.5	1.4	1.4	1.3	1.2	1.1	1.1	1.0	0.96	1.0
16.4	16.6	16.6	17.5	18.0	18.0	16.2	15.6	15.5	15.4	15.5	16.3
8.0	8.1	8.1	9.4	11.9	15.3	16.6	16.4	16.2	16.5	14.6	17.1
2.9	2.9	2.9	3.3	4.4	5.7	7.7	9.0	9.1	9.8	8.0	9.5
0.47	0.49	0.49	0.59	0.75	0.99	0.97	0.86	0.88	0.85	0.88	1.0
0.46	0.48	0.50	0.59	0.75	0.95	0.87	0.74	0.71	0.67	0.66	0.75
4.2	4.3	4.2	4.9	6.0	7.6	7.0	5.8	5.5	5.2	5.1	5.9
4.3	4.4	4.4	4.7	5.1	5.5	5.4	5.0	5.2	5.2	5.3	5.4

TABLE 68

Service Income excluding Entrepreneurial Savings *

	1919	1920	1921	1922	1923	1924	1925	1926
Total ($000,000)	48,922	57,367	45,806	47,793	54,685	55,269	57,523	60,470
Agriculture	16.8	16.6	14.1	13.1	12.5	12.6	12.3	11.9
Mining	3.1	3.6	3.5	3.0	3.7	3.1	2.8	3.1
Anth. coal	0.46	0.44	0.66	0.38	0.57	0.62	0.40	0.55
Bit. coal	1.6	1.9	1.9	1.6	2.0	1.5	1.3	1.4
Metal	0.48	0.44	0.30	0.30	0.36	0.36	0.36	0.35
Oil & gas	0.39	0.53	0.40	0.45	0.43	0.39	0.43	0.51
Other	0.20	0.26	0.23	0.24	0.30	0.31	0.30	0.29
Manufacturing	26.6	26.4	22.5	22.7	24.5	23.1	23.2	22.9
Food & tobacco	3.1	2.8	2.9	2.7	2.5	2.4	2.3	2.2
Textile & leather	5.3	5.1	5.2	5.1	5.2	4.6	4.7	4.5
Constr. mat. & furn.	3.2	3.4	2.9	3.2	3.5	3.5	3.5	3.5
Paper	0.58	0.64	0.59	0.59	0.61	0.60	0.61	0.62
Printing	1.3	1.4	1.7	1.7	1.6	1.7	1.7	1.8
Metal	10.0	9.9	6.7	6.8	8.4	7.7	7.8	7.8
Chemical	1.5	1.5	1.2	1.2	1.3	1.2	1.2	1.2
Misc. & rubber	1.6	1.6	1.4	1.4	1.4	1.3	1.4	1.4
Construction	3.8	4.4	4.1	4.8	5.9	6.2	6.3	6.6
Transp. & other pub. util.	9.4	10.5	10.5	9.7	9.5	9.2	9.0	8.9
Electric light & power	0.29	0.31	0.41	0.41	0.47	0.54	0.54	0.59
Mfd. gas	0.16	0.15	0.17	0.17	0.17	0.18	0.18	0.18
Steam rr., Pull., & exp.	6.5	7.2	6.8	6.3	6.2	5.8	5.7	5.6
Street rwy.	0.75	0.81	0.96	0.91	0.80	0.80	0.75	0.72
Water transp.	1.0	1.2	1.2	0.96	0.85	0.90	0.83	0.82
Pipe lines	0.06	0.06	0.07	0.07	0.07	0.06	0.06	0.07
Telephone	0.49	0.55	0.71	0.74	0.71	0.76	0.76	0.77
Telegraph	0.15	0.17	0.18	0.17	0.16	0.16	0.16	0.18
Trade	15.6	15.1	16.0	16.2	15.5	15.7	15.8	15.8
Finance	3.1	3.1	4.1	4.0	3.6	3.9	3.9	4.1
Banking	0.78	0.82	1.1	1.1	1.0	1.0	1.1	1.1
Insurance	1.3	1.4	1.8	1.8	1.6	1.7	1.9	1.9
Real estate	0.94	0.94	1.2	1.1	1.1	1.1	0.99	1.1
Service	10.1	10.3	12.8	14.4	13.4	14.3	14.8	14.7
Government	8.2	6.8	8.7	8.3	7.5	7.7	7.8	7.7
Federal	4.9	3.4	3.8	3.3	2.9	2.9	2.9	2.9
State	0.38	0.41	0.59	0.55	0.52	0.58	0.52	0.44
County	0.31	0.31	0.47	0.47	0.43	0.46	0.44	0.43
City incl. pub. educ.	2.7	2.7	3.8	3.9	3.7	3.9	3.9	4.0
Miscellaneous	3.3	3.2	3.6	3.9	3.9	4.0	4.2	4.2

* Excluding Social Security contributions of employers.

TABLE 68

Service Income excluding Entrepreneurial Savings *

1927	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
61,054	62,238	65,599	60,542	51,676	41,447	39,073	43,988	47,446	52,604	57,802	54,288
11.6	11.4	11.0	11.1	10.4	9.9	9.4	9.2	9.3	9.0	9.2	9.7
2.8	2.4	2.4	2.2	1.9	1.6	1.7	2.0	2.0	2.1	2.1	1.9
0.49	0.45	0.39	0.40	0.38	0.35	0.32	0.34	0.28	0.24	0.21	0.18
1.2	1.0	0.97	0.88	0.77	0.66	0.75	0.92	0.94	0.99	0.96	0.80
0.32	0.30	0.31	0.28	0.20	0.13	0.14	0.16	0.19	0.24	0.33	0.24
0.46	0.37	0.46	0.43	0.33	0.34	0.38	0.43	0.42	0.42	0.44	0.46
0.28	0.26	0.23	0.23	0.21	0.17	0.16	0.17	0.18	0.20	0.21	0.18
22.8	22.9	23.3	21.7	19.7	17.4	18.5	20.4	21.3	21.8	23.3	19.9
2.3	2.4	2.3	2.4	2.4	2.5	2.6	2.7	2.6	2.5	2.6	2.7
4.7	4.5	4.4	4.0	4.1	3.7	4.3	4.4	4.5	4.3	4.1	3.7
3.3	3.1	3.0	2.7	2.1	1.5	1.6	1.8	1.9	2.2	2.4	2.0
0.62	0.62	0.62	0.63	0.62	0.59	0.65	0.70	0.69	0.68	0.70	0.68
1.8	1.9	1.9	2.1	2.1	2.1	1.9	1.9	1.8	1.8	1.8	1.8
7.5	7.8	8.3	7.3	5.8	4.7	5.0	6.2	7.0	7.7	9.0	6.5
1.2	1.2	1.3	1.3	1.3	1.2	1.3	1.4	1.4	1.3	1.1	1.4
1.4	1.4	1.3	1.3	1.2	1.1	1.2	1.2	1.3	1.3	1.4	1.1
6.3	6.1	5.9	5.5	4.3	3.3	2.4	2.3	2.4	3.1	3.2	3.1
8.8	8.5	8.4	8.4	8.3	8.0	7.8	7.4	7.4	7.4	7.4	7.3
0.60	0.65	0.66	0.75	0.82	0.85	0.81	0.78	0.76	0.75	0.77	0.82
0.18	0.17	0.15	0.16	0.16	0.18	0.19	0.18	0.17	0.16	0.16	0.17
5.4	5.2	5.0	4.8	4.6	4.2	4.1	4.0	4.0	4.0	4.0	3.8
0.69	0.65	0.63	0.63	0.65	0.65	0.58	0.54	0.50	0.46	0.42	0.44
0.78	0.78	0.74	0.75	0.74	0.71	0.78	0.75	0.81	0.84	0.89	0.84
0.08	0.08	0.08	0.07	0.08	0.07	0.08	0.08	0.08	0.08	0.08	0.08
0.80	0.85	0.90	0.99	1.0	1.1	1.0	0.95	0.90	0.88	0.91	0.99
0.17	0.17	0.18	0.20	0.21	0.19	0.18	0.18	0.17	0.16	0.16	0.16
15.4	15.5	15.6	16.3	17.0	17.1	16.1	16.2	15.4	14.8	14.7	15.4
4.4	4.6	4.8	4.8	5.1	5.2	4.9	4.7	4.5	4.2	4.1	4.4
1.1	1.1	1.1	1.2	1.2	1.3	1.2	1.1	1.1	0.98	0.94	1.0
2.0	2.1	2.1	2.3	2.5	2.7	2.6	2.4	2.4	2.2	2.2	2.3
1.3	1.4	1.5	1.3	1.3	1.2	1.1	1.1	1.1	1.0	0.97	1.1
15.6	15.8	16.1	16.3	17.2	18.4	17.9	16.3	16.0	15.5	15.8	16.0
8.1	8.3	8.2	9.2	11.2	13.8	15.8	16.4	16.3	16.9	14.8	17.1
2.9	2.9	2.9	3.2	4.1	5.2	7.3	9.0	9.2	10.0	8.1	9.5
0.48	0.50	0.50	0.57	0.71	0.89	0.92	0.86	0.88	0.87	0.89	1.0
0.46	0.49	0.50	0.57	0.70	0.86	0.82	0.74	0.72	0.68	0.67	0.75
4.2	4.4	4.3	4.8	5.7	6.9	6.7	5.8	5.5	5.3	5.1	5.9
4.3	4.4	4.4	4.5	4.8	5.2	5.4	5.1	5.3	5.3	5.4	5.5

TABLE 69

Number Engaged (employees on full-time equivalent basis)

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*
Total (000)	39,818	40,212	36,519	38,043	40,819	40,634	41,344	42,783
Agriculture	21.3	21.3	23.2	22.2	20.4	20.3	19.9	19.4
Mining	2.8	3.0	2.5	2.4	2.8	2.5	2.5	2.7
Anth. coal	0.39	0.37	0.46	0.27	0.39	0.41	0.27	0.38
Bit. coal	1.5	1.7	1.3	1.2	1.4	1.2	1.3	1.4
Metal	0.37	0.36	0.22	0.27	0.32	0.32	0.32	0.31
Oil & gas	0.32	0.37	0.30	0.36	0.35	0.32	0.36	0.43
Other	0.22	0.26	0.23	0.25	0.28	0.28	0.28	0.27
Manufacturing	25.4	24.8	21.2	22.4	23.6	22.2	22.4	22.2
Food & tobacco	3.0	2.8	2.7	2.7	2.5	2.4	2.4	2.3
Textile & leather	5.7	5.5	5.6	5.7	5.8	5.3	5.4	5.2
Constr. mat. & furn.	3.4	3.3	3.0	3.5	3.6	3.5	3.6	3.5
Paper	0.59	0.64	0.57	0.58	0.61	0.60	0.61	0.62
Printing	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Metal	8.4	8.3	5.6	6.0	7.1	6.6	6.6	6.6
Chemical	1.3	1.2	1.1	1.1	1.1	1.1	1.1	1.1
Misc. & rubber	1.6	1.6	1.3	1.4	1.4	1.3	1.4	1.3
Construction	2.8	3.1	3.1	3.8	4.3	4.5	4.5	4.8
Transp. & other pub. util.	8.2	8.7	8.2	8.0	8.2	8.0	7.8	7.8
Electric light & power	0.28	0.30	0.34	0.36	0.44	0.48	0.48	0.53
Mfd. gas	0.16	0.14	0.14	0.15	0.16	0.17	0.17	0.17
Steam rr., Pull., & exp.	5.3	5.6	5.1	4.8	5.0	4.8	4.7	4.6
Street rwy.	0.74	0.75	0.77	0.77	0.71	0.69	0.66	0.62
Water transp.	0.74	0.90	0.84	0.84	0.78	0.77	0.72	0.72
Pipe lines	0.05	0.04	0.06	0.06	0.06	0.05	0.06	0.06
Telephone	0.70	0.76	0.80	0.82	0.83	0.85	0.87	0.86
Telegraph	0.19	0.19	0.20	0.18	0.18	0.19	0.20	0.20
Trade	12.6	13.6	13.8	13.9	13.8	14.3	14.3	14.2
Finance	2.4	2.5	2.8	2.6	2.5	2.7	2.7	2.8
Banking	0.78	0.86	0.93	0.87	0.85	0.88	0.89	0.91
Insurance	0.76	0.80	0.94	0.90	0.86	0.93	0.97	1.0
Real estate	0.83	0.86	0.89	0.81	0.84	0.89	0.80	0.92
Service	12.2	12.4	13.8	13.9	13.8	14.4	14.6	14.8
Professional	2.6	2.6	2.9	3.0	3.0	3.1	3.2	3.2
Personal	3.3	3.4	3.6	3.8	3.7	3.8	4.0	4.1
Domestic	4.3	4.2	4.7	4.8	4.8	5.0	5.0	5.1
Miscellaneous	2.0	2.2	2.5	2.3	2.3	2.4	2.4	2.5
Government	8.8	7.0	7.6	7.1	6.7	7.0	7.0	6.9
Federal	4.5	2.6	2.7	2.2	2.0	2.0	2.0	1.9
State	0.40	0.42	0.46	0.43	0.41	0.44	0.48	0.43
County	0.38	0.39	0.46	0.46	0.44	0.47	0.45	0.44
City incl. pub. educ.	3.5	3.6	4.0	3.9	3.8	4.0	4.0	4.1
Miscellaneous	3.5	3.5	3.8	3.9	4.0	4.1	4.2	4.3

TABLE 69

Number Engaged (employees on full-time equivalent basis)

1927	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
42,898	43,151	44,913	42,775	39,398	36,003	36,011	38,534	39,815	41,846	43,797	41,103
19.1	19.0	18.3	19.1	20.7	22.7	23.0	21.5	21.1	20.1	19.3	20.6
2.5	2.3	2.3	2.3	2.1	2.0	2.0	2.2	2.2	2.2	2.2	2.0
0.39	0.37	0.34	0.34	0.33	0.29	0.25	0.27	0.25	0.23	0.21	0.19
1.2	1.1	1.1	1.1	1.1	1.0	1.1	1.2	1.1	1.1	1.1	1.0
0.29	0.27	0.28	0.26	0.21	0.15	0.15	0.18	0.20	0.24	0.30	0.24
0.38	0.31	0.38	0.35	0.27	0.28	0.31	0.36	0.35	0.36	0.36	0.36
0.27	0.26	0.24	0.24	0.24	0.21	0.21	0.22	0.22	0.22	0.22	0.20
21.8	21.7	22.3	20.8	19.2	17.8	19.0	20.7	21.3	21.9	22.9	20.4
2.3	2.4	2.4	2.4	2.3	2.3	2.5	2.7	2.6	2.6	2.7	2.7
5.4	5.2	5.1	4.8	4.9	4.8	5.4	5.5	5.6	5.5	5.4	5.0
3.3	3.1	3.1	2.7	2.2	1.8	1.9	2.1	2.2	2.5	2.6	2.3
0.60	0.59	0.59	0.60	0.58	0.57	0.62	0.68	0.67	0.66	0.68	0.66
1.2	1.3	1.3	1.4	1.3	1.3	1.2	1.2	1.2	1.2	1.3	1.3
6.3	6.4	6.9	6.2	5.2	4.6	4.7	5.7	6.1	6.5	7.3	5.8
1.1	1.1	1.2	1.2	1.1	1.0	1.2	1.2	1.2	1.2	1.2	1.1
1.3	1.3	1.3	1.2	1.2	1.1	1.2	1.3	1.3	1.3	1.4	1.2
4.5	4.5	4.4	4.2	3.4	2.5	2.1	2.2	2.3	2.7	2.7	2.6
7.6	7.4	7.3	7.1	6.7	6.2	5.9	5.7	5.5	5.5	5.5	5.2
0.55	0.58	0.61	0.66	0.66	0.63	0.59	0.59	0.58	0.59	0.59	0.60
0.17	0.16	0.14	0.15	0.14	0.13	0.14	0.13	0.13	0.12	0.12	0.12
4.5	4.3	4.1	3.9	3.6	3.2	3.0	2.9	2.8	2.8	2.9	2.6
0.59	0.57	0.54	0.52	0.51	0.48	0.44	0.41	0.38	0.36	0.33	0.33
0.70	0.69	0.65	0.65	0.61	0.58	0.63	0.62	0.62	0.63	0.66	0.62
0.07	0.07	0.06	0.06	0.06	0.05	0.06	0.06	0.06	0.06	0.06	0.06
0.88	0.91	0.97	1.0	0.93	0.93	0.86	0.79	0.75	0.73	0.74	0.77
0.20	0.20	0.21	0.22	0.21	0.19	0.18	0.18	0.17	0.17	0.17	0.16
14.6	14.7	14.8	15.0	14.9	14.7	14.5	14.5	14.0	13.8	13.7	14.1
3.0	3.2	3.3	3.4	3.4	3.4	3.3	3.2	3.1	3.0	3.0	3.2
0.94	0.96	0.94	0.94	0.89	0.85	0.75	0.73	0.68	0.65	0.64	0.68
1.1	1.1	1.1	1.2	1.3	1.4	1.3	1.3	1.2	1.2	1.2	1.3
1.0	1.2	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2
15.3	15.5	15.6	16.0	16.5	16.6	16.2	16.6	16.9	17.0	16.9	17.4
3.3	3.5	3.5	3.8	4.2	4.5	4.5	4.3	4.3	4.3	4.2	4.6
4.3	4.2	4.4	4.6	4.8	5.0	4.8	5.1	5.2	5.1	5.0	5.2
5.2	5.1	5.1	5.0	4.9	4.6	4.4	4.6	4.7	4.8	4.8	4.7
2.6	2.6	2.6	2.6	2.6	2.5	2.5	2.5	2.6	2.8	2.7	2.9
7.0	7.1	7.0	7.5	8.3	9.0	8.9	8.6	8.7	8.8	8.7	9.3
1.9	1.9	1.9	2.0	2.2	2.4	2.4	2.4	2.6	2.8	2.7	2.9
0.47	0.48	0.47	0.52	0.60	0.68	0.68	0.67	0.71	0.72	0.74	0.81
0.46	0.48	0.48	0.52	0.59	0.66	0.65	0.62	0.62	0.61	0.62	0.68
4.2	4.2	4.2	4.4	4.8	5.3	5.2	4.8	4.7	4.7	4.6	5.0
4.4	4.5	4.6	4.6	4.8	5.0	5.1	5.0	5.0	5.0	5.0	5.3

TABLE 70

Dividends

	1919	1920	1921	1922	1923	1924	1925	1926
Total ($000,000)	2,887	3,216	2,963	3,049	3,839	3,813	4,425	4,725
Agriculture	0.55	0.50	0.54	0.52	0.42	0.39	0.41	0.34
Mining	6.7	6.5	6.5	4.6	5.8	5.6	6.1	6.9
Anth. coal	0.18	0.16	0.30	0.12	0.19	0.22	0.15	0.30
Bit. coal	0.68	0.75	0.91	0.55	0.75	0.55	0.54	0.82
Metal	3.4	2.7	2.4	1.6	2.2	2.2	2.4	1.8
Oil & gas	1.4	1.8	1.6	1.3	1.4	1.3	1.6	2.9
Other	1.0	1.1	1.3	0.96	1.3	1.3	1.4	1.1
Manufacturing	43.7	46.3	44.7	43.0	45.9	43.3	43.2	44.8
Food & tobacco	5.3	6.1	5.4	5.0	5.8	6.5	6.3	5.8
Textile & leather	8.7	8.6	6.8	6.9	6.4	5.3	4.9	4.4
Constr. mat. & furn.	3.2	3.9	3.7	4.0	4.6	4.2	4.2	5.2
Paper	1.6	1.9	1.7	1.1	1.5	0.97	1.4	1.0
Printing	1.2	1.3	1.9	2.2	1.8	1.7	2.0	2.0
Metal	13.2	13.2	13.3	12.1	14.2	16.4	15.1	16.9
Chemical	6.9	7.8	8.7	7.0	7.0	6.4	7.2	7.3
Misc. & rubber	3.6	3.5	3.4	4.5	4.7	1.9	2.1	2.2
Construction	0.53	0.65	1.1	0.99	0.98	0.85	1.3	0.88
Transp. & other pub. util.	18.4	15.1	15.4	18.6	16.6	18.6	18.5	18.3
Electric light & power	2.4	2.2	2.8	4.0	4.2	4.9	5.2	5.2
Mfd. gas	1.5	1.1	0.86	0.73	0.87	1.3	1.1	1.0
Steam rr., Pull., & exp.	8.9	7.3	7.0	7.4	6.6	7.3	6.7	7.1
Street rwy.	1.2	1.0	0.91	1.5	1.2	1.2	1.1	0.99
Water transp.	1.6	0.88	0.61	0.60	0.49	0.35	0.41	0.43
Pipe lines	1.1	0.96	1.2	2.0	1.1	1.2	1.6	1.2
Telephone	1.4	1.3	1.6	2.0	1.9	2.2	2.1	2.1
Telegraph	0.35	0.31	0.33	0.32	0.24	0.25	0.21	0.25
Trade	13.9	11.9	10.8	9.9	9.6	10.2	9.9	10.0
Finance	11.6	12.6	13.8	15.5	13.9	13.3	12.5	11.6
Banking	9.6	9.3	10.5	10.8	8.5	8.6	7.7	7.5
Insurance	0.64	0.60	0.78	1.5	1.0	0.88	0.87	0.91
Real estate	1.4	2.8	2.5	3.3	4.4	3.8	3.9	3.2
Service	1.0	2.5	2.2	1.6	1.8	1.9	2.1	2.2
Miscellaneous	3.6	3.9	4.9	5.4	5.0	5.9	6.0	4.9

TABLE 70

Dividends

1927	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
5,051	5,493	6,300	5,993	4,646	3,016	2,472	3,014	3,770	4,838	4,947	3,486
0.57	0.46	0.19	0.12	0.30	0.20	0.00	0.57	0.50	0.76	0.65	0.63
5.5	4.6	5.8	4.2	3.0	2.7	3.0	5.0	4.9	4.4	6.0	5.9
0.25	0.25	0.25	0.22	0.20	0.20	0.03	0.07	0.07	0.06	0.02	0.02
0.68	0.36	0.43	0.40	0.34	0.22	0.17	0.77	0.29	0.34	0.24	0.25
1.5	1.8	3.1	1.5	0.81	0.37	0.54	0.79	1.1	1.6	2.6	2.2
2.0	1.3	1.1	1.3	0.80	1.2	1.5	2.6	1.9	1.4	1.9	2.0
0.99	0.94	0.93	0.67	0.83	0.70	0.76	0.79	1.5	0.96	1.3	1.4
44.1	45.8	43.5	43.7	40.8	37.1	40.9	42.0	42.0	49.8	49.2	40.5
6.5	6.4	6.4	7.2	7.9	9.7	11.3	10.5	8.9	9.2	8.3	9.9
4.2	4.2	3.4	2.8	2.7	2.5	3.1	3.8	3.0	3.6	3.4	2.4
4.3	4.0	3.5	3.0	2.3	1.6	1.7	2.6	2.5	3.5	3.7	2.3
1.1	1.2	0.91	0.86	0.79	0.68	1.1	1.3	1.2	1.3	1.5	0.76
2.2	1.8	2.1	2.1	2.0	2.0	1.4	2.1	1.9	2.2	1.9	2.1
17.1	17.4	17.7	15.9	13.5	10.0	9.0	12.7	14.1	18.3	19.8	12.1
6.6	9.0	7.7	10.0	9.9	9.3	12.0	7.7	8.3	9.4	8.4	8.3
2.1	1.8	1.9	1.7	1.6	1.4	1.4	1.3	2.0	2.3	2.1	2.6
0.94	0.94	0.95	1.4	0.86	0.64	0.76	0.47	0.55	0.76	0.85	0.84
20.6	19.1	20.4	23.8	26.6	32.3	33.6	27.5	24.7	17.9	19.2	24.4
5.6	6.5	7.1	9.0	11.5	14.3	15.1	10.9	8.8	7.1	8.0	10.8
0.92	0.70	1.1	1.1	1.7	2.9	2.5	1.9	1.7	1.2	1.2	1.7
8.6	6.7	7.0	7.4	5.5	2.5	3.1	4.2	3.4	3.0	3.3	2.4
0.93	0.84	0.77	0.65	0.61	0.59	0.62	0.64	0.57	0.65	0.77	1.0
0.38	0.40	0.45	0.50	0.42	0.41	0.32	0.58	1.5	0.83	0.83	0.87
1.6	1.6	1.8	2.4	2.9	5.2	4.4	3.0	3.8	1.6	1.7	2.5
2.2	2.1	2.0	2.5	3.8	6.2	7.6	6.3	4.8	3.5	3.3	5.1
0.25	0.21	0.33	0.37	0.22	0.10	0.01	0.02	0.12	0.01	0.04	—0.02
9.8	9.1	9.0	8.3	8.3	7.1	7.2	10.2	11.6	13.8	12.6	13.8
10.8	12.0	12.1	11.1	12.8	12.3	8.3	8.7	7.4	5.6	5.8	8.4
7.6	8.0	7.2	7.5	8.8	9.3	6.4	6.2	5.0	4.0	4.1	5.6
1.1	1.2	1.1	1.0	1.3	1.0	0.66	0.75	1.0	0.45	0.43	1.1
2.2	2.8	3.8	2.6	2.6	2.0	1.2	1.7	1.4	1.1	1.3	1.6
2.1	1.8	1.9	1.9	1.6	1.8	1.4	1.5	1.4	2.3	2.4	2.0
5.6	6.2	6.1	5.6	5.8	5.9	4.8	4.0	6.9	4.5	3.3	3.6

TABLE 71

Interest

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*
Total ($000,000)	3,229	3,653	3,872	3,980	4,206	4,374	4,579	4,699
Agriculture	11.1	11.8	12.7	12.8	12.1	11.1	10.0	9.5
Mining	0.72	0.83	0.99	0.84	0.89	1.2	1.2	0.99
Anth. coal	0.18	0.18	0.33	0.19	0.24	0.38	0.28	0.24
Bit. coal	0.22	0.29	0.33	0.29	0.31	0.32	0.33	0.22
Metal	0.14	0.13	0.10	0.10	0.11	0.16	0.18	0.11
Oil & gas	0.11	0.15	0.14	0.15	0.13	0.17	0.22	0.21
Other	0.07	0.08	0.09	0.10	0.10	0.15	0.17	0.21
Manufacturing	2.7	2.9	3.6	2.7	2.8	3.5	3.4	3.2
Food & tobacco	0.78	0.97	0.93	0.77	0.75	0.92	0.95	0.78
Textile & leather	0.40	0.31	0.36	0.30	0.09	0.07	0.10	0.05
Constr. mat. & furn.	0.18	0.18	0.19	0.22	0.22	0.26	0.24	0.25
Paper	0.12	0.10	0.11	0.16	0.19	0.19	0.21	0.26
Printing	0.08	0.05	0.09	0.04	0.03	0.04	0.09	0.11
Metal	0.81	0.77	0.86	0.47	0.92	1.2	1.1	0.97
Chemical	0.01	0.08	0.53	0.31	0.32	0.17	0.46	0.46
Misc. & rubber	0.30	0.47	0.49	0.40	0.27	0.32	0.24	0.35
Construction	0.12	0.14	0.20	0.11	0.14	0.18	0.23	0.24
Transp. & other pub. util.	21.0	19.6	19.4	19.7	19.9	20.4	20.2	20.1
Electric light & power	2.4	2.3	2.4	2.9	3.4	4.1	4.3	4.8
Mfd. gas	0.45	0.43	0.48	0.38	0.36	0.38	0.47	0.56
Steam rr., Publ., & exp.	13.5	12.6	12.3	12.3	11.9	12.0	11.7	11.2
Street rwy.	3.5	3.0	3.0	3.2	3.2	3.0	2.7	2.4
Water transp.	0.30	0.26	0.26	0.25	0.24	0.21	0.17	0.17
Pipe lines	...*	...*	...*	0.01	0.01	0.01	0.01	0.01
Telephone	0.91	0.92	0.92	0.73	0.75	0.75	0.88	0.86
Telegraph	—0.05	—0.04	...*	...*	...*	0.01	0.01	0.02
Trade	1.0	1.1	1.0	0.99	0.52	0.70	0.67	0.52
Finance	25.3	24.2	24.2	24.4	26.7	28.0	30.5	32.3
Insurance	—0.42	—0.46	—0.48	—0.49	—0.47	—0.50	—0.49	—0.48
Real estate	25.7	24.6	24.6	24.9	27.1	28.5	31.0	32.8
Service	0.49	0.41	0.47	0.57	0.66	0.76	0.90	1.0
Government	32.3	34.1	32.7	33.3	31.7	29.3	28.0	27.3
Federal	25.5	27.7	25.7	25.7	23.8	20.9	18.8	17.3
State	—0.18	—0.23	—0.18	—0.01	0.10	0.19	0.31	0.33
County	1.2	1.1	1.2	1.3	1.6	1.8	2.1	2.2
City incl. pub. educ.	5.9	5.5	5.9	6.2	6.3	6.4	6.8	7.4
Miscellaneous	5.3	4.9	4.9	4.6	4.7	4.9	4.9	4.8

* Less than 0.005 per cent.

TABLE 71

Interest

1927	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
4,936	5,273	5,605	5,720	5,712	5,516	4,999	4,848	4,649	4,609	4,689	4,593
9.0	8.4	7.8	7.5	7.3	7.3	7.2	6.9	6.6	6.3	5.9	5.8
0.89	0.80	0.80	0.78	0.73	0.72	0.68	0.72	0.80	0.88	0.76	0.68
0.22	0.21	0.14	0.14	0.16	0.18	0.20	0.21	0.23	0.23	0.19	0.19
0.20	0.17	0.27	0.26	0.22	0.20	0.18	0.16	0.16	0.16	0.14	0.12
0.09	0.07	0.04	0.06	0.08	0.10	0.11	0.09	0.10	0.17	0.14	0.12
0.18	0.18	0.17	0.16	0.17	0.17	0.16	0.20	0.22	0.22	0.19	0.14
0.18	0.17	0.17	0.16	0.10	0.06	0.04	0.05	0.09	0.11	0.10	0.10
3.3	3.5	3.7	4.1	4.1	3.6	3.7	3.3	3.3	3.2	3.0	3.1
0.79	0.80	0.77	0.84	0.79	0.66	0.64	0.59	0.59	0.53	0.56	0.57
0.10	0.14	0.19	0.16	0.13	0.01	—0.02	—0.01	0.04	0.06	0.08	0.07
0.28	0.33	0.40	0.45	0.46	0.33	0.32	0.27	0.24	0.24	0.16	0.15
0.27	0.25	0.27	0.32	0.30	0.30	0.33	0.28	0.24	0.24	0.27	0.23
0.18	0.21	0.23	0.26	0.27	0.26	0.27	0.22	0.18	0.19	0.19	0.21
0.74	0.91	1.1	0.98	0.92	0.90	1.0	1.0	1.1	1.1	1.1	1.1
0.59	0.52	0.46	0.72	0.85	0.91	0.89	0.69	0.66	0.56	0.50	0.56
0.37	0.36	0.32	0.34	0.34	0.26	0.28	0.28	0.23	0.19	0.14	0.14
0.23	0.19	0.24	0.27	0.24	0.19	0.17	0.10	0.03	0.04	0.04	0.04
19.6	18.7	17.3	17.3	17.9	19.3	20.8	20.0	19.9	19.1	18.2	17.7
5.1	5.1	5.0	5.1	5.6	6.2	6.9	6.4	6.4	6.2	5.7	5.8
0.57	0.68	0.67	0.81	0.86	1.1	1.3	1.1	1.0	1.0	0.95	0.95
10.7	10.0	9.1	9.1	9.1	9.2	9.5	9.2	9.0	8.6	8.4	7.6
2.2	2.0	1.8	1.7	1.6	1.7	1.8	1.8	2.0	2.0	1.9	1.9
0.16	0.13	0.11	0.11	0.15	0.20	0.25	0.27	0.33	0.33	0.32	0.35
0.01	0.01	0.01	0.01	0.04	0.05	0.08	0.06	0.08	0.07	0.06	0.04
0.81	0.66	0.56	0.46	0.51	0.77	0.93	0.96	0.92	0.81	0.81	0.84
0.03	0.04	0.04	0.06	0.06	0.07	0.08	0.09	0.11	0.11	0.10	0.10
0.62	0.82	0.99	1.2	1.2	1.1	0.98	0.86	0.69	0.65	0.67	0.68
34.7	37.6	40.4	40.5	40.2	36.8	31.0	30.5	32.1	32.0	31.3	31.1
—0.48	—0.45	—0.57	—0.42	—0.38	—0.38	—0.42	—0.52	—0.57	—0.60	—0.66	—0.67
35.2	38.0	41.0	40.9	40.6	37.2	31.5	31.0	32.7	32.6	31.9	31.7
1.3	1.4	1.6	1.7	1.6	2.0	1.9	1.8	2.3	2.2	2.0	2.0
25.4	23.5	22.6	22.1	22.4	24.7	29.2	32.4	32.0	33.4	35.9	36.8
15.4	13.4	12.0	10.9	10.8	11.7	14.5	17.2	16.9	17.7	19.6	20.5
0.32	0.36	0.37	0.46	0.64	0.85	1.1	1.3	1.3	1.2	1.1	1.0
1.9	1.9	2.2	2.1	1.8	2.0	2.2	2.2	2.2	2.1	1.9	1.8
7.7	7.8	8.0	8.7	9.1	10.2	11.3	11.6	11.7	12.4	13.3	13.5
5.0	5.2	4.6	4.5	4.3	4.3	4.2	3.4	2.3	2.3	2.2	2.2

TABLE 72

Dividends and Interest

	1919	1920	1921	1922	1923	1924	1925	1926
Total ($000,000)	6,116	6,868	6,836	7,029	8,046	8,187	9,004	9,424
Agriculture	6.1	6.5	7.4	7.5	6.5	6.1	5.3	4.9
Mining	3.6	3.5	3.4	2.5	3.2	3.2	3.6	4.0
Anth. coal	0.18	0.17	0.31	0.16	0.22	0.30	0.22	0.27
Bit. coal	0.44	0.50	0.58	0.40	0.52	0.43	0.44	0.52
Metal	1.7	1.3	1.1	0.76	1.1	1.1	1.3	0.97
Oil & gas	0.73	0.91	0.79	0.66	0.73	0.68	0.88	1.5
Other	0.52	0.58	0.61	0.47	0.67	0.70	0.78	0.65
Manufacturing	22.0	23.2	21.4	20.1	23.4	22.1	22.9	24.1
Food & tobacco	2.9	3.4	2.9	2.6	3.2	3.5	3.6	3.3
Textile & leather	4.3	4.2	3.1	3.2	3.1	2.5	2.4	2.2
Constr. mat. & furn.	1.6	1.9	1.7	1.9	2.3	2.1	2.2	2.7
Paper	0.80	0.92	0.78	0.59	0.81	0.55	0.78	0.64
Printing	0.62	0.64	0.89	0.97	0.86	0.80	1.0	1.1
Metal	6.6	6.6	6.2	5.5	7.3	8.3	8.0	8.9
Chemical	3.2	3.7	4.1	3.2	3.5	3.2	3.8	3.9
Misc. & rubber	1.8	1.9	1.8	2.2	2.4	1.1	1.1	1.3
Construction	0.32	0.38	0.59	0.50	0.54	0.49	0.76	0.56
Transp. & other pub. util.	19.8	17.5	17.7	19.2	18.3	19.6	19.4	19.2
Electric light & power	2.4	2.3	2.6	3.4	3.8	4.4	4.7	5.0
Mfd. gas	0.92	0.76	0.65	0.53	0.60	0.79	0.80	0.79
Steam rr., Pull., & exp.	11.3	10.2	10.0	10.2	9.4	9.8	9.2	9.2
Street rwy.	2.4	2.1	2.1	2.5	2.3	2.2	1.9	1.7
Water transp.	0.91	0.55	0.41	0.40	0.36	0.28	0.29	0.30
Pipe lines	0.52	0.45	0.51	0.86	0.55	0.55	0.81	0.59
Telephone	1.2	1.1	1.2	1.3	1.3	1.4	1.5	1.5
Telegraph	0.14	0.12	0.15	0.14	0.12	0.12	0.11	0.14
Trade	7.1	6.2	5.3	4.9	4.9	5.1	5.2	5.3
Finance	18.8	18.8	19.7	20.5	20.6	21.1	21.7	21.9
Banking	4.5	4.3	4.6	4.7	4.0	4.0	3.8	3.8
Insurance	0.08	0.04	0.06	0.36	0.24	0.14	0.18	0.22
Real estate	14.2	14.4	15.1	15.5	16.3	17.0	17.7	17.9
Service	0.73	1.4	1.2	1.0	1.2	1.3	1.5	1.6
Government	17.1	18.2	18.5	18.9	16.6	15.6	14.3	13.6
Federal	13.4	14.7	14.6	14.6	12.4	11.1	9.5	8.6
State	—0.10	—0.12	—0.10	—0.01	0.05	0.10	0.16	0.16
County	0.62	0.59	0.70	0.76	0.81	0.95	1.1	1.1
City incl. pub. educ.	3.1	2.9	3.3	3.5	3.3	3.4	3.5	3.7
Miscellaneous	4.5	4.4	4.9	4.9	4.8	5.4	5.4	4.8

TABLE 72

Dividends and Interest

1927	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
9,987	10,766	11,905	11,713	10,358	8,532	7,471	7,862	8,419	9,447	9,636	8,079
4·7	4·3	3·8	3·7	4·2	4·8	4·8	4·5	3·9	3·5	3·2	3·6
3·2	2·7	3·4	2·5	1·7	1·4	1·5	2·4	2·6	2·7	3·4	2·9
0·24	0·23	0·20	0·18	0·18	0·19	0·14	0·16	0·16	0·14	0·11	0·12
0·44	0·27	0·36	0·33	0·27	0·21	0·18	0·39	0·22	0·25	0·19	0·18
0·83	0·95	1·7	0·82	0·41	0·20	0·25	0·36	0·56	0·92	1·4	1·0
1·1	0·74	0·66	0·75	0·45	0·54	0·62	1·1	0·98	0·84	1·0	0·96
0·59	0·56	0·57	0·42	0·43	0·29	0·28	0·33	0·72	0·54	0·70	0·67
23·9	25·1	24·8	24·3	20·5	15·5	16·0	18·1	20·6	27·1	26·7	19·2
3·7	3·7	3·7	4·1	4·0	3·8	4·2	4·4	4·3	5·0	4·5	4·6
2·2	2·2	1·9	1·5	1·3	0·88	1·0	1·4	1·4	1·9	1·8	1·1
2·3	2·2	2·0	1·7	1·3	0·78	0·76	1·2	1·3	1·9	2·0	1·1
0·70	0·72	0·61	0·60	0·52	0·44	0·59	0·67	0·69	0·77	0·91	0·46
1·2	1·0	1·2	1·2	1·1	0·86	0·66	0·95	0·96	1·2	1·1	1·0
9·0	9·3	9·9	8·6	6·6	4·1	3·6	5·5	6·9	10·0	10·7	5·8
3·6	4·9	4·3	5·5	4·9	3·9	4·6	3·3	4·1	5·1	4·6	3·9
1·3	1·1	1·1	1·1	0·91	0·68	0·64	0·67	1·0	1·3	1·2	1·2
0·59	0·57	0·62	0·86	0·52	0·35	0·37	0·24	0·26	0·41	0·46	0·39
20·1	18·9	19·0	20·6	21·8	23·9	25·0	22·9	22·0	18·5	18·7	20·6
5·3	5·8	6·1	7·1	8·2	9·1	9·6	8·1	7·5	6·7	6·9	8·0
0·75	0·69	0·87	0·98	1·2	1·7	1·7	1·4	1·3	1·1	1·1	1·3
9·7	8·3	8·0	8·2	7·5	6·9	7·4	7·3	6·5	5·8	5·8	5·4
1·6	1·4	1·3	1·2	1·2	1·3	1·4	1·4	1·4	1·3	1·3	1·5
0·27	0·27	0·29	0·31	0·27	0·28	0·27	0·39	0·85	0·58	0·58	0·57
0·81	0·82	0·95	1·2	1·3	1·9	1·5	1·2	1·8	0·87	0·88	1·1
1·5	1·4	1·3	1·5	2·0	2·7	3·1	3·0	2·7	2·2	2·1	2·7
0·14	0·14	0·19	0·22	0·13	0·08	0·06	0·06	0·11	0·06	0·07	0·04
5·3	5·0	5·2	4·8	4·4	3·2	3·0	4·4	5·6	7·4	6·8	6·4
22·6	24·5	25·5	25·4	27·9	28·1	23·5	22·1	21·0	18·5	18·2	21·3
3·8	4·1	3·8	3·8	4·0	3·3	2·1	2·4	2·2	2·1	2·1	2·4
0·31	0·39	0·32	0·32	0·38	0·12	—0·06	—0·03	0·13	—0·06	—0·10	0·10
18·5	20·1	21·3	21·3	23·6	24·7	21·5	19·8	18·7	16·5	16·2	18·7
1·7	1·6	1·7	1·8	1·6	1·9	1·7	1·7	1·9	2·3	2·2	2·0
12·6	11·5	10·6	10·8	12·3	16·0	19·6	20·0	17·7	16·3	17·4	20·9
7·6	6·6	5·6	5·3	6·0	7·6	9·7	10·6	9·3	8·6	9·5	11·6
0·16	0·17	0·17	0·23	0·35	0·55	0·76	0·78	0·70	0·58	0·54	0·60
0·95	0·94	1·1	1·0	1·0	1·3	1·5	1·4	1·2	1·0	0·92	1·0
3·8	3·8	3·7	4·2	5·0	6·6	7·6	7·2	6·5	6·1	6·5	7·7
5·3	5·7	5·4	5·0	5·0	4·8	4·4	3·7	4·4	3·4	2·8	2·8

TABLE 73

Property Income including Rent

	1919	1920	1921	1922	1923	1924	1925	1926
Total ($000,000)	10,082	11,156	11,306	11,925	13,211	13,819	14,470	14,566
Agriculture	3.7	4.0	4.5	4.4	4.0	3.6	3.3	3.2
Mining	2.2	2.2	2.0	1.4	2.0	1.9	2.2	2.6
Anth. coal	0.11	0.10	0.19	0.09	0.13	0.18	0.14	0.18
Bit. coal	0.27	0.31	0.35	0.24	0.31	0.25	0.27	0.34
Metal	1.0	0.82	0.66	0.45	0.67	0.66	0.79	0.63
Oil & gas	0.44	0.56	0.48	0.39	0.44	0.40	0.55	1.0
Other	0.32	0.35	0.37	0.28	0.41	0.42	0.48	0.42
Manufacturing	13.4	14.3	12.9	11.9	14.2	13.1	14.3	15.6
Food & tobacco	1.8	2.1	1.7	1.5	1.9	2.1	2.2	2.1
Textile & leather	2.6	2.6	1.9	1.9	1.9	1.5	1.5	1.4
Constr. mat. & furn.	0.98	1.2	1.0	1.1	1.4	1.2	1.4	1.8
Paper	0.48	0.57	0.47	0.35	0.49	0.33	0.49	0.41
Printing	0.37	0.40	0.54	0.57	0.52	0.47	0.64	0.70
Metal	4.0	4.1	3.8	3.2	4.4	4.9	5.0	5.8
Chemical	2.0	2.3	2.5	1.9	2.1	1.9	2.4	2.5
Misc. & rubber	1.1	1.2	1.1	1.3	1.5	0.63	0.70	0.82
Construction	0.19	0.23	0.36	0.29	0.33	0.29	0.48	0.36
Transp. & other pub. util.	12.0	10.8	10.7	11.3	11.2	11.6	12.0	12.4
Electric light & power	1.5	1.4	1.6	2.0	2.3	2.6	2.9	3.3
Mfd. gas	0.56	0.47	0.39	0.31	0.37	0.47	0.50	0.51
Steam rr., Pull., & exp.	6.9	6.3	6.1	6.0	5.7	5.8	5.7	5.9
Street rwy.	1.5	1.3	1.3	1.5	1.4	1.3	1.2	1.1
Water transp.	0.55	0.34	0.25	0.23	0.22	0.16	0.18	0.19
Pipe lines	0.31	0.28	0.31	0.51	0.33	0.32	0.50	0.38
Telephone	0.71	0.67	0.74	0.75	0.78	0.83	0.92	0.96
Telegraph	0.08	0.08	0.09	0.08	0.07	0.07	0.07	0.09
Trade	4.3	3.8	3.2	2.9	3.0	3.0	3.3	3.4
Finance	50.8	50.0	51.4	53.2	51.6	53.3	51.3	49.5
Banking	2.7	2.7	2.8	2.8	2.5	2.4	2.4	2.4
Insurance	0.05	0.02	0.04	0.21	0.15	0.08	0.11	0.14
Real estate	48.0	47.3	48.6	50.2	49.0	50.8	48.8	46.9
Service	0.44	0.85	0.74	0.60	0.73	0.76	0.92	1.1
Government	10.4	11.2	11.2	11.1	10.1	9.3	8.9	8.8
Federal	8.2	9.1	8.8	8.6	7.6	6.6	5.9	5.6
State	—0.06	—0.08	—0.06	...*	0.03	0.06	0.10	0.11
County	0.38	0.36	0.42	0.45	0.49	0.56	0.67	0.72
City incl. pub. educ.	1.9	1.8	2.0	2.1	2.0	2.0	2.2	2.4
Miscellaneous	2.7	2.7	2.9	2.9	2.9	3.2	3.4	3.1

* Less than 0.005 per cent.

TABLE 73

Property Income including Rent

1927	*1928*	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
15,065	15,707	16,822	15,978	13,385	10,623	9,585	9,767	10,563	11,634	12,215	10,655
3.1	3.0	2.7	2.7	3.2	3.8	3.8	3.6	3.1	2.8	2.5	2.7
2.1	1.9	2.4	1.8	1.3	1.1	1.1	1.9	2.1	2.2	2.7	2.2
0.16	0.16	0.14	0.13	0.14	0.15	0.11	0.13	0.13	0.12	0.08	0.09
0.29	0.18	0.25	0.24	0.21	0.17	0.14	0.32	0.18	0.20	0.15	0.14
0.55	0.65	1.2	0.60	0.32	0.16	0.20	0.29	0.44	0.75	1.1	0.76
0.74	0.50	0.47	0.55	0.35	0.43	0.48	0.91	0.78	0.68	0.82	0.73
0.39	0.38	0.40	0.31	0.33	0.23	0.22	0.27	0.58	0.44	0.55	0.51
15.9	17.2	17.6	17.8	15.9	12.4	12.5	14.6	16.4	22.0	21.1	14.6
2.4	2.5	2.6	3.0	3.1	3.1	3.2	3.5	3.4	4.1	3.6	3.5
1.4	1.5	1.4	1.1	0.99	0.71	0.79	1.2	1.1	1.5	1.4	0.82
1.5	1.5	1.4	1.3	1.0	0.63	0.59	0.94	1.0	1.6	1.6	0.83
0.46	0.50	0.43	0.44	0.40	0.35	0.46	0.54	0.55	0.62	0.72	0.35
0.79	0.70	0.87	0.90	0.83	0.69	0.51	0.77	0.76	0.98	0.84	0.78
6.0	6.4	7.0	6.3	5.1	3.3	2.8	4.4	5.5	8.1	8.5	4.4
2.4	3.3	3.0	4.0	3.8	3.1	3.6	2.7	3.3	4.1	3.6	3.0
0.83	0.75	0.81	0.78	0.70	0.55	0.50	0.54	0.81	1.0	0.92	0.91
0.39	0.39	0.44	0.63	0.40	0.28	0.28	0.20	0.21	0.33	0.36	0.29
13.3	12.9	13.4	15.1	16.9	19.2	19.5	18.4	17.6	15.0	14.8	15.6
3.5	4.0	4.3	5.2	6.4	7.3	7.5	6.6	6.0	5.4	5.4	6.1
0.50	0.47	0.62	0.72	0.94	1.4	1.3	1.1	1.1	0.88	0.85	0.96
6.4	5.7	5.6	6.0	5.8	5.5	5.8	5.9	5.2	4.7	4.6	4.1
1.0	0.96	0.90	0.84	0.90	1.0	1.1	1.1	1.1	1.1	1.0	1.2
0.18	0.18	0.21	0.23	0.21	0.22	0.21	0.32	0.68	0.18	0.46	0.13
0.54	0.56	0.67	0.89	1.0	1.5	1.2	0.96	1.4	0.70	0.69	0.82
1.0	0.96	0.92	1.1	1.5	2.2	2.4	2.4	2.1	1.8	1.7	2.0
0.10	0.10	0.14	0.16	0.10	0.07	0.05	0.05	0.09	0.04	0.06	0.03
3.5	3.5	3.7	3.5	3.4	2.6	2.4	3.6	4.5	6.0	5.4	4.8
48.7	48.3	47.2	45.3	44.2	42.3	40.4	37.3	37.1	33.8	35.4	40.3
2.5	2.8	2.7	2.8	3.1	2.6	1.6	1.9	1.8	1.7	1.6	1.8
0.20	0.26	0.22	0.23	0.29	0.09	—0.05	—0.02	0.11	—0.05	—0.08	0.07
46.0	45.2	44.3	42.3	40.9	39.5	38.8	35.4	35.2	32.2	33.9	38.4
1.1	1.1	1.2	1.3	1.3	1.6	1.3	1.4	1.5	1.8	1.8	1.5
8.3	7.9	7.5	7.9	9.5	12.8	15.3	16.1	14.1	13.2	13.8	15.9
5.1	4.5	4.0	3.9	4.6	6.1	7.6	8.5	7.4	7.0	7.5	8.8
0.10	0.12	0.12	0.17	0.27	0.44	0.60	0.63	0.56	0.47	0.42	0.45
0.63	0.64	0.75	0.76	0.79	1.0	1.2	1.1	0.98	0.83	0.72	0.77
2.5	2.6	2.6	3.1	3.9	5.3	5.9	5.8	5.1	4.9	5.1	5.8
3.5	3.9	3.8	3.7	3.9	3.9	3.5	3.0	3.5	2.8	2.2	2.1

Net Income and Total Payments Originating within Industrial Divisions Percentage Distribution by Type, 1919–1938

TABLES 74–76

The estimates for total manufacturing include and those for manufacturing subdivisions exclude salaries of employees at central administrative offices.

TABLE 74

Net Income Originating, Percentage Distribution by Type

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*	*1927*
1 Agriculture									
Total ($000,000)	10,862	9,077	5,538	5,861	6,729	7,114	7,946	7,534	7,458
Total net savings	20.9	−9.9	−26.1	−15.5	−9.6	−5.0	5.3	−1.5	−1.7
Total payments	79.1	109.9	126.1	115.5	109.6	105.0	94.7	101.5	101.7
Empl. comp.	13.9	19.6	20.9	19.1	18.1	17.2	15.6	17.6	17.2
Entrep. withdr.	61.7	85.4	96.0	87.4	83.7	80.8	73.1	77.8	78.1
Dividends	0.15	0.18	0.29	0.27	0.23	0.21	0.23	0.21	0.39
Interest	3.3	4.7	8.8	8.7	7.6	6.8	5.8	5.9	6.0
2 Mining									
Total ($000,000)	1,723	2,488	1,352	1,456	1,976	1,697	1,887	2,172	1,749
Entrep. net savings	0.47	1.0	−1.4	−0.02	−0.32	−0.24	0.99	1.1	0.41
Corp. net savings	−0.75	5.9	−33.2	−10.5	−14.7	−17.4	−3.7	−4.5	−15.6
Total payments	100.3	93.1	134.6	110.5	115.1	117.7	102.7	103.4	115.2
Wages	76.8	73.0	104.1	86.3	90.7	90.1	74.6	75.8	84.4
Salaries	9.1	8.8	10.7	10.4	9.5	10.4	9.5	9.2	11.0
Entrep. withdr.	1.8	1.6	2.4	2.0	1.6	1.7	1.4	1.2	1.4
Dividends	11.3	8.4	14.3	9.6	11.3	12.5	14.3	15.0	15.9
Interest	1.4	1.2	2.8	2.3	1.9	3.0	2.9	2.1	2.5
3 Manufacturing									
Total ($000,000)	17,083	17,703	9,815	13,455	16,914	15,427	16,880	17,323	16,817
Entrep. net savings	2.6	0.28	−1.9	1.2	1.3	0.56	0.90	0.51	0.47
Corp. net savings	13.5	5.2	−17.9	7.5	8.3	4.9	7.9	6.3	2.6
Total payments	83.9	94.6	119.8	91.3	90.4	94.5	91.2	93.2	96.9
Wages	56.7	65.4	76.0	59.4	60.1	61.5	59.1	59.6	60.1
Salaries	16.3	17.1	24.8	18.5	16.9	18.8	17.6	18.4	20.4
Entrep. withdr.	3.1	3.0	4.1	2.9	2.3	2.4	2.2	2.1	2.2
Dividends	7.4	8.4	13.5	9.7	10.4	10.7	11.3	12.2	13.2
Interest	0.51	0.61	1.4	0.79	0.70	1.0	0.91	0.88	0.98
3a Food and tobacco									
Total ($000,000)	1,896	1,675	1,196	1,570	1,744	1,762	1,744	1,801	1,827
Entrep. net savings	0.24	−3.9	−7.2	0.30	1.0	1.2	0.80	0.90	0.13
Corp. net savings	12.0	−3.7	−17.7	6.4	6.4	7.7	5.9	8.6	4.4
Total payments	87.8	107.6	124.9	93.3	92.6	91.1	93.3	90.5	95.5
Wages	50.1	62.4	72.9	54.5	52.9	51.5	52.1	50.9	51.1
Salaries	18.1	20.8	24.3	19.1	17.9	16.5	16.3	16.1	17.7
Entrep. withdr.	10.1	10.6	11.3	8.0	7.2	6.7	6.3	6.2	6.6
Dividends	8.1	11.7	13.4	9.8	12.8	14.1	16.0	15.2	18.0
Interest	1.3	2.1	3.0	1.9	1.8	2.3	2.5	2.0	2.1

TABLE 74

Net Income Originating, Percentage Distribution by Type

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
7,330	7,708	5,814	4,041	2,821	3,554	4,749	5,380	6,089	6,274	5,157
−3.2	1.0	−23.0	−44.0	−59.2	−13.8	7.2	11.9	17.2	9.9	−1.5
103.2	99.0	123.0	144.0	159.2	113.8	92.8	88.1	82.8	90.1	101.5
17.3	16.7	19.5	21.0	20.7	14.5	11.8	11.9	11.3	12.7	13.9
79.6	76.5	96.0	112.4	124.1	89.1	73.7	70.2	66.2	72.5	82.3
0.34	0.16	0.12	0.35	0.21	0.00	0.36	0.35	0.61	0.51	0.40
6.0	5.7	7.4	10.4	14.2	10.2	7.0	5.7	4.7	4.4	4.9
1,662	1,821	1,319	738	463	513	904	950	1,210	1,440	1,100
0.96	1.4	−1.2	−4.1	−6.8	−4.6	−0.85	−1.0	−0.04	0.43	0.55
−9.3	−9.1	−23.1	−53.2	−66.1	−49.5	−18.4	−22.2	−11.7	−9.6	−14.0
108.3	107.8	124.3	157.2	172.8	154.0	119.3	123.2	111.8	109.2	113.4
78.4	73.4	87.1	111.0	120.0	111.1	84.2	84.7	77.7	74.1	77.3
10.7	10.6	13.4	19.2	23.4	18.8	12.7	13.5	11.6	10.9	12.9
1.4	1.2	1.6	2.5	3.3	2.8	1.6	1.6	1.4	1.3	1.7
15.2	20.1	18.9	18.8	17.6	14.7	16.9	19.5	17.8	20.5	18.6
2.5	2.5	3.4	5.6	8.5	6.7	3.8	3.9	3.4	2.5	2.9
17,949	19,505	14,094	9,307	5,380	7,480	9,984	11,817	14,323	16,237	11,960
0.41	0.30	−0.99	−2.1	−4.1	−0.16	0.25	0.52	0.91	0.37	−0.28
5.2	6.2	−12.3	−30.2	−54.8	−12.5	−4.4	−0.64	1.2	0.80	−2.9
94.3	93.5	113.3	132.3	158.9	112.7	104.2	100.1	97.9	98.8	103.2
56.8	55.9	62.9	72.0	85.8	66.0	63.7	61.9	59.1	62.3	64.5
20.4	20.6	27.9	34.6	44.8	28.2	24.4	21.9	19.3	19.0	23.4
2.0	1.9	2.3	2.9	3.8	2.4	1.8	1.7	1.7	1.6	2.2
14.0	14.1	18.6	20.4	20.8	13.5	12.6	13.4	16.8	15.0	11.8
1.0	1.1	1.7	2.5	3.7	2.5	1.6	1.3	1.0	0.87	1.2
1,966	2,038	1,827	1,439	1,074	1,259	1,611	1,656	1,871	1,826	1,743
0.28	0.12	−0.40	−1.7	−3.0	0.65	2.5	2.5	2.9	0.62	−0.13
7.2	5.7	−2.7	−10.7	−18.6	−2.8	3.8	2.9	2.5	−3.3	−1.9
92.6	94.2	103.1	112.4	121.6	102.1	93.7	94.6	94.6	102.7	102.1
48.7	49.2	52.1	56.4	61.0	53.6	51.9	52.2	49.6	57.6	58.5
17.3	16.8	18.2	20.4	22.6	18.7	16.3	16.6	15.6	16.2	16.8
6.5	6.4	6.5	7.0	7.5	5.2	4.0	3.9	4.2	5.1	5.4
18.0	19.7	23.8	25.5	27.2	22.1	19.7	20.3	23.9	22.4	19.8
2.1	2.1	2.6	3.1	3.4	2.5	1.8	1.7	1.3	1.4	1.5

TABLE 74 (cont.)

Net Income Originating, Percentage Distribution by Type

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*	*1927*
3b Textile and leather									
Total ($000,000)	3,622	3,022	2,339	2,982	3,344	2,642	2,997	2,781	3,164
Entrep. net savings	7.6	0.04	—1.2	2.8	2.3	—0.23	1.2	—0.32	1.1
Corp. net savings	15.2	—5.2	—7.9	8.3	6.7	—2.6	2.8	—2.9	3.5
Total payments	77.3	105.2	109.1	88.8	91.0	102.8	96.0	103.2	95.4
Wages	53.4	76.0	79.8	64.6	66.9	75.2	70.4	76.2	70.5
Salaries	12.6	15.1	15.4	13.1	13.5	16.0	14.6	15.7	14.8
Entrep. withdr.	4.0	4.5	4.8	3.6	3.1	3.8	3.6	3.7	3.2
Dividends	7.0	9.2	8.6	7.1	7.4	7.7	7.2	7.5	6.7
Interest	0.35	0.38	0.60	0.40	0.12	0.12	0.15	0.08	0.16
3c Construction materials and furniture									
Total ($000,000)	1,894	2,332	1,264	1,780	2,352	2,181	2,303	2,382	2,139
Entrep. net savings	2.5	2.3	—2.0	1.6	2.6	1.2	1.4	0.98	0.23
Corp. net savings	9.4	8.5	—10.7	6.4	9.1	3.3	3.6	2.2	—2.2
Total payments	88.1	89.3	112.7	92.0	88.3	95.5	95.0	96.8	101.9
Wages	66.6	68.6	80.9	66.6	65.7	70.6	69.2	68.6	72.2
Salaries	13.3	12.0	19.0	15.2	12.7	14.9	15.1	15.3	16.9
Entrep. withdr.	3.0	3.0	3.6	2.7	2.0	2.2	2.2	2.1	2.0
Dividends	4.9	5.4	8.6	6.9	7.5	7.3	8.1	10.3	10.2
Interest	0.32	0.29	0.58	0.50	0.40	0.52	0.47	0.50	0.65
3d Paper									
Total ($000,000)	383	514	256	339	425	403	446	475	477
Entrep. net savings	1.4	2.0	—1.2	0.39	0.62	0.39	0.55	0.54	0.57
Corp. net savings	13.2	19.6	—23.4	5.7	6.5	7.1	5.8	9.3	8.3
Total payments	85.4	78.4	124.5	94.0	92.9	92.5	93.7	90.1	91.2
Wages	55.9	54.6	79.7	62.1	59.4	62.4	59.8	59.2	57.6
Salaries	15.4	10.9	22.2	18.5	17.2	18.0	17.2	17.5	18.1
Entrep. withdr.	1.3	1.2	1.8	1.2	0.98	0.98	0.90	0.86	0.78
Dividends	11.7	11.0	19.1	10.3	13.4	9.1	13.7	10.0	11.9
Interest	1.0	0.69	1.7	1.9	1.9	2.0	2.2	2.6	2.8
3e Printing and publishing									
Total ($000,000)	729	938	821	944	995	1,071	1,126	1,214	1,225
Entrep. net savings	2.9	2.0	0.64	2.4	1.8	1.6	1.7	1.4	0.96
Corp. net savings	7.5	7.1	1.8	8.1	5.9	6.2	4.8	4.5	2.6
Total payments	89.6	90.9	97.6	89.5	92.4	92.2	93.6	94.1	96.4
Wages	48.2	53.2	52.8	47.5	49.4	48.4	48.0	47.6	47.7
Salaries	30.6	27.2	31.7	30.0	31.7	33.6	33.5	34.5	35.5
Entrep. withdr.	5.6	5.8	5.7	4.7	4.4	4.1	3.8	3.5	3.5
Dividends	4.8	4.5	7.0	7.1	6.8	5.9	7.8	8.0	9.0
Interest	0.35	0.21	0.43	0.15	0.12	0.18	0.35	0.43	0.72

TABLE 74 (cont.)

Net Income Originating, Percentage Distribution by Type

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
2,947	2,992	1,971	1,668	1,076	1,750	1,913	2,193	2,424	2,426	1,938
0.31	—0.09	—4.8	—5.3	—7.6	0.56	—0.45	0.14	1.0	—0.01	—0.01
—0.84	—1.6	—23.7	—25.8	—37.9	1.8	—5.1	—1.4	0.70	—3.7	—5.0
100.5	101.7	128.5	131.0	145.5	97.6	105.6	101.3	98.3	103.7	105.0
72.2	73.3	90.9	93.9	105.5	73.5	80.2	78.2	73.7	79.8	82.2
17.0	17.6	24.4	25.0	28.6	17.1	17.1	15.4	14.6	14.2	15.3
3.3	3.2	4.2	4.1	4.4	2.7	2.4	2.3	2.5	2.5	3.1
7.8	7.2	8.6	7.5	6.9	4.4	6.0	5.2	7.3	7.0	4.3
0.25	0.36	0.47	0.44	0.06	—0.05	—0.04	0.09	0.11	0.16	0.17
2,141	2,172	1,452	757	211	481	730	951	1,322	1,557	1,154
0.48	0.25	—1.9	—5.3	—21.1	—3.2	—1.2	—0.23	0.85	0.77	—0.84
0.71	0.50	—18.5	—49.3	—200.0	—33.7	—15.8	—5.1	0.91	1.1	—0.39
98.8	99.2	120.4	154.6	321.1	136.9	117.0	105.3	98.2	98.1	101.2
68.8	68.5	78.7	97.1	194.9	91.3	78.1	72.9	67.5	69.1	72.4
17.1	17.6	25.2	36.4	86.6	31.0	24.2	19.4	15.2	15.0	18.9
2.0	2.1	2.5	3.4	7.8	2.7	2.2	1.9	1.9	1.8	2.3
10.2	10.0	12.3	14.3	23.2	8.5	10.7	9.9	12.8	11.7	7.1
0.80	1.0	1.8	3.5	8.5	3.3	1.8	1.2	0.82	0.49	0.61
476	498	414	303	183	271	352	377	434	498	367
0.43	0.35	—0.02	—0.51	—1.4	—0.01	0.23	0.20	0.35	0.40	—0.81
5.6	7.2	—5.1	—18.3	—46.6	—6.0	1.2	0.49	2.9	2.7	—6.9
94.0	92.4	105.1	118.8	148.0	106.0	98.6	99.3	96.7	96.9	107.7
57.5	58.0	64.5	70.7	88.8	63.7	60.2	62.6	60.0	61.7	74.4
19.4	19.2	23.1	29.5	37.8	25.5	22.9	20.6	19.4	16.8	22.2
0.74	0.68	0.76	0.89	1.2	0.72	0.61	0.66	0.69	0.67	0.91
13.6	11.5	12.5	12.1	11.3	10.0	11.0	12.5	14.1	15.1	7.2
2.8	3.1	4.4	5.6	9.1	6.1	3.8	3.0	2.6	2.5	2.9
1,308	1,408	1,304	1,052	765	711	828	912	1,007	1,091	1,004
1.3	1.2	0.21	—0.68	—2.2	—0.38	0.43	0.37	0.70	0.29	—0.77
6.6	4.7	—1.7	—6.3	—13.2	—4.0	—3.1	0.61	0.29	—0.34	—1.1
92.1	94.1	101.5	107.0	115.4	104.4	102.6	99.0	99.0	100.0	101.9
45.2	45.2	47.6	51.2	54.1	50.0	49.7	48.9	48.2	48.8	50.7
35.2	35.6	40.0	42.2	47.2	43.1	41.0	38.2	36.3	38.7	39.5
3.2	2.9	2.9	3.1	4.4	4.4	2.9	3.0	3.1	3.1	3.4
7.6	9.4	9.8	9.0	7.8	5.0	7.7	7.9	10.4	8.6	7.4
0.86	0.93	1.2	1.5	1.8	1.9	1.3	0.90	0.86	0.83	0.96

TABLE 74 (cont.)

Net Income Originating, Percentage Distribution by Type

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*	*1927*
3f Metal									
Total ($000,000)	6,175	6,665	2,717	3,793	5,726	5,250	5,862	6,038	5,559
Entrep. net savings	0.93	0.40	—0.79	0.16	0.46	0.35	0.50	0.43	0.25
Corp. net savings	14.3	8.9	—25.7	5.1	10.1	6.5	12.0	9.1	3.6
Total payments	84.8	90.7	126.5	94.8	89.5	93.1	87.5	90.4	96.1
Wages	63.9	68.5	83.2	66.2	64.1	63.1	60.1	61.2	62.3
Salaries	13.6	14.7	26.6	17.7	14.6	16.6	14.7	14.8	17.2
Entrep. withdr.	0.73	0.68	1.0	0.70	0.52	0.57	0.49	0.46	0.47
Dividends	6.2	6.4	14.5	9.7	9.5	11.9	11.4	13.2	15.5
Interest	0.42	0.42	1.2	0.49	0.68	1.0	0.84	0.75	0.65
3g Chemical									
Total ($000,000)	1,030	1,073	559	934	975	999	1,162	1,364	1,073
Entrep. net savings	0.87	—0.66	—2.2	0.10	0.20	0.23	0.41	0.51	0.23
Corp. net savings	11.7	0.34	—15.7	14.8	2.3	10.2	13.4	20.5	0.20
Total payments	87.5	100.3	147.9	85.1	97.5	89.6	86.2	79.0	99.6
Wages	45.0	53.1	63.4	39.9	46.2	42.5	38.8	35.4	44.6
Salaries	21.0	21.5	31.9	19.3	20.9	19.1	16.9	15.6	20.1
Entrep. withdr.	2.2	2.1	3.0	1.7	1.6	1.4	1.3	1.0	1.3
Dividends	19.2	23.3	45.9	23.0	27.4	24.5	27.5	25.3	30.9
Interest	0.04	0.28	3.7	1.3	1.4	2.0	1.8	1.6	2.7
3h Miscellaneous and rubber									
Total ($000,000)	1,151	1,234	487	935	1,145	906	1,015	967	967
Entrep. net savings	1.6	0.86	—2.9	0.74	0.88	0.72	1.1	0.58	0.55
Corp. net savings	21.1	13.5	—47.1	13.7	15.6	9.3	12.5	3.5	2.4
Total payments	77.3	85.7	150.0	85.6	83.5	90.0	86.4	95.9	97.0
Wages	48.6	57.0	91.6	52.1	51.3	60.9	57.8	62.9	62.7
Salaries	17.2	16.5	30.5	15.5	14.2	17.7	17.1	19.1	19.9
Entrep. withdr.	1.6	1.7	3.3	1.6	1.3	1.7	1.5	1.6	1.5
Dividends	9.0	9.1	20.7	14.7	15.8	8.1	9.0	10.7	11.0
Interest	0.83	1.4	3.9	1.7	0.99	1.5	1.1	1.7	1.9
4 Construction									
Total ($000,000)	2,071	2,611	1,860	2,358	3,382	3,713	3,952	4,240	4,036
Entrep. net savings	8.7	2.9	—1.4	1.9	2.4	5.2	5.2	3.7	2.7
Corp. net savings	1.0	0.45	—1.5	0.33	0.67	1.3	1.1	1.3	1.3
Total payments	90.2	96.6	103.0	97.8	97.0	93.4	93.8	95.0	96.0
Wages	65.9	74.9	73.0	69.8	75.7	70.0	67.1	71.7	71.9
Salaries	11.8	11.5	15.8	13.5	10.9	11.6	10.5	12.1	12.3
Entrep. withdr.	11.6	9.3	12.0	13.1	9.1	10.7	14.3	9.9	10.4
Dividends	0.74	0.80	1.7	1.3	1.1	0.87	1.5	0.98	1.2
Interest	0.19	0.19	0.42	0.19	0.18	0.21	0.26	0.26	0.28

TABLE 74 (cont.)

Net Income Originating, Percentage Distribution by Type

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
6,224	7,225	4,797	2,544	987	1,718	2,912	3,837	5,045	6,365	3,775
0.34	0.38	—0.04	—0.71	—2.6	—0.54	—0.15	0.19	0.37	0.36	—0.24
7.6	10.4	—8.9	—39.3	—121.0	—24.3	—5.7	1.2	3.1	3.9	—2.5
92.1	89.3	109.0	140.1	223.7	124.8	105.9	98.6	96.5	95.7	102.7
59.2	57.2	64.2	79.3	125.5	79.9	69.2	65.2	62.5	64.1	67.8
16.4	15.4	23.3	33.3	61.6	28.6	21.4	17.9	15.0	15.0	21.8
0.42	0.38	0.48	0.65	1.1	0.58	0.40	0.38	0.39	0.36	0.59
15.4	15.4	19.8	24.7	30.4	12.9	13.1	13.8	17.6	15.4	11.2
0.77	0.85	1.2	2.1	5.1	2.9	1.7	1.3	1.0	0.83	1.3
1,451	1,610	1,108	582	467	595	754	866	1,065	1,224	952
0.41	0.37	0.06	—0.44	—0.71	0.22	0.45	0.46	0.58	0.42	—0.22
14.5	18.6	—25.8	—93.0	—73.4	—40.2	—11.7	—12.2	—8.3	—0.01	—7.9
85.1	81.0	125.8	193.4	174.2	139.9	111.3	111.8	107.7	99.6	108.1
32.9	33.1	44.6	68.7	67.0	55.7	52.4	48.7	42.9	45.3	52.6
15.3	15.3	22.1	35.5	34.9	25.7	23.7	22.3	18.8	17.4	21.1
0.93	0.88	1.1	1.9	1.6	1.2	1.0	1.0	1.0	0.96	1.2
34.1	30.2	54.2	79.0	59.8	49.9	29.8	36.2	42.6	34.0	30.5
1.9	1.6	3.7	8.4	10.8	7.4	4.4	3.6	2.4	1.9	2.7
961	961	646	504	282	411	562	694	810	874	686
0.29	0.11	—1.8	—2.5	—5.0	—1.1	—0.25	0.51	0.84	0.46	0.16
1.5	—1.9	—30.3	—38.0	—69.4	—16.9	—2.3	1.2	2.1	0.12	—0.85
98.2	101.8	132.2	140.6	174.4	118.0	102.6	98.3	97.1	99.4	100.7
64.3	64.8	79.8	83.0	102.0	75.4	69.4	62.9	61.5	65.3	62.4
20.0	21.2	31.1	36.6	49.0	29.2	22.5	21.7	19.4	19.8	22.4
1.6	1.6	2.1	2.2	2.8	1.7	1.4	1.4	1.4	1.4	1.7
10.4	12.4	16.2	14.9	15.5	8.2	6.9	10.8	13.7	12.2	13.1
1.9	1.9	3.0	3.8	5.1	3.5	2.4	1.6	1.1	0.73	0.96
4,015	4,086	3,377	2,124	1,042	728	875	1,062	1,584	1,842	1,691
2.4	2.4	—1.1	—4.8	—22.5	—21.4	—11.6	—6.6	—2.6	—1.2	—0.08
0.91	0.89	—0.86	—3.3	—12.1	—11.6	—5.3	—2.9	—1.4	—1.0	—0.04
96.6	96.7	101.9	108.1	134.6	133.0	116.9	109.5	104.0	102.3	100.1
72.2	71.6	71.2	74.2	84.2	77.6	73.5	68.2	65.4	67.2	62.6
13.5	12.7	16.0	18.8	26.8	27.5	18.2	16.2	14.3	13.6	13.7
9.5	10.7	11.8	12.6	20.8	24.1	23.0	23.0	21.9	19.1	22.0
1.3	1.5	2.5	1.9	1.8	2.6	1.6	2.0	2.3	2.3	1.7
0.25	0.32	0.45	0.64	0.99	1.2	0.56	0.12	0.12	0.11	0.12

TABLE 74 (cont.)

Net Income Originating, Percentage Distribution by Type

	1919	1920	1921	1922	1923	1924	1925	1926	1927
5 Transportation and other public utilities									
Total ($000,000)	5,963	7,348	6,087	6,215	7,094	7,080	7,564	7,888	7,791
Entrep. net savings	0.14	0.07	—0.03	—0.01	...*	0.01	0.01	0.02	...*
Corp. net savings	2.1	1.4	1.1	3.7	6.3	5.3	8.5	8.7	5.7
Total payments	97.7	98.5	98.9	96.4	93.7	94.7	91.5	91.3	94.3
Wages & salaries	76.4	80.9	78.1	73.6	71.9	71.1	67.3	67.2	67.4
Empl. comp.	77.3	82.0	79.0	74.5	72.8	72.0	68.4	68.2	68.5
Entrep. withdr.	0.18	0.12	0.12	0.12	0.10	0.08	0.08	0.07	0.06
Dividends	8.9	6.6	7.5	9.1	9.0	10.0	10.8	11.0	13.3
Interest	11.4	9.7	12.3	12.6	11.8	12.6	12.2	12.0	12.4
5a Electric light and power									
Total ($000,000)	325	382	410	503	635	730	818	914	1,032
Corp. net savings	11.0	11.8	11.0	13.6	12.1	9.2	9.8	12.0	12.5
Total payments	89.0	88.2	89.0	86.4	87.9	90.8	90.2	88.0	87.5
Wages & salaries	43.0	46.3	45.1	38.6	39.7	40.8	37.9	37.7	35.6
Entrep. withdr.	0.99	0.90	0.83	0.64	0.45	0.36	0.28	0.20	0.15
Dividends	20.9	18.7	20.4	24.5	25.4	25.4	28.1	26.1	27.5
Interest	24.1	22.3	22.7	22.7	22.4	24.3	23.9	24.0	24.2
5b Manufactured gas									
Total ($000,000)	99	114	114	118	143	150	252	210	222
Corp. net savings	—34.7	—20.4	—7.5	0.33	0.95	—11.3	29.7	12.7	15.6
Total payments	134.7	120.4	107.5	99.7	99.1	111.3	70.3	87.3	84.4
Wages & salaries	77.8	74.1	68.7	67.9	65.3	68.0	41.7	51.9	50.6
Dividends	42.3	32.5	22.5	18.9	23.3	32.2	20.0	22.9	21.0
Interest	14.6	13.8	16.3	12.8	10.5	11.1	8.6	12.5	12.7
5c Steam railroads, Pullman, and express									
Total ($000,000)	3,938	4,845	3,815	3,824	4,439	4,266	4,487	4,668	4,465
Corp. net savings	1.5	—0.13	—0.14	2.8	6.4	5.7	8.5	9.2	3.9
Total payments	98.5	100.1	100.1	97.2	93.6	94.3	91.5	90.8	96.1
Wages	62.5	66.4	59.5	55.4	55.7	53.7	51.8	51.5	52.5
Salaries	17.1	17.8	21.5	21.9	19.6	20.4	19.5	19.1	20.1
Empl. comp.	80.9	85.7	82.2	78.5	76.7	75.5	73.0	72.3	74.4
Dividends	6.5	4.9	5.5	5.9	5.7	6.5	6.6	7.2	9.8
Interest	11.1	9.5	12.5	12.8	11.3	12.3	12.0	11.3	11.8
5d Street railways									
Total ($000,000)	528	629	611	625	649	627	619	602	585
Corp. net savings	2.2	3.5	4.6	2.7	4.1	1.3	2.2	1.2	1.6
Total payments	97.8	96.5	95.4	97.3	95.9	98.7	97.8	98.8	98.4
Wages & salaries	69.9	73.8	71.8	69.4	67.7	70.3	70.1	71.9	71.8
Dividends	6.7	5.1	4.4	7.5	7.3	7.5	7.7	7.8	8.0
Interest	21.2	17.6	19.2	20.4	20.9	21.0	20.0	19.1	18.7

* Less than 0.005 per cent.

TABLE 74 (cont.)

Net Income Originating, Percentage Distribution by Type

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
8,046	8,511	7,625	6,366	4,867	4,721	4,855	5,149	5,843	6,212	5,513
0.02	0.02	—0.02	—0.04	—0.05	—0.01	0.02	0.02	0.06	0.07	0.01
8.7	8.9	1.7	—3.2	—9.8	—4.0	—4.5	—4.2	3.6	1.9	—1.6
91.3	91.1	98.3	103.2	109.8	104.0	104.4	104.2	96.3	98.0	101.6
65.0	63.5	65.4	66.4	66.4	62.9	65.9	66.5	65.0	66.9	69.6
66.0	64.5	66.5	67.7	67.8	64.4	67.4	68.1	66.4	68.9	71.4
0.06	0.07	0.08	0.06	0.06	0.05	0.05	0.06	0.05	0.05	0.05
13.0	15.1	18.7	19.4	20.0	17.6	17.0	18.1	14.8	15.3	15.4
12.2	11.4	13.0	16.1	21.9	22.0	20.0	17.9	15.1	13.8	14.7
1,205	1,380	1,452	1,379	1,145	1,029	996	1,042	1,112	1,189	1,143
14.5	15.7	11.6	7.4	1.6	—0.40	1.1	4.7	7.7	6.7	4.8
85.5	84.3	88.4	92.6	98.4	100.4	98.9	95.3	92.3	93.3	95.2
33.3	31.3	31.2	30.6	30.6	30.8	31.6	34.7	35.6	37.5	38.6
0.11	0.09	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07
29.6	32.5	37.0	38.6	37.8	36.2	33.0	31.8	31.0	33.2	33.1
22.5	20.3	20.2	23.3	30.0	33.4	31.3	28.7	25.7	22.4	23.5
191	184	186	155	159	159	152	143	160	182	174
6.5	—11.0	—14.6	—35.7	—39.5	—26.5	—24.8	—35.5	—17.7	—6.8	—11.0
93.5	111.0	114.6	135.7	139.5	126.5	124.8	135.5	117.7	106.8	111.0
55.2	54.7	53.1	51.2	46.5	47.6	53.1	56.7	53.4	49.7	51.9
19.9	36.0	36.5	49.8	54.9	38.2	36.0	44.7	35.2	32.7	34.0
18.4	20.4	25.0	31.7	38.1	40.7	35.7	34.0	29.1	24.4	25.1
4,483	4,653	3,871	2,974	2,090	2,121	2,231	2,410	2,811	2,928	2,416
8.0	8.7	—0.30	—6.8	—11.6	—2.3	—4.2	—1.4	5.1	1.5	—2.6
92.0	91.3	100.3	106.8	111.6	102.3	104.2	101.4	94.9	98.5	102.6
50.5	50.1	51.6	53.2	53.7	50.0	52.2	52.6	52.3	51.3	56.0
19.9	19.2	22.0	25.2	27.0	23.6	23.5	23.3	20.9	21.5	25.1
72.0	70.9	75.5	80.7	83.5	76.3	78.5	78.8	75.6	79.4	84.6
8.2	9.4	11.4	8.6	3.7	3.6	5.6	5.3	5.2	5.7	3.5
11.8	11.0	13.4	17.4	24.4	22.5	20.0	17.3	14.1	13.4	14.5
567	566	523	442	339	302	320	324	345	345	338
1.6	0.51	1.0	—3.3	—12.0	9.4	—8.3	—8.0	—5.8	—7.3	—6.8
98.4	99.5	99.0	103.3	112.0	109.4	108.3	108.0	105.8	107.3	106.8
71.7	72.7	73.2	76.0	79.8	75.3	74.4	72.9	69.9	70.4	69.9
8.2	8.6	7.5	6.5	5.3	5.0	6.0	6.7	9.1	11.0	10.7
18.5	18.2	18.3	20.9	26.9	29.0	27.9	28.5	26.8	25.9	26.3

TABLE 74 (cont.)

Net Income Originating, Percentage Distribution by Type

	1919	1920	1921	1922	1923	1924	1925	1926	1927
5e Water transportation									
Total ($000,000)	589	771	535	470	485	516	507	531	494
Entrep. net savings	1.4	0.71	—0.29	—0.11	0.01	0.12	0.21	0.25	0.03
Corp. net savings	3.7	2.5	—4.6	—3.0	—2.2	—0.94	0.12	0.68	—1.7
Total payments	91.9	96.8	104.9	103.1	102.1	100.8	99.7	99.1	101.7
Wages & salaries	84.2	91.2	98.9	96.2	95.3	95.8	93.8	93.0	95.4
Entrep. withdr.	1.3	0.71	0.71	0.95	0.93	0.61	0.71	0.71	0.72
Dividends	7.8	3.7	3.4	3.9	3.9	2.6	3.6	3.8	3.9
Interest	1.7	1.2	1.9	2.1	2.1	1.8	1.5	1.5	1.6
5f Pipe lines									
Total ($000,000)	66	92	69	97	106	112	134	129	150
Corp. net savings	11.4	29.9	3.6	3.3	22.7	30.0	17.3	24.8	13.8
Total payments	88.6	70.1	96.4	96.7	77.3	70.0	82.7	75.2	86.2
Wages & salaries	40.8	36.6	45.9	31.7	35.7	30.0	28.1	32.1	32.6
Dividends	47.6	33.4	50.3	61.8	41.3	39.7	54.4	42.8	53.4
Interest	0.18	0.12	0.18	0.26	0.38	0.35	0.29	0.25	0.25
5g Telephone									
Total ($000,000)	325	397	433	473	524	566	622	668	701
Corp. net savings	4.4	2.2	5.2	6.5	6.0	5.1	7.9	9.1	8.5
Total payments	95.6	97.8	94.8	93.5	94.0	94.9	92.1	90.9	91.5
Wages & salaries	72.7	77.9	74.4	73.6	73.4	73.8	69.9	69.1	69.0
Empl. comp.	73.6	78.9	75.4	74.6	74.3	74.6	70.7	69.9	69.9
Dividends	12.6	10.3	11.2	12.7	13.6	14.5	15.0	15.0	15.9
Interest	9.4	8.5	8.2	6.1	6.0	5.8	6.5	6.0	5.7
5h Telegraph									
Total ($000,000)	92	118	100	106	113	113	125	136	141
Corp. net savings	12.3	10.6	7.8	15.2	13.4	12.5	15.9	11.0	15.3
Total payments	87.7	89.4	92.2	84.8	86.6	87.5	84.1	89.0	84.7
Wages & salaries	76.7	80.4	80.2	73.6	76.1	76.6	73.9	77.7	72.5
Empl. comp.	78.4	82.1	82.3	75.6	78.3	78.8	76.0	79.7	74.4
Dividends	11.0	8.6	9.9	9.2	8.2	8.3	7.6	8.7	9.1
Interest	—1.7	—1.3	0.09	—0.04	0.16	0.37	0.52	0.63	1.1
6 Trade									
Total ($000,000)	11,111	9,498	6,788	8,964	10,155	9,887	10,482	10,658	10,390
Entrep. net savings	21.8	4.4	—6.7	6.5	8.3	5.0	5.2	3.5	2.8
Corp. net savings	5.6	0.09	—6.8	3.4	4.5	3.1	3.8	2.2	1.7
Total payments	72.5	95.5	113.6	90.1	87.2	91.9	91.1	94.3	95.5
Wages & salaries	48.9	63.7	76.2	63.4	62.9	66.1	66.6	69.7	70.2
Entrep. withdr.	19.8	27.3	32.1	22.9	20.4	21.6	20.0	20.0	20.3
Dividends	3.6	4.0	4.7	3.4	3.6	3.9	4.2	4.4	4.8
Interest	0.30	0.44	0.59	0.44	0.22	0.31	0.29	0.23	0.30

TABLE 74 (cont.)

Net Income Originating, Percentage Distribution by Type

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
519	535	468	376	280	306	341	398	489	564	484
0.23	0.38	—0.38	—0.68	—0.83	—0.13	0.26	0.20	0.77	0.80	0.09
0.72	2.5	—4.8	—8.9	—12.2	—5.7	—5.7	—14.8	—2.9	—1.7	—4.2
99.1	97.2	105.2	109.6	113.0	105.8	105.4	114.6	102.1	100.9	104.1
92.8	89.8	96.4	101.3	103.8	98.6	95.8	96.0	90.4	90.5	94.1
0.74	0.85	0.99	0.88	0.82	0.60	0.58	0.56	0.47	0.44	0.44
4.3	5.3	6.5	5.2	4.4	2.6	5.2	14.2	8.2	7.3	6.2
1.3	1.1	1.4	2.2	3.9	4.0	3.9	3.8	3.1	2.7	3.3
176	205	176	170	134	149	129	126	144	163	135
22.4	20.2	—5.6	—2.9	—41.6	3.2	0.16	—47.6	14.3	17.9	0.77
77.6	79.8	105.6	102.9	141.6	96.8	99.8	147.6	85.7	82.1	99.2
27.5	24.5	24.9	23.3	22.8	20.3	27.2	29.8	28.8	30.0	34.2
49.8	55.0	80.5	78.4	116.7	73.9	70.4	114.9	54.6	50.4	63.6
0.29	0.24	0.20	1.2	2.1	2.6	2.2	3.0	2.3	1.7	1.4
757	840	823	762	646	578	602	619	688	744	739
10.4	11.1	6.1	2.0	—7.2	—9.7	—8.4	—5.6	3.0	2.2	—2.0
89.6	88.9	93.9	98.0	107.2	109.7	108.4	105.6	97.0	97.8	102.0
68.7	69.7	71.9	69.8	70.2	67.6	67.8	67.6	65.6	68.7	71.0
69.6	70.6	72.8	71.0	71.6	69.1	69.4	69.3	67.3	70.4	72.8
15.4	14.7	17.9	23.1	29.1	32.6	31.2	29.4	24.3	22.2	24.0
4.6	3.7	3.2	3.8	6.6	8.1	7.8	6.9	5.4	5.1	5.2
144	149	126	109	74	76	84	86	96	98	84
15.0	4.0	—16.4	—10.1	—16.2	2.5	—1.4	—3.1	4.7	—2.3	—6.8
85.0	96.0	116.4	110.1	116.2	97.5	101.4	103.1	95.3	102.3	106.8
72.6	78.5	93.8	94.5	102.5	87.9	92.0	88.9	86.6	92.0	98.7
74.5	80.6	96.4	97.7	106.7	91.5	95.4	92.2	89.9	95.3	102.6
9.2	14.0	17.5	9.2	4.2	0.43	0.63	5.0	0.27	2.2	—1.0
1.3	1.4	2.5	3.3	5.3	5.5	5.4	5.8	5.2	4.8	5.3
10,840	11,106	9,225	7,410	5,453	6,129	7,354	7,722	8,564	9,157	8,863
3.4	1.5	—6.0	—11.4	—15.9	—2.3	—0.31	—0.03	0.96	0.48	0.39
2.6	0.62	—6.9	—13.3	—19.0	—4.4	—1.1	—0.92	0.14	—0.46	—0.33
94.0	97.8	112.9	124.7	135.0	106.7	101.4	101.0	98.9	100.0	99.9
69.4	72.1	82.9	89.7	94.2	73.6	72.0	71.3	68.3	70.4	70.6
19.6	20.1	23.9	28.9	35.7	29.3	24.7	23.6	22.4	22.4	23.5
4.6	5.1	5.4	5.2	3.9	2.9	4.2	5.7	7.8	6.8	5.4
0.40	0.50	0.74	0.89	1.1	0.80	0.57	0.42	0.35	0.34	0.35

TABLE 74 (cont.)

Net Income Originating, Percentage Distribution by Type

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*	*1927*
7 Finance									
Total ($000,000)	6 899	7,472	7,682	8,259	8,794	9,601	9,740	9,816	10,312
Corp. net savings	4.1	1.3	—0.10	0.31	—0.16	0.79	0.84	1.4	3.0
Total payments	95.9	98.7	100.1	99.7	100.2	99.2	99.2	98.6	97.0
Wages & salaries	20.0	22.1	22.5	21.1	20.7	20.6	20.8	22.8	23.6
Entrep. withdr.	1.8	2.0	1.9	1.8	2.0	2.0	2.2	2.3	2.3
Dividends	4.9	5.4	5.3	5.7	6.0	5.3	5.7	5.6	5.3
Interest	11.8	11.8	12.2	11.7	12.8	12.7	14.3	15.5	16.6
Rent	57.5	57.4	58.2	59.3	58.7	58.7	56.1	52.4	49.3
7a Banking									
Total ($000,000)	868	958	921	924	971	1,035	1,132	1,181	1,282
Corp. net savings	24.2	19.6	10.9	8.7	10.2	12.5	16.3	15.6	17.6
Total payments	75.8	80.4	89.1	91.3	89.8	87.5	83.7	84.4	82.4
Wages & salaries	44.0	49.3	55.2	55.8	56.3	56.0	53.4	54.3	52.6
Dividends	31.8	31.1	33.9	35.5	33.5	31.5	30.3	30.1	29.8
7b Insurance									
Total ($000,000)	706	727	742	784	777	866	1,032	1,127	1,288
Corp. net savings	6.3	—8.9	—11.8	—12.0	—13.5	—12.5	—1.9	—4.1	2.3
Total payments	93.7	108.9	111.8	112.0	113.5	112.5	104.9	104.1	97.7
Wages & salaries	75.8	88.3	91.8	89.9	88.7	89.3	82.8	82.2	77.1
Entrep. withdr.	17.2	20.3	19.5	18.9	22.3	21.9	20.5	20.1	18.2
Dividends	2.6	2.7	3.1	5.7	5.1	3.9	3.7	3.8	4.2
Interest	—1.9	—2.3	—2.5	—2.5	—2.6	—2.5	—2.2	—2.0	—1.8
7c Real estate									
Total ($000,000)	5,325	5,787	6,019	6,552	7,046	7,699	7,577	7,508	7,742
Corp. net savings	0.50	—0.46	—0.34	0.61	—0.12	0.70	—0.68	0.02	0.66
Total payments	99.5	100.5	100.3	99.4	100.1	99.3	100.7	100.0	99.3
Wages & salaries	8.7	9.3	9.0	8.0	8.2	8.1	7.5	9.0	9.9
Dividends	0.76	1.5	1.2	1.5	2.4	1.9	2.3	2.0	1.4
Interest	15.6	15.5	15.9	15.1	16.2	16.2	18.7	20.5	22.4
Rent	71.5	74.1	74.3	74.7	73.3	73.1	72.1	68.5	65.6
8 Service									
Total ($000,000)	6,129	6,853	6,652	7,383	8,260	8,644	9,306	10,114	10,318
Entrep. net savings	17.6	12.1	10.6	5.2	9.7	6.6	6.3	10.2	5.9
Corp. net savings	0.80	0.08	—0.38	0.35	0.52	0.51	0.60	0.23	—0.06
Total payments	81.6	87.9	89.7	94.5	89.8	92.9	93.1	89.6	94.2
Wages & salaries	53.1	59.4	63.2	60.9	59.6	60.6	59.3	58.4	61.6
Entrep. withdr.	27.7	27.0	25.3	32.6	29.0	31.1	32.4	29.7	31.0
Dividends	0.47	1.2	0.99	0.66	0.82	0.82	0.99	1.0	1.0
Interest	0.26	0.22	0.27	0.31	0.34	0.38	0.44	0.47	0.61

TABLE 74 (cont.)

Net Income Originating, Percentage Distribution by Type

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
10,871	11,135	9,762	7,591	5,494	4,834	5,035	5,731	6,113	6,651	6,551
3.7	0.63	—4.0	—12.4	—21.1	—19.8	—13.1	—5.9	—0.65	—0.36	—1.7
96.3	99.4	104.0	112.4	121.1	119.8	113.1	105.9	100.6	100.4	101.7
24.3	25.7	27.2	31.4	35.8	36.1	36.9	34.1	33.0	31.9	32.8
2.3	2.3	2.6	3.0	3.6	3.7	3.8	3.5	3.3	3.4	3.3
6.1	6.9	6.8	7.8	6.7	4.2	5.2	4.8	4.4	4.3	4.4
18.2	20.4	23.7	30.3	36.9	32.1	29.4	26.1	24.1	22.0	21.8
45.5	44.2	43.7	39.9	38.1	43.7	37.9	37.4	35.8	38.8	39.3
1,401	1,390	1,139	735	415	290	490	709	882	875	814
18.5	14.6	—2.0	—43.1	101.3	—119.2	—39.2	2.9	19.3	15.4	8.2
81.5	85.4	102.0	143.1	201.3	219.2	139.2	97.1	80.7	84.6	91.8
50.2	52.6	62.6	87.2	133.8	164.8	101.0	70.5	58.7	61.7	67.7
31.3	32.8	39.4	55.9	67.5	54.4	38.2	26.5	22.0	22.9	24.1
1,436	1,484	1,327	1,161	937	865	1,041	1,105	1,145	1,273	1,275
6.1	3.7	—7.4	—14.7	—19.7	—16.6	—2.3	—2.2	0.03	3.1	1.8
93.9	96.3	107.4	114.7	119.7	116.6	102.3	102.2	100.0	96.9	98.2
73.9	76.2	85.6	91.5	97.7	96.7	84.2	83.0	82.9	80.0	80.5
17.1	17.5	19.1	19.8	20.9	20.4	18.4	18.2	17.6	17.7	17.0
4.6	4.7	4.6	5.2	3.3	1.9	2.2	3.4	1.9	1.7	3.0
—1.7	—2.2	—1.8	—1.9	—2.2	—2.5	—2.4	—2.4	—2.4	—2.4	—2.4
8,034	8,261	7,296	5,696	4,141	3,678	3,503	3,917	4,086	4,503	4,463
0.71	—2.3	—3.7	—8.0	—13.4	—12.7	—12.6	—8.5	—5.1	—1.4	—4.4
99.3	102.3	103.7	108.0	113.4	112.7	112.6	108.5	105.1	104.4	104.4
10.9	12.0	11.0	12.0	12.0	11.7	13.9	13.7	13.5	12.5	12.8
1.9	2.9	2.1	2.1	1.4	0.82	1.4	1.3	1.3	1.4	1.3
25.0	27.8	32.1	40.7	49.5	42.8	42.9	38.8	36.8	33.2	32.7
61.5	59.5	58.5	53.1	50.5	57.5	54.1	54.7	53.5	57.3	57.7
10,680	11,290	10,412	8,727	6,398	5,772	6,752	7,364	8,298	9,130	8,872
6.0	4.6	3.7	—1.2	—14.6	—17.6	—4.9	—2.6	1.3	—0.54	2.5
0.06	0.13	—0.77	—2.4	—7.4	—6.2	—3.5	—2.9	—2.4	—1.9	—1.9
94.0	95.3	97.1	103.5	122.1	123.7	108.4	105.5	101.1	102.4	99.5
60.2	61.1	61.4	63.9	69.0	67.9	65.1	65.1	63.9	64.8	63.2
32.1	32.4	33.7	37.8	50.5	53.6	41.3	38.3	34.6	35.2	34.4
0.93	1.0	1.1	0.84	0.85	0.59	0.68	0.74	1.4	1.3	0.78
0.68	0.77	0.95	1.1	1.7	1.7	1.3	1.4	1.2	1.0	1.0

TABLE 74 (concl.)

Net Income Originating, Percentage Distribution by Type

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*	*1927*
9 Government									
Total ($000,000)	3,768	7,018	6,206	6,136	7,042	7,278	7,365	8,114	8,484
Net savings	—34.6	27.0	15.4	13.9	22.9	23.6	21.9	26.5	27.0
Total payments	134.6	73.0	84.6	86.1	77.1	76.4	78.1	73.5	73.0
Wages & salaries	96.8	48.2	55.3	55.6	50.4	51.3	53.5	51.1	51.6
Empl. comp.	106.9	55.2	64.2	64.5	58.2	58.8	60.7	57.7	58.2
Interest	27.7	17.8	20.4	21.6	18.9	17.6	17.4	15.8	14.8
10 Miscellaneous									
Total ($000,000)	2,245	2,341	1,954	2,303	2,723	2,782	3,072	3,248	3,258
Entrep. net savings	7.0	5.4	5.2	1.1	3.2	1.9	1.7	3.4	1.6
Corp. net savings	8.3	3.0	—7.5	3.5	4.2	2.6	4.4	3.6	1.5
Total payments	84.7	91.5	102.3	95.4	92.6	95.5	93.9	93.0	96.9
Wages & salaries	61.0	65.4	70.8	65.9	65.8	66.2	64.6	66.2	67.3
Entrep. withdr.	11.6	13.1	14.4	14.5	12.5	13.5	13.4	12.7	13.4
Dividends	4.6	5.4	7.4	7.1	7.0	8.1	8.6	7.1	8.7
Interest	7.6	7.6	9.6	8.0	7.2	7.7	7.3	6.9	7.5

TABLE 74 (concl.)

Net Income Originating, Percentage Distribution by Type

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
8,290	8,874	8,920	7,410	6,175	7,504	8,188	7,504	8,216	10,724	10,816
22.9	25.1	23.6	4.6	−14.7	−1.5	−7.0	−23.1	−26.7	4.6	−1.6
77.1	74.9	76.4	95.4	114.7	101.5	107.0	123.1	126.7	95.4	101.6
55.2	53.8	55.0	67.3	77.9	58.2	55.0	65.3	64.9	52.2	54.2
62.2	60.7	62.2	78.1	92.6	82.0	87.9	103.3	108.0	79.7	86.0
15.0	14.2	14.2	17.2	22.1	19.5	19.2	19.8	18.7	15.7	15.6
3,654	3,867	2,596	1,855	1,454	1,435	2,115	2,629	3,012	3,179	3,013
1.3	0.76	0.31	−1.7	−7.0	−6.4	−1.7	−1.0	−0.30	−0.61	−0.19
7.6	7.3	−28.5	−61.0	−70.1	−62.7	−19.3	−7.9	−3.4	−5.3	−5.6
91.2	91.9	128.2	162.6	177.0	169.1	121.1	108.9	103.7	106.0	105.8
61.7	62.3	87.0	111.1	119.1	117.4	88.2	78.2	76.7	80.2	80.1
12.7	12.9	18.4	23.7	29.5	28.6	19.3	16.7	16.2	17.3	18.3
9.3	10.0	12.9	14.6	12.2	8.3	5.4	9.9	7.3	5.2	4.1
7.5	6.7	9.9	13.3	16.3	14.8	8.2	4.1	3.5	3.2	3.3

TABLE 75

Total Payments including Entrepreneurial Savings
Percentage Distribution by Type

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*	*1927*
1 Construction									
Total ($000,000)	2,049	2,599	1,888	2,350	3,359	3,663	3,910	4,185	3,985
Wages & salaries	78.5	86.7	87.4	83.5	87.2	82.7	78.5	85.0	85.3
Entrep. net income	20.6	12.3	10.4	15.0	11.5	16.2	19.7	13.8	13.3
Property income	0.94	0.99	2.1	1.5	1.3	1.1	1.8	1.3	1.5
2 Trade									
Total ($000,000)	10,487	9,190	7,250	8,657	9,695	9,581	10,088	10,422	10,217
Wages & salaries	51.8	63.8	71.3	65.6	65.9	68.2	69.3	71.2	71.4
Entrep. net income	44.1	31.8	23.7	30.4	30.1	27.4	26.1	24.0	23.5
Property income	4.1	4.5	5.0	3.9	4.0	4.4	4.7	4.8	5.1
3 Service									
Total ($000,000)	6,080	6,847	6,677	7,357	8,217	8,600	9,251	10,091	10,325
Wages & salaries	53.6	59.4	63.0	61.1	59.9	60.9	59.7	58.5	61.5
Entrep. net income	45.7	39.1	35.8	37.9	38.9	37.9	38.9	40.0	36.8
Property income	0.74	1.4	1.3	0.97	1.2	1.2	1.4	1.5	1.6
4 Miscellaneous									
Total ($000,000)	2,059	2,271	2,101	2,223	2,609	2,710	2,936	3,131	3,209
Wages & salaries	66.5	67.4	65.9	68.3	68.7	68.0	67.6	68.7	68.4
Entrep. net income	20.2	19.2	18.2	16.1	16.4	15.8	15.8	16.8	15.1
Property income	13.3	13.4	15.8	15.6	14.9	16.2	16.6	14.6	16.5

For agriculture, the percentage distribution is identical with that of net income originating since savings are all considered entrepreneurial; for real estate, it is identical with that for total payments excluding entrepreneurial savings since the latter were not estimated.

TABLE 75

Total Payments including Entrepreneurial Savings Percentage Distribution by Type

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
3,978	4,049	3,406	2,195	1,169	812	922	1,093	1,606	1,861	1,692
86.4	85.0	86.5	90.0	99.0	91.2	87.0	82.1	78.6	80.0	76.3
12.0	13.2	10.6	7.5	—1.5	2.4	10.9	15.9	19.0	17.7	21.9
1.5	1.8	2.9	2.1	2.5	3.4	2.1	2.0	2.4	2.4	1.9
10,562	11,037	9,866	8,395	6,491	6,395	7,137	7,793	8,552	9,199	8,892
71.2	72.6	77.5	79.2	79.1	70.6	71.2	70.6	68.4	70.1	70.4
23.7	21.8	16.8	15.5	16.6	25.9	24.1	23.4	23.4	22.7	23.8
5.1	5.6	5.7	5.4	4.2	3.6	4.7	6.0	8.2	7.1	5.8
10,673	11,275	10,492	8,934	6,875	6,129	6,992	7,576	8,197	9,299	9,042
60.3	61.1	60.9	62.1	64.2	63.9	62.9	63.3	62.4	63.6	62.0
38.1	37.0	37.1	35.7	33.4	33.9	35.2	34.6	35.0	34.1	36.2
1.6	1.8	2.0	1.9	2.4	2.1	1.9	2.1	2.5	2.3	1.8
3,378	3,583	3,335	2,986	2,472	2,336	2,501	2,836	3,115	3,348	3,183
66.8	67.3	67.7	69.0	70.0	72.1	73.6	72.5	74.2	76.2	75.8
15.1	14.8	14.5	13.7	13.2	13.7	14.7	14.5	15.4	15.9	17.2
18.1	18.0	17.7	17.3	16.7	14.2	11.7	12.9	10.4	8.0	7.0

TABLE 76

Total Payments excluding Entrepreneurial Savings Percentage Distribution by Type

	1919	1920	1921	1922	1923	1924	1925	1926	1927
1 Agriculture									
Total ($000,000)	8,587	9,975	6,981	6,768	7,374	7,471	7,526	7,649	7,582
Empl. comp.	17.6	17.8	16.6	16.6	16.5	16.4	16.5	17.3	16.9
Entrep. withdr.	78.0	77.7	76.2	75.6	76.3	76.9	77.1	76.6	76.9
Dividends	0.19	0.16	0.23	0.24	0.22	0.20	0.24	0.21	0.38
Interest	4.2	4.3	7.0	7.5	6.9	6.5	6.1	5.9	5.9
Net savings	26.5	−9.0	−20.7	−13.4	−8.7	−4.8	5.6	−1.5	−1.6
2 Mining									
Total ($000,000)	1,728	2,315	1,821	1,610	2,273	1,997	1,937	2,246	2,016
Wages	76.6	78.5	77.6	78.0	78.8	76.6	72.7	73.4	73.2
Salaries	9.0	9.4	8.0	9.4	8.3	8.8	9.3	8.9	9.6
Entrep. withdr.	1.8	1.7	1.8	1.8	1.4	1.4	1.4	1.1	1.2
Dividends	11.3	9.1	10.6	8.6	9.8	10.6	13.9	14.5	13.8
Interest	1.3	1.3	2.1	2.1	1.6	2.6	2.8	2.1	2.2
Entrep. net savings	0.47	1.1	−1.1	−0.02	−0.28	−0.20	0.96	1.1	0.36
Corp. net savings	−0.75	6.4	−24.7	−9.5	−12.8	−14.8	−3.6	−4.4	−13.6
3 Manufacturing									
Total ($000,000)	14,340	16,740	11,760	12,285	15,289	14,578	15,396	16,143	16,296
Wages	67.5	69.2	63.4	65.1	66.5	65.1	64.8	63.9	62.1
Salaries	19.4	18.1	20.7	20.2	18.7	19.9	19.3	19.7	21.0
Entrep. withdr.	3.6	3.2	3.4	3.2	2.5	2.6	2.4	2.3	2.2
Dividends	8.8	8.9	11.3	10.7	11.5	11.3	12.4	13.1	13.7
Interest	0.60	0.64	1.2	0.86	0.77	1.1	1.0	0.94	1.0
Entrep. net savings	3.1	0.29	−1.6	1.3	1.4	0.59	0.98	0.55	0.48
Corp. net savings	16.1	5.5	−15.0	8.3	9.2	5.2	8.7	6.8	2.7
3a Food and tobacco									
Total ($000,000)	1,664	1,802	1,494	1,465	1,615	1,605	1,627	1,630	1,744
Wages	57.1	58.0	58.4	58.4	57.1	56.6	55.9	56.3	53.5
Salaries	20.6	19.3	19.4	20.4	19.3	18.1	17.5	17.8	18.5
Entrep. withdr.	11.5	9.8	9.1	8.5	7.7	7.3	6.7	6.9	6.9
Dividends	9.3	10.9	10.7	10.5	13.8	15.5	17.2	16.8	18.8
Interest	1.5	2.0	2.4	2.1	2.0	2.5	2.7	2.2	2.2
Entrep. net savings	0.28	−3.6	−5.8	0.32	1.1	1.3	0.86	1.0	0.13
Corp. net savings	13.6	−3.4	−14.2	6.8	6.9	8.5	6.4	9.5	4.6

TABLE 76

Total Payments excluding Entrepreneurial Savings
Percentage Distribution by Type

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
7,567	7,631	7,149	5,821	4,492	4,015	4,409	4,741	5,044	5,650	5,510
16.8	16.8	15.9	14.6	13.0	12.8	12.7	13.5	13.7	14.1	13.7
77.1	77.3	78.0	78.0	78.0	78.3	79.4	79.6	79.9	80.5	81.1
0.33	0.16	0.10	0.24	0.13	0.0	0.39	0.10	0.73	0.57	0.40
5.8	5.7	6.0	7.2	8.9	8.9	7.6	6.5	5.7	4.9	4.8
—3.1	1.0	—18.7	—30.6	—37.2	—12.1	7.7	13.5	20.7	11.0	—1.5
1,800	1,962	1,640	1,161	801	791	1,078	1,171	1,352	1,573	1,247
72.4	68.1	70.1	70.6	69.4	72.1	70.7	68.8	69.5	67.8	68.2
9.9	9.9	10.8	12.2	13.6	12.2	10.7	10.9	10.4	9.9	11.4
1.3	1.1	1.3	1.6	1.9	1.8	1.4	1.3	1.2	1.2	1.5
14.1	18.6	15.2	11.9	10.2	9.5	14.0	15.8	15.9	18.8	16.4
2.3	2.3	2.7	3.6	4.9	4.3	3.2	3.2	3.0	2.3	2.5
0.88	1.3	—0.96	—2.6	—3.9	—3.0	—0.71	—0.81	—0.03	0.39	0.49
—8.6	—8.5	—18.6	—33.8	—38.2	—32.1	—15.3	—18.0	—10.5	—8.8	—12.3
16,935	18,237	15,972	12,315	8,550	8,429	10,402	11,831	14,015	16,048	12,339
60.2	59.8	55.5	51.4	54.0	58.6	61.2	61.8	60.4	63.0	62.6
21.6	22.0	24.6	26.1	28.2	25.0	23.4	21.9	19.7	19.3	22.7
2.2	2.0	2.0	2.2	2.4	2.2	1.7	1.7	1.7	1.7	2.1
14.9	15.0	16.4	15.4	13.1	12.0	12.1	13.4	17.2	15.2	11.5
1.1	1.1	1.5	1.9	2.3	2.2	1.6	1.3	1.0	0.88	1.1
0.43	0.32	—0.87	—1.6	—2.6	—0.15	0.24	0.52	0.93	0.37	—0.27
5.6	6.6	—10.9	—22.8	—34.5	—11.1	—4.3	—0.64	1.3	0.81	—2.8
1,819	1,919	1,884	1,617	1,306	1,286	1,510	1,566	1,770	1,876	1,779
52.6	52.2	50.5	50.2	50.2	52.4	55.4	55.2	52.4	56.1	57.3
18.6	17.8	17.6	18.1	18.6	18.3	17.4	17.6	16.5	15.8	16.5
7.0	6.8	6.3	6.2	6.1	5.1	4.3	4.1	4.5	5.0	5.3
19.4	20.9	23.1	22.7	22.4	21.7	21.0	21.4	25.2	21.8	19.4
2.3	2.2	2.6	2.8	2.8	2.5	1.9	1.7	1.4	1.4	1.5
0.30	0.13	—0.38	—1.5	—2.5	0.64	2.7	2.7	3.0	0.60	—0.12
7.7	6.1	—2.6	—9.5	—15.3	—2.7	4.1	3.1	2.6	—3.3	—1.9

TABLE 76 (cont.)

Total Payments excluding Entrepreneurial Savings
Percentage Distribution by Type

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*	*1927*
3b Textile and leather									
Total ($000,000)	2,800	3,178	2,552	2,649	3,045	2,717	2,875	2,870	3,019
Wages	69.1	72.3	73.2	72.7	73.5	73.1	73.1	73.9	73.9
Salaries	16.3	14.4	14.1	14.8	14.9	15.6	15.3	15.2	15.5
Entrep. withdr.	5.1	4.3	4.4	4.1	3.4	3.7	3.7	3.6	3.4
Dividends	9.0	8.7	7.9	8.0	8.1	7.5	7.5	7.3	7.0
Interest	0.46	0.36	0.55	0.45	0.13	0.12	0.16	0.08	0.16
Entrep. net savings	9.8	0.04	—1.1	3.2	2.5	—0.22	1.3	—0.31	1.2
Corp. net savings	19.6	—5.0	—7.2	9.4	7.3	—2.5	2.9	—2.8	3.6
3c Construction materials and furniture									
Total ($000,000)	1,668	2,081	1,425	1,638	2,078	2,083	2,187	2,306	2,180
Wages	75.6	76.8	71.8	72.4	74.4	73.9	72.8	70.9	70.8
Salaries	15.1	13.4	16.9	16.5	14.4	15.6	15.9	15.8	16.6
Entrep. withdr.	3.4	3.4	3.2	3.0	2.3	2.3	2.3	2.1	1.9
Dividends	5.6	6.0	7.6	7.5	8.5	7.6	8.5	10.6	10.0
Interest	0.36	0.32	0.51	0.55	0.45	0.54	0.50	0.52	0.63
Entrep. net savings	2.9	2.5	—1.8	1.8	2.9	1.3	1.5	1.0	0.23
Corp. net savings	10.7	9.5	—9.5	6.9	10.3	3.5	3.8	2.3	—2.1
3d Paper									
Total ($000,000)	327	427	319	318	395	373	418	428	435
Wages	65.5	69.7	64.0	66.1	64.0	67.4	63.8	65.7	63.2
Salaries	18.1	13.9	17.8	19.7	18.5	19.4	18.3	19.4	19.9
Entrep. withdr.	1.5	1.5	1.5	1.3	1.1	1.1	0.97	0.95	0.85
Dividends	13.7	14.0	15.3	11.0	14.4	9.9	14.6	11.1	13.0
Interest	1.2	0.88	1.3	2.0	2.1	2.2	2.3	2.8	3.1
Entrep. net savings	1.7	2.6	—0.93	0.41	0.67	0.42	0.59	0.60	0.63
Corp. net savings	15.5	25.0	—18.8	6.0	7.0	7.6	6.2	10.4	9.1
3e Printing									
Total ($000,000)	653	853	802	845	920	988	1,054	1,142	1,181
Wages	53.9	58.5	54.1	53.1	53.5	52.5	51.3	50.6	49.5
Salaries	34.2	29.9	32.5	33.6	34.3	36.4	35.8	36.7	36.8
Entrep. withdr.	6.2	6.4	5.8	5.3	4.7	4.5	4.1	3.8	3.6
Dividends	5.4	4.9	7.1	7.9	7.4	6.4	8.4	8.5	9.3
Interest	0.39	0.23	0.44	0.16	0.13	0.20	0.37	0.46	0.75
Entrep. net savings	3.3	2.2	0.65	2.7	1.9	1.7	1.8	1.5	1.0
Corp. net savings	8.4	7.8	1.8	9.0	6.3	6.7	5.1	4.8	2.7

TABLE 76 (cont.)

Total Payments excluding Entrepreneurial Savings
Percentage Distribution by Type

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
2,963	3,044	2,532	2,185	1,565	1,708	2,020	2,221	2,382	2,515	2,035
71.8	72.1	70.7	71.7	72.5	75.3	75.9	77.2	75.0	77.0	78.2
16.9	17.3	19.0	19.1	19.7	17.5	16.2	15.3	14.9	13.7	14.5
3.3	3.2	3.2	3.1	3.0	2.8	2.2	2.3	2.6	2.4	2.9
7.8	7.1	6.7	5.7	4.8	4.5	5.7	5.2	7.4	6.8	4.1
0.25	0.35	0.37	0.33	0.04	—0.05	—0.03	0.09	0.12	0.15	0.16
0.31	—0.09	—3.7	—4.0	—5.2	0.58	—0.42	0.14	1.1	—0.01	—0.01
—0.83	—1.6	—18.4	—19.7	—26.0	1.8	—4.9	—1.4	0.71	—3.5	—4.8
2,116	2,156	1,748	1,171	676	658	854	1,001	1,299	1,527	1,168
69.6	69.1	65.4	62.8	60.7	66.7	66.7	69.2	68.7	70.5	71.5
17.3	17.7	20.9	23.5	27.0	22.7	20.7	18.5	15.5	15.3	18.7
2.1	2.1	2.1	2.2	2.4	2.0	1.8	1.8	1.9	1.8	2.3
10.3	10.1	10.2	9.2	7.2	6.2	9.2	9.4	13.1	11.9	7.0
0.81	1.0	1.5	2.2	2.7	2.4	1.5	1.1	0.84	0.50	0.60
0.48	0.25	—1.6	—3.4	—6.6	—2.3	—1.0	—0.22	0.87	0.78	—0.83
0.72	0.51	—15.3	—31.9	—62.3	—24.6	—13.5	—4.8	0.93	1.1	—0.38
448	461	435	360	272	288	347	374	420	482	395
61.2	62.7	61.3	59.5	60.0	60.0	61.1	63.0	62.0	63.7	69.1
20.6	20.8	21.9	24.9	25.5	24.0	23.2	20.7	20.1	17.4	20.6
0.79	0.73	0.72	0.75	0.78	0.68	0.62	0.66	0.71	0.70	0.84
14.5	12.4	11.9	10.2	7.6	9.5	11.2	12.6	14.6	15.6	6.7
2.9	3.3	4.2	4.7	6.1	5.8	3.9	3.0	2.6	2.6	2.7
0.46	0.38	—0.02	—0.43	—0.97	—0.01	0.24	0.20	0.36	0.42	—0.76
5.9	7.8	—4.8	—15.4	—31.5	—5.7	1.2	0.50	3.0	2.8	—6.4
1,205	1,324	1,323	1,125	883	742	850	903	997	1,092	1,023
49.1	48.1	46.9	47.8	46.9	47.9	48.4	49.4	48.7	48.8	49.7
38.3	37.9	39.4	39.4	40.9	41.3	39.9	38.6	36.7	38.7	38.8
3.5	3.0	2.9	2.9	3.8	4.2	2.8	3.1	3.2	3.1	3.3
8.2	10.0	9.7	8.5	6.7	4.8	7.5	8.0	10.5	8.6	7.2
0.94	0.99	1.1	1.4	1.6	1.8	1.3	0.91	0.87	0.83	0.94
1.4	1.3	0.21	—0.63	—1.9	—0.37	0.42	0.37	0.71	0.29	—0.76
7.2	5.0	—1.7	—5.9	—11.4	—3.8	—3.0	0.62	0.29	—0.34	—1.1

TABLE 76 (cont.)

Total Payments excluding Entrepreneurial Savings
Percentage Distribution by Type

	1919	1920	1921	1922	1923	1924	1925	1926	1927
3f Metal									
Total ($000,000)	5,235	6,046	3,437	3,595	5,124	4,890	5,131	5,461	5,344
Wages	75.4	75.5	65.8	69.8	71.7	67.7	68.7	67.6	64.8
Salaries	16.0	16.2	21.0	18.7	16.3	17.8	16.7	16.4	17.9
Entrep. withdr.	0.86	0.75	0.83	0.74	0.58	0.61	0.56	0.51	0.49
Dividends	7.3	7.0	11.4	10.2	10.6	12.8	13.1	14.6	16.2
Interest	0.50	0.47	0.98	0.52	0.76	1.1	0.96	0.83	0.68
Entrep. net savings	1.1	0.44	—0.62	0.17	0.51	0.37	0.58	0.48	0.26
Corp. net savings	16.9	9.8	—20.3	5.3	11.2	7.0	13.7	10.1	3.8
3g Chemical									
Total ($000,000)	901	1,076	827	795	951	894	1,001	1,077	1,069
Wages	51.4	52.9	42.9	46.9	47.4	47.5	45.0	44.9	44.8
Salaries	24.1	21.5	21.6	22.6	21.5	21.3	19.6	19.8	20.2
Entrep. withdr.	2.5	2.1	2.0	2.0	1.6	1.6	1.5	1.3	1.3
Dividends	22.0	23.2	31.0	27.0	28.1	27.3	31.9	32.1	31.0
Interest	0.04	0.27	2.5	1.5	1.4	2.3	2.1	2.0	2.7
Entrep. net savings	0.99	—0.66	—1.5	0.11	0.20	0.26	0.48	0.64	0.23
Corp. net savings	13.3	0.34	—30.9	17.3	2.3	11.4	15.5	26.0	0.20
3h Miscellaneous and rubber									
Total ($000,000)	891	1,057	730	800	956	815	877	927	938
Wages	63.0	66.5	61.1	60.9	61.4	67.7	66.9	65.6	64.6
Salaries	22.2	19.2	20.3	18.1	17.0	19.7	19.8	19.9	20.5
Entrep. withdr.	2.1	2.0	2.2	1.9	1.6	1.9	1.7	1.6	1.5
Dividends	11.6	10.6	13.8	17.2	18.9	9.0	10.4	11.1	11.4
Interest	1.1	1.6	2.6	2.0	1.2	1.7	1.2	1.8	2.0
Entrep. net savings	2.1	1.0	—1.9	0.86	1.0	0.80	1.3	0.61	0.57
Corp. net savings	27.3	15.7	—31.4	16.0	18.7	10.3	14.4	3.7	2.5
4 Construction									
Total ($000,000)	1,868	2,522	1,915	2,306	3,280	3,469	3,706	4,027	3,876
Wages	73.0	77.5	70.9	71.4	78.1	74.9	71.6	75.5	74.9
Salaries	13.1	11.9	15.3	13.8	11.2	12.4	11.2	12.8	12.8
Entrep. withdr.	12.9	9.6	11.7	13.3	9.4	11.5	15.3	10.4	10.8
Dividends	0.82	0.83	1.7	1.3	1.1	0.93	1.6	1.0	1.2
Interest	0.21	0.20	0.41	0.19	0.18	0.23	0.28	0.27	0.29
Entrep. net savings	9.7	3.1	—1.4	1.9	2.4	5.6	5.5	3.9	2.8
Corp. net savings	1.2	0.46	—1.5	0.34	0.69	1.4	1.1	1.4	1.3

TABLE 76 (cont.)

Total Payments excluding Entrepreneurial Savings
Percentage Distribution by Type

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
5,732	6,449	5,228	3,563	2,208	2,144	3,083	3,783	4,870	6,092	3,878
64.2	64.1	58.9	56.6	56.1	64.0	65.4	66.1	64.7	67.0	66.0
17.8	17.3	21.4	23.8	27.5	22.9	20.2	18.1	15.6	15.6	21.2
0.46	0.43	0.44	0.46	0.50	0.47	0.38	0.39	0.40	0.38	0.57
16.7	17.3	18.2	17.7	13.6	10.4	12.4	14.0	18.2	16.1	10.9
0.83	0.95	1.1	1.5	2.3	2.3	1.6	1.4	1.1	0.87	1.3
0.36	0.42	—0.04	—0.51	—1.2	—0.43	—0.14	0.20	0.38	0.37	—0.24
8.2	11.6	—8.2	—28.1	—54.1	—19.4	—5.4	1.2	3.2	4.1	—2.4
1,234	1,305	1,393	1,126	814	832	840	968	1,147	1,219	1,030
38.7	40.9	35.5	35.5	38.5	39.8	47.2	43.6	39.8	45.5	48.7
17.9	18.9	17.6	18.4	20.0	18.4	21.3	19.9	17.4	17.5	19.5
1.1	1.1	0.90	0.98	0.94	0.87	0.91	0.94	0.95	0.97	1.1
40.1	37.2	43.1	40.8	34.4	35.6	26.6	32.4	39.6	34.2	28.2
2.2	2.0	3.0	4.3	6.2	5.3	3.9	3.2	2.3	1.9	2.5
0.48	0.46	0.05	—0.23	—0.41	0.16	0.10	0.41	0.54	0.42	—0.20
17.1	22.9	—20.5	—48.1	—42.2	—28.7	—10.4	—11.0	—7.7	—0.01	—7.3
944	978	854	708	491	484	576	682	787	869	690
65.5	63.7	60.4	59.0	58.5	63.9	67.6	64.0	63.4	65.7	62.0
20.3	20.8	23.5	26.0	28.1	21.8	22.0	22.0	20.0	19.9	22.3
1.6	1.5	1.6	1.6	1.6	1.5	1.3	1.4	1.4	1.4	1.7
10.5	12.1	12.2	10.6	8.9	6.9	6.7	11.0	14.1	12.2	13.0
2.0	1.8	2.3	2.7	2.9	2.9	2.4	1.6	1.1	0.73	0.96
0.30	0.11	—1.4	—1.8	—2.8	—0.93	—0.24	0.52	0.86	0.47	0.16
1.6	—1.8	—22.9	—27.1	—39.8	—14.3	—2.3	1.2	2.1	0.12	—0.84
3,880	3,951	3,443	2,297	1,404	968	1,022	1,163	1,648	1,884	1,693
74.7	74.0	69.8	68.7	62.5	58.3	62.9	62.3	62.9	65.7	62.5
14.0	13.1	15.7	17.4	19.9	20.7	15.6	14.8	13.7	13.3	13.7
9.8	11.0	11.5	11.6	15.4	18.1	19.7	21.0	21.1	18.7	22.0
1.3	1.5	2.5	1.7	1.4	1.9	1.4	1.8	2.2	2.2	1.7
0.26	0.33	0.44	0.59	0.74	0.89	0.48	0.11	0.12	0.11	0.12
2.5	2.5	—1.1	—4.4	—16.7	—16.1	—9.9	—6.0	—2.5	—1.2	—0.08
0.94	0.92	—0.84	—3.1	—9.0	—8.7	—4.5	—2.6	—1.3	—1.0	—0.04

TABLE 76 (cont.)

Total Payments excluding Entrepreneurial Savings
Percentage Distribution by Type

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*	*1927*
5 Transportation and other public utilities									
Total ($000,000)	5,829	7,237	6,021	5,988	6,647	6,707	6,919	7,200	7,348
Wages & salaries	78.1	82.2	79.0	76.4	76.7	75.0	73.6	73.6	71.5
Empl. comp.	79.1	83.3	79.8	77.3	77.7	76.0	74.7	74.8	72.7
Entrep. withdr.	0.19	0.12	0.12	0.13	0.11	0.09	0.08	0.08	0.07
Dividends	9.1	6.7	7.6	9.5	9.6	10.6	11.8	12.0	14.1
Interest	11.7	9.9	12.5	13.1	12.6	13.3	13.4	13.1	13.1
Entrep. net savings	0.14	0.08	—0.03	—0.01	...*	0.01	0.02	0.02	...*
Corp. net savings	2.2	1.5	1.1	3.8	6.7	5.6	9.3	9.5	6.0
5a Electric light and power									
Total ($000,000)	290	337	365	431	558	663	737	831	903
Wages & salaries	48.3	52.5	50.7	44.7	45.1	44.9	42.0	42.8	40.7
Entrep. withdr.	1.1	1.0	0.93	0.74	0.51	0.40	0.31	0.23	0.17
Dividends	23.5	21.2	22.9	28.3	28.9	28.0	31.2	29.7	31.5
Interest	27.0	25.3	25.5	26.3	25.5	26.7	26.5	27.3	27.6
Corp. net savings	12.3	13.1	12.3	15.7	13.7	10.1	10.9	13.6	14.3
5b Manufactured gas									
Total ($000,000)	134	137	122	117	142	167	177	183	187
Wages & salaries	57.7	61.6	63.9	68.2	65.9	61.1	59.4	59.5	60.0
Dividends	31.4	27.0	21.0	19.0	23.5	28.9	28.4	26.2	24.9
Interest	10.9	11.5	15.2	12.9	10.6	9.9	12.2	14.3	15.1
Corp. net savings	—25.8	—16.9	—7.0	0.33	0.96	—10.2	42.3	14.6	18.5
5c Steam railroads, Pullman, and express									
Total ($000,000)	3,880	4,852	3,821	3,718	4,156	4,024	4,105	4,239	4,289
Wages	63.5	66.3	59.4	57.0	59.5	56.9	56.6	56.7	54.7
Salaries	17.4	17.8	21.4	22.5	20.9	21.6	21.4	21.1	21.0
Empl. comp.	82.1	85.6	82.1	80.8	81.9	80.1	79.7	79.6	77.5
Dividends	6.6	4.9	5.5	6.1	6.1	6.9	7.2	8.0	10.2
Interest	11.2	9.5	12.5	13.1	12.0	13.1	13.1	12.4	12.3
Corp. net savings	1.5	—0.13	—0.14	2.9	6.8	6.0	9.3	10.1	4.1
5d Street railways									
Total ($000,000)	516	607	583	608	622	620	605	595	576
Wages & salaries	71.4	76.4	75.3	71.3	70.6	71.2	71.7	72.8	72.9
Dividends	6.9	5.3	4.6	7.7	7.6	7.6	7.9	7.9	8.1
Interest	21.7	18.2	20.1	20.9	21.8	21.3	20.4	19.3	19.0
Corp. net savings	2.3	3.6	4.9	2.8	4.3	1.3	2.3	1.2	1.6

* Less than 0.005 per cent.

TABLE 76 (cont.)

Total Payments excluding Entrepreneurial Savings
Percentage Distribution by Type

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
7,345	7,752	7,496	6,572	5,345	4,912	5,071	5,367	5,628	6,087	5,602
71.2	69.7	66.6	64.4	60.5	60.5	63.1	63.8	67.5	68.3	68.5
72.3	70.8	67.7	65.6	61.8	61.9	61.5	65.4	68.9	70.3	70.3
0.07	0.07	0.08	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05
14.3	16.6	19.0	18.8	18.2	16.9	16.3	17.4	15.4	15.6	15.2
13.4	12.5	13.2	15.6	19.9	21.1	19.1	17.2	15.7	14.0	14.5
0.02	0.03	−0.02	−0.04	−0.04	−0.01	0.02	0.02	0.07	0.07	0.01
9.5	9.8	1.8	−3.1	−8.9	−3.9	−1.3	−4.1	3.8	2.0	−1.6
1,030	1,162	1,284	1,277	1,127	1,033	985	993	1,026	1,109	1,088
38.9	37.2	35.3	33.1	31.1	30.7	35.0	36.4	38.5	40.3	40.6
0.13	0.10	0.08	0.07	0.06	0.06	0.06	0.07	0.07	0.07	0.07
34.6	38.6	41.8	41.7	38.4	36.0	33.3	33.4	33.6	35.6	31.7
26.4	24.1	22.8	25.2	30.5	33.2	31.6	30.1	27.8	24.0	24.7
17.0	18.7	13.1	8.0	1.6	−0.40	1.1	4.9	8.3	7.2	5.0
182	205	213	210	222	201	189	194	188	194	193
59.1	49.2	46.3	40.0	33.3	37.6	42.4	41.9	45.3	46.5	46.7
21.3	32.4	31.8	36.7	39.4	30.2	29.0	33.0	29.9	30.6	30.6
19.7	18.3	21.8	23.4	27.3	32.2	28.6	25.1	24.7	22.9	22.7
6.9	−9.9	−12.7	−26.3	−28.3	−20.9	−19.8	−26.2	−15.1	−6.1	−9.9
4,123	4,250	3,883	3,175	2,332	2,171	2,324	2,415	2,667	2,883	2,477
54.9	54.9	51.4	49.9	48.1	48.8	50.1	51.9	55.1	55.1	54.6
21.6	21.1	22.0	23.6	24.2	23.1	22.6	23.0	22.0	21.8	21.5
78.3	77.7	75.3	75.6	74.8	74.6	75.3	77.7	79.6	80.6	82.5
8.9	10.3	11.4	8.1	3.3	3.5	5.1	5.2	5.5	5.7	3.4
12.8	12.0	13.4	16.3	21.9	21.9	19.2	17.0	11.9	13.7	11.2
8.7	9.5	−0.30	−6.3	−10.4	−2.3	−4.0	−1.4	5.1	1.5	−2.5
558	563	518	457	379	331	317	350	365	370	361
72.9	73.1	74.0	73.5	71.3	68.9	68.7	67.5	66.1	65.6	65.4
8.3	8.6	7.6	6.2	4.7	4.6	5.5	6.2	8.6	10.3	10.0
18.8	18.3	18.5	20.2	24.0	26.5	25.8	26.4	25.3	24.1	24.6
1.6	0.51	1.0	−3.2	−10.7	−8.6	−7.7	−7.4	−5.5	−6.8	−6.4

TABLE 76 (cont.)

Total Payments excluding Entrepreneurial Savings
Percentage Distribution by Type

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*	*1927*
5e Water transportation									
Total ($000,000)	559	747	562	484	495	520	505	526	503
Wages & salaries	88.7	94.2	94.3	93.3	93.3	95.0	94.2	93.9	93.9
Entrep. withdr.	1.4	0.73	0.68	0.92	0.91	0.61	0.72	0.72	0.71
Dividends	8.2	3.8	3.2	3.7	3.8	2.6	3.6	3.9	3.9
Interest	1.7	1.3	1.8	2.0	2.0	1.8	1.5	1.5	1.6
Entrep. net savings	1.5	0.73	—0.28	—0.10	0.01	0.12	0.21	0.25	0.03
Corp. net savings	3.9	2.5	—4.4	—2.9	—2.1	—0.94	0.12	0.68	—1.7
5f Pipe lines									
Total ($000,000)	58	65	67	94	82	79	111	97	130
Wages & salaries	46.0	52.2	47.7	35.9	46.1	42.8	33.9	42.7	37.8
Dividends	53.8	47.6	52.2	63.9	53.4	56.7	65.7	57.0	61.9
Interest	0.20	0.18	0.19	0.27	0.49	0.51	0.35	0.34	0.29
Corp. net savings	12.8	42.7	3.8	3.4	29.3	42.9	20.9	33.0	16.0
5g Telephone									
Total ($000,000)	311	388	410	442	493	537	573	607	641
Wages & salaries	76.0	79.7	78.5	78.7	78.1	77.7	75.8	76.0	75.4
Empl. comp.	77.0	80.8	79.5	79.8	79.1	78.6	76.7	76.9	76.4
Dividends	13.2	10.5	11.8	13.6	14.5	15.3	16.3	16.5	17.4
Interest	9.8	8.7	8.7	6.6	6.4	6.1	7.0	6.7	6.2
Corp. net savings	4.6	2.3	5.5	6.9	6.4	5.3	8.5	10.0	9.3
5h Telegraph									
Total ($000,000)	81	105	92	90	98	99	105	121	119
Wages & salaries	87.5	89.9	86.9	86.7	87.9	87.5	87.8	87.3	85.6
Empl. comp.	89.5	91.8	89.2	89.2	90.3	90.1	90.4	89.5	87.9
Dividends	12.5	9.6	10.7	10.9	9.5	9.5	9.0	9.7	10.7
Interest	—2.0	—1.5	0.10	—0.05	0.18	0.42	0.62	0.71	1.3
Corp. net savings	14.0	11.9	8.4	17.9	15.4	14.3	18.9	12.4	18.1
6 Trade									
Total ($000,000)	8,061	9,071	7,708	8,074	8,854	9,089	9,548	10,053	9,926
Wages & salaries	67.4	66.7	67.1	70.4	72.2	71.9	73.2	73.8	73.5
Entrep. withdr.	27.3	28.6	28.2	25.4	23.4	23.5	21.9	21.2	21.2
Dividends	5.0	4.2	4.2	3.7	4.2	4.3	4.6	4.7	5.0
Interest	0.41	0.46	0.52	0.49	0.25	0.34	0.32	0.24	0.31
Entrep. net savings	30.1	4.6	—5.9	7.2	9.5	5.4	5.7	3.7	2.9
Corp. net savings	7.7	0.09	—6.0	3.8	5.2	3.4	4.1	2.3	1.8

TABLE 76 (cont.)

Total Payments excluding Entrepreneurial Savings
Percentage Distribution by Type

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
514	520	492	412	317	324	360	456	499	569	504
93.6	92.4	91.6	92.4	91.9	93.1	90.8	83.8	88.5	89.7	90.1
0.74	0.88	0.94	0.80	0.73	0.57	0.55	0.49	0.46	0.43	0.43
4.3	5.5	6.1	4.8	3.9	2.5	4.9	12.4	8.0	7.2	6.0
1.3	1.2	1.3	2.0	3.5	3.8	3.7	3.3	3.0	2.7	3.2
0.24	0.39	−0.36	−0.62	−0.74	−0.12	0.25	0.17	0.75	0.79	0.09
0.72	2.5	−4.6	−8.14	−10.8	−5.4	−5.4	−12.9	−2.8	−1.7	−4.0
136	163	186	175	190	144	129	186	123	133	131
35.4	30.7	23.5	22.6	16.1	21.0	27.3	20.2	33.6	36.6	34.4
64.2	69.0	76.3	76.2	82.4	76.4	70.5	77.8	63.7	61.4	64.1
0.38	0.30	0.19	1.2	1.5	2.6	2.2	2.0	2.7	2.0	1.4
28.9	25.3	−5.3	−2.8	−29.4	3.3	0.16	−32.3	16.7	21.8	0.78
678	747	773	746	692	634	652	654	668	728	754
76.7	78.3	76.6	71.2	65.5	61.6	62.5	64.0	67.7	70.3	69.6
77.8	79.4	77.6	72.5	66.7	63.0	64.0	65.7	69.4	72.1	71.4
17.2	16.5	19.0	23.6	27.1	29.7	28.8	27.8	25.1	22.7	23.5
5.1	4.2	3.4	3.9	6.1	7.3	7.2	6.5	5.6	5.2	5.1
11.6	12.4	6.5	2.1	−6.7	−8.8	−7.7	−5.3	3.1	2.3	−1.9
123	143	147	121	86	74	85	89	91	101	90
85.5	81.8	80.6	85.8	88.2	90.1	90.7	86.2	90.9	89.9	92.4
87.7	83.9	82.8	88.7	91.8	93.9	94.0	89.5	94.3	93.1	96.0
10.8	14.6	15.0	8.3	3.6	0.44	0.62	4.9	0.29	2.2	−0.94
1.5	1.5	2.2	3.0	4.5	5.7	5.4	5.6	5.4	4.7	4.9
17.7	4.2	−14.1	−9.2	−13.9	2.6	−1.4	−3.0	4.9	−2.2	−6.4
10,191	10,865	10,419	9,241	7,359	6,537	7,460	7,795	8,470	9,155	8,857
73.8	73.7	73.4	71.9	69.8	69.0	71.0	70.6	69.1	70.5	70.7
20.9	20.5	21.2	23.2	26.5	27.5	24.4	23.4	22.7	22.4	23.5
4.9	5.2	4.8	4.2	2.9	2.7	4.1	5.6	7.9	6.8	5.4
0.42	0.51	0.66	0.72	0.82	0.75	0.56	0.41	0.36	0.34	0.35
3.6	1.6	−5.3	−9.2	−11.8	−2.2	−0.31	−0.03	0.97	0.48	0.39
2.7	0.63	−6.1	−10.7	−14.1	−4.1	−1.1	−0.91	0.14	−0.46	−0.33

TABLE 76 (cont.)

Total Payments excluding Entrepreneurial Savings
Percentage Distribution by Type

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*	*1927*
7 Finance									
Total ($000,000)	6,618	7,376	7,690	8,233	8,808	9,525	9,658	9,676	10,005
Wages & salaries	20.8	22.4	22.5	21.2	20.6	20.7	21.0	23.2	24.3
Entrep. withdr.	1.8	2.0	1.9	1.8	2.0	2.0	2.2	2.3	2.3
Dividends	5.1	5.5	5.3	5.7	6.0	5.3	5.7	5.7	5.4
Interest	12.3	12.0	12.2	11.8	12.7	12.8	14.5	15.7	17.1
Rent	59.9	58.1	58.1	59.5	58.6	59.1	56.6	53.1	50.8
Corp. net savings	4.3	1.3	—0.10	0.31	—0.16	0.79	0.85	1.4	3.1
7a Banking									
Total ($000,000)	658	770	821	843	871	906	947	996	1,056
Wages & salaries	58.1	61.3	62.0	61.1	62.7	64.0	63.8	64.3	63.8
Dividends	41.9	38.7	38.0	38.9	37.3	36.0	36.2	35.7	36.2
Corp. net savings	31.9	24.4	12.3	9.5	11.4	14.3	19.5	18.5	21.4
7b Insurance									
Total ($000,000)	662	792	830	878	882	974	1,082	1,174	1,258
Wages & salaries	80.9	81.0	82.1	80.3	78.2	79.3	79.0	79.0	78.9
Entrep. withdr.	18.4	18.6	17.4	16.9	19.6	19.5	19.6	19.3	18.6
Dividends	2.8	2.4	2.8	5.1	4.5	3.4	3.6	3.7	4.3
Interest	—2.0	—2.1	—2.3	—2.2	—2.2	—2.2	—2.1	—1.9	—1.9
Corp. net savings	6.7	—8.2	—10.6	—10.7	—11.9	—11.2	—4.7	—3.9	2.3
7c Real estate									
Total ($000,000)	5,298	5,814	6,039	6,512	7,055	7,645	7,628	7,506	7,691
Wages & salaries	8.7	9.2	8.9	8.1	8.2	8.1	7.5	9.0	10.0
Dividends	0.76	1.5	1.2	1.5	2.4	1.9	2.3	2.0	1.4
Interest	15.6	15.5	15.8	15.2	16.2	16.3	18.6	20.5	22.6
Rent	74.9	73.7	74.0	75.2	73.2	73.7	71.7	68.5	66.0
Corp. net savings	0.51	—0.46	—0.34	0.61	—0.12	0.71	—0.68	0.02	0.66
8 Service									
Total ($000,000)	5,001	6,021	5,969	6,974	7,419	8,034	8,667	9,059	9,721
Wages & salaries	65.1	67.6	70.4	64.5	66.4	65.2	63.7	65.2	65.3
Entrep. withdr.	34.0	30.8	28.2	34.5	32.3	33.5	34.8	33.1	32.9
Dividends	0.58	1.3	1.1	0.70	0.92	0.89	1.1	1.2	1.1
Interest	0.32	0.25	0.30	0.33	0.38	0.41	0.47	0.53	0.64
Entrep. net savings	21.6	13.7	11.9	5.5	10.8	7.1	6.7	11.4	6.2
Corp. net savings	0.98	0.09	—0.42	0.37	0.58	0.55	0.64	0.26	—0.07

TABLE 76 (cont.)

Total Payments excluding Entrepreneurial Savings
Percentage Distribution by Type

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
10,466	11,064	10,150	8,534	6,653	5,791	5,694	6,067	6,152	6,675	6,660
25.2	25.8	26.1	28.0	29.6	30.1	32.6	32.2	32.8	31.8	32.3
2.3	2.4	2.5	2.7	2.9	3.1	3.4	3.3	3.3	3.4	3.3
6.3	6.9	6.5	7.0	5.6	3.5	4.6	4.6	4.4	4.3	4.1
18.9	20.5	22.8	26.9	30.5	26.8	26.0	24.6	24.0	22.0	21.4
47.2	44.4	42.0	35.5	31.4	36.5	33.5	35.3	35.5	38.6	38.7
3.9	0.64	−3.8	−11.1	−17.4	−16.5	−11.6	−5.5	−0.64	−0.36	−1.6
1,142	1,188	1,162	1,051	836	636	683	688	712	741	748
61.6	61.6	61.3	60.9	66.5	75.2	72.5	72.7	72.8	72.9	73.8
38.4	38.4	38.7	39.1	33.5	24.8	27.5	27.3	27.2	27.1	26.2
22.7	17.0	−2.0	−30.1	−50.3	−54.4	−28.2	3.0	23.9	18.1	8.9
1,348	1,428	1,425	1,331	1,121	1,008	1,065	1,129	1,145	1,233	1,251
78.7	79.2	79.7	79.8	81.6	82.9	82.3	81.2	82.9	82.5	82.0
18.2	18.2	17.7	17.2	17.5	17.5	17.9	17.8	17.6	18.3	17.3
4.9	4.9	4.3	4.6	2.8	1.6	2.1	4.4	1.9	1.7	3.1
−1.8	−2.2	−1.7	−1.6	−1.9	−2.1	−2.3	−3.4	−2.4	−2.5	−2.5
6.5	3.9	−6.9	−12.8	−16.4	−14.2	−2.2	−2.1	0.03	3.2	1.9
7,976	8,449	7,563	6,152	4,696	4,147	3,946	4,250	4,296	4,701	4,661
11.0	11.8	10.6	11.1	10.6	10.3	12.3	12.6	12.8	12.0	12.3
2.0	2.8	2.0	2.0	1.3	0.72	1.3	1.2	1.3	1.4	1.2
25.1	27.2	31.0	37.7	43.6	37.9	38.1	35.8	35.0	31.8	31.3
62.0	58.2	56.4	49.2	44.5	51.0	48.3	50.4	50.9	54.9	55.3
0.72	−2.2	−3.5	−7.4	−11.8	−11.3	−11.2	−7.8	−4.9	−4.2	−4.2
10,036	10,756	10,108	9,037	7,811	7,142	7,319	7,771	8,392	9,349	8,824
64.1	64.1	63.2	61.7	56.5	54.9	60.1	61.7	63.2	63.3	63.6
34.2	34.0	34.7	36.5	41.4	43.3	38.1	36.3	34.2	34.4	34.6
0.99	1.1	1.1	0.82	0.70	0.48	0.63	0.70	1.3	1.3	0.78
0.73	0.81	0.98	1.0	1.4	1.3	1.2	1.3	1.2	1.0	1.1
6.4	4.8	3.8	−1.1	−12.0	−14.2	−4.5	−2.5	1.3	−0.53	2.5
0.07	0.14	−0.79	−2.3	−6.1	−5.0	−3.3	−2.7	−2.4	−1.8	−1.9

TABLE 76 (concl.)

Total Payments excluding Entrepreneurial Savings
Percentage Distribution by Type

	1919	*1920*	*1921*	*1922*	*1923*	*1924*	*1925*	*1926*	*1927*
9 Government									
Total ($000,000)	5,071	5,124	5,248	5,282	5,431	5,561	5,751	5,963	6,191
Wages & salaries	71.9	66.1	65.4	64.6	65.4	67.1	68.5	69.6	70.7
Empl. comp.	79.4	75.7	75.9	74.9	75.5	77.0	77.7	78.5	79.7
Interest	20.6	24.3	24.1	25.1	24.5	23.0	22.3	21.5	20.3
Net savings	—25.7	37.0	18.3	16.2	29.7	30.9	28.1	36.1	37.0
9a Federal government									
Total ($000,000)	3,210	2,948	2,755	2,608	2,571	2,491	2,515	2,548	2,540
Wages & salaries	64.4	51.9	47.9	43.6	44.5	47.2	49.2	50.4	51.3
Empl. comp.	74.4	65.7	63.9	60.7	61.1	63.4	65.8	68.1	70.0
Interest	25.6	34.3	36.1	39.3	38.9	36.6	34.2	31.9	30.0
9b State government									
Total ($000,000)	182	225	263	264	289	328	315	281	306
Wages & salaries	85.4	79.8	73.5	74.1	71.1	68.2	78.3	84.5	86.0
Empl. comp.	103.2	103.7	102.6	100.1	98.6	97.4	95.5	94.5	94.9
Interest	—3.2	—3.7	—2.6	—0.12	1.4	2.6	4.5	5.5	5.1
9c County government									
Total ($000,000)	189	220	261	280	301	330	349	366	378
Wages & salaries	79.0	80.2	80.2	79.6	76.9	74.9	71.0	70.7	74.3
Empl. comp.	80.0	81.5	81.8	80.9	78.3	76.4	72.1	71.4	75.0
Interest	20.0	18.5	18.2	19.1	21.7	23.6	27.9	28.6	25.0
9d City government including public education									
Total ($000,000)	1,490	1,730	1,969	2,130	2,270	2,412	2,573	2,767	2,967
Wages & salaries	85.6	86.7	86.8	87.1	86.7	86.5	85.9	85.5	85.3
Empl. comp.	87.2	88.3	88.4	88.3	88.4	88.4	87.8	87.4	87.1
Interest	12.8	11.7	11.6	11.7	11.6	11.6	12.2	12.6	12.9
10 Miscellaneous									
Total ($000,000)	1,901	2,143	1,999	2,198	2,520	2,657	2,884	3,019	3,158
Wages & salaries	72.0	71.4	69.3	69.0	71.1	69.3	68.8	71.2	69.5
Entrep. withdr.	13.6	14.4	14.1	15.2	13.5	14.1	14.2	13.7	13.8
Dividends	5.4	5.9	7.2	7.4	7.6	8.5	9.2	7.6	9.0
Interest	8.9	8.3	9.4	8.4	7.8	8.0	7.7	7.5	7.8
Entrep. net savings	8.3	5.9	5.1	1.1	3.5	2.0	1.8	3.7	1.6
Corp. net savings	9.8	3.3	—7.3	3.6	4.5	2.7	4.7	3.9	1.6

TABLE 76 (concl.)

Total Payments excluding Entrepreneurial Savings
Percentage Distribution by Type

1928	*1929*	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
6,393	6,649	6,816	7,066	7,081	7,617	8,763	9,240	10,412	10,227	10,991
71.6	71.8	72.0	70.6	67.9	57.3	51.4	53.0	51.2	54.7	53.3
80.6	81.0	81.4	81.9	80.7	80.8	82.1	83.9	85.2	83.6	84.6
19.4	19.0	18.6	18.1	19.3	19.2	17.9	16.1	14.8	16.4	15.4
29.7	33.5	30.9	4.9	—12.8	—1.5	—6.6	—18.8	—21.1	4.9	—1.6
2,535	2,580	2,586	2,741	2,780	3,597	4,788	5,152	6,079	5,588	6,096
53.0	54.1	55.1	52.6	48.8	33.9	29.6	32.6	31.1	34.1	31.7
72.1	74.0	75.9	77.5	76.8	79.8	82.6	84.8	86.6	83.6	84.6
27.9	26.0	24.1	22.5	23.2	20.2	17.4	15.2	13.4	16.4	15.4
329	345	371	403	417	418	441	478	514	568	601
85.8	85.9	85.0	83.6	81.4	79.0	78.5	79.8	81.3	82.8	83.6
94.3	94.0	92.9	90.9	88.7	86.3	86.0	87.8	89.3	90.9	92.0
5.7	6.0	7.1	9.1	11.3	13.7	14.0	12.2	10.7	9.1	8.0
408	455	466	468	465	433	434	444	457	475	491
74.5	71.6	73.2	76.6	75.3	73.4	74.1	75.8	78.0	80.3	82.2
75.2	72.3	74.0	77.5	76.3	74.2	75.0	76.7	78.9	81.3	83.3
24.8	27.7	26.0	22.5	23.7	25.8	25.0	23.3	21.1	18.7	16.7
3,122	3,269	3,393	3,454	3,419	3,169	3,100	3,166	3,362	3,596	3,803
84.8	84.4	83.2	82.5	80.8	78.8	78.1	79.1	79.3	78.9	79.5
86.8	86.4	85.4	85.0	83.6	82.1	81.8	82.8	83.0	82.7	83.7
13.2	13.6	14.6	15.0	16.4	17.9	18.2	17.2	17.0	17.3	16.3
3,332	3,553	3,327	3,017	2,574	2,427	2,537	2,863	3,124	3,368	3,189
67.7	67.8	67.9	68.3	67.3	69.4	72.6	71.8	74.0	75.7	75.7
13.9	14.1	14.3	14.6	16.7	16.9	15.9	15.3	15.6	16.3	17.3
10.2	10.8	10.1	9.0	6.9	4.9	4.8	9.1	7.0	4.9	3.9
8.2	7.3	7.7	8.2	9.2	8.7	6.7	3.7	3.3	3.1	3.1
1.4	0.83	0.24	—1.0	—4.0	—3.8	—1.4	—0.93	—0.29	—0.58	—0.18
8.3	8.0	—22.2	—37.5	—39.6	—37.1	—15.5	—7.2	—3.3	—5.0	—5.3