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ECONOMICS OF A CHANGING WORLD

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CONTENTS

CHAP.		PAGE
	PREFACE BY SIR ARTHUR SALTER	7
	AUTHOR'S PREFACE	13
I	THE PRICE COMPLEX	17
II	CAPITAL AND INTEREST	38
III	INTERNATIONAL TRADE	55
IV	BALANCES OF PAYMENTS AND THE REPARATIONS PROBLEM	68
V	THE CHANGING PRICE LEVEL	89
VI	THE BUSINESS CYCLE AND UNEMPLOYMENT	133
VII	THE WORLD ECONOMIC CRISIS	171
VIII	MONETARY SYSTEMS	198
IX	PUBLIC FINANCE	235
X	THE ECONOMIC FUTURE	262
	INDEX	285

PREFACE
by
SIR ARTHUR SALTER

The world depression has, to an unprecedented extent, stimulated interest in every branch of economic study, and every form of exposition of economic doctrine.

Above all there is a demand for new bridges between theory and practice, between such guidance as the economist has to offer and the policies of the statesmen and the opinions of the man in the street on whose support he depends.

Mr. H. V. Hodson, who is known to all whose business it is to follow the progress of economics as one of the most brilliant of our younger economists, has in this small work made a notable contribution towards meeting this new demand.

His primary object is not to present new policies nor to advocate new economic doctrine. He summarizes for us, in a manageable form, the doctrines of modern economists as they are directly related to the problems that confront us. He helps us to approach these problems ourselves with minds fortified by some knowledge of what economic doctrine can contribute to them; and of the extent to which the doctrine is unanimous or disputed. He does much more than this, however. After explaining what others think, and where they differ, he makes comments of his own; and through

these comments expresses modestly his own distinctive and interesting point of view.

In one respect, in particular, his method of approach to his subject yields results of particular value. Most works on economics for the layman usually deal entirely with what may be called the economics of equilibrium. They ask 'What is value?' 'Why is international trade profitable?' 'What determines the level of wages?' But most of us, with our eyes on the turbulent stream of current events, want our economics brought into a more definite and closer relation with the actual process of change. We want our economics to be less of a static and more of a dynamic science. The questions to which we want answers are rather: 'Why do prices change?' 'How does unemployment come about?' 'What happens when one country lends money to another and balances of trade are upset?' It is questions of this kind that Mr. Hodson helps us to answer. His are the economics of change, or as his title puts it, of a 'changing world'.

The economic doctrine on which most of us were brought up is based upon the abstraction of an 'economic man', pursuing his gain in active competition with his fellows. The conclusions based upon this abstraction retain their validity in all circumstances as inferences from the premise. But their practical application varies of course indefinitely according as the actual conditions under which we live approximate to, or depart from, the original premise. And there is no doubt that the gap has greatly widened and is widening. In the last century, over considerable areas and periods man competed freely, in the sale and purchase of both his goods and his services, within a framework of law which did little more than repress fraud and abuses. Orthodox

economic theory therefore bore a relatively close relation to the actual economic process. For half a century we have seen this situation in the course of profound modification. Commercial policy, social legislation, trade union organisation, monopolies or semi-monopolies in both the productive industries and the distributive trades, have restricted the area and transformed the character of competition. These changes have not invalidated the reasoning of the pure scientist, but they have immensely increased the distance between his doctrine and the discussion of alternative policies or the course of practical affairs. The qualifications and reservations accumulate, till in time they begin to form a new science; as the economic system itself changes till it is becoming fundamentally different from the one we have known.

The main need of man throughout the ages has been to wrest enough from niggard nature to maintain him in tolerable comfort; to stimulate his exertions in this arduous task. But nature is now not niggard but prodigal; scientific inventions and industrial skill have converted man from a pygmy to a giant; the vital need of our age is, not to increase productive capacity, but to construct a system which translates increased productive capacity into increased purchasing capacity; which so relates supply and demand that the first can be both maintained and utilized.

And at this period we halt between two systems, suffering some of the defects of each, and failing to obtain the full advantages of either. The old automatic system which effected adjustments through changing prices in a field of free competition has been impeded and obstructed by a hundred forms of control; but con-

trol does not yet include the deliberate planning which is the alternative method of adjustment. We must either re-create the conditions under which the first will again operate without intolerable waste and injustice, which personally I believe to be impossible; or we must substitute the opposite system, as for example it is being tried in Russia, with both economic and political consequences which most of us contemplate with grave misgiving; or—which I believe to be the right course—we must construct a new system, which will combine the advantages of both the opposite extremes. We must place private enterprise within a more intricate and skilful framework of control and planning. This I believe to be both practicable and advisable—and to constitute the distinctive and fundamental task of our age and civilisation.

Mr. Hodson assumes the 'general shape of the present system to continue'. But he clearly recognises the alternatives before us—'either the self-righting economic forces', he says, 'must be allowed much freer play than at present, so that readjustment to changing circumstances may be achieved with far less waste and misery, or the congregation of individual wills must be still further controlled by the exercise of the public will, accelerating or smoothing the readjustment or preventing the circumstances themselves from changing so violently. It is a world, that is, in which either trade is freer or finance and production more subject to control.'

With this clear vision of the course of actual events, Mr. Hodson guides us through the main spheres of economic doctrine. He discusses how prices change; the function of capital and interest; the meaning of international trade and the balance of payments; the

business cycle and monetary systems; and he brings all of these into relation with the actual conditions of the present world economic crisis. The layman will learn from his exposition of economic doctrine; and the economist will also find his personal comments on rival doctrines to be illuminating contributions to the science.

ARTHUR SALTER

December 19th, 1932.

AUTHOR'S PREFACE

Like the subject of a *succès de scandale*, the economist just now is at once under a cloud and very much sought after. Obsessed as the public is with its own economic misfortunes, it listens to the voice of economic theory as never before, while simultaneously it reviles the economists for their failure to agree and for not prescribing an infallible cure for commercial depression. The oracles to whom such ardent pilgrimages are made speak not only equivocally but with many voices. Of course. Economists are more like research chemists than clinical practitioners; dragged into the upper air of the consulting-room, their prescriptions will differ because their diagnoses will differ and because they will hold varying opinions of the personality of the patient. Doctors themselves, report has it, sometimes disagree, but how much more acute would be the disagreement if their laboratory technicians were called upon to do the doctor's job?

Do they agree even in the laboratory? That is a far more searching and important question. An observer who noted the variety of economic theories extant, among those with the best academic credentials, concerning the relations between money and prices or the cause of business crises would feel justified in deducing that economics bore to science the relation of astrology

to astronomy, in other words that it was not scientific at all; and that where the experts were so much at loggerheads the judgment of the man in the street was no more likely to be wrong than theirs. What do we mean, then, by saying that economics is a science? Science, as Thomas Huxley once said, is organised common sense, and economics is organised common sense about a certain class of human affairs, namely the interchange of goods and services and generally those relations which concern objects of exchange value. Like the physical and biological sciences, it reasons by logic and not by faith, and like those sciences it takes ascertained facts for the material of its reasoning. The great difference is that whereas even the biological sciences can select and isolate for study the facts that they want to consider, the experimental method is scarcely open to the economist, whose data are the forms and varieties of human intercourse. It is as if a student of hydrostatics and hydrodynamics had no laboratory for his researches but only a turbulent stream in which he himself was floating. Small wonder that opinions differ among scientists so handicapped.

The facts about which the economist has to reason are constantly being changed by non-economic (mainly political) forces, so that as often as not his practical conclusions rest on personal judgment about such forces, in which he can hardly be blamed for being fallible. If this point is borne in mind, it is really more surprising how much economists agree than how much they disagree. Being trained, many of them, to academic controversy, they exaggerate their own differences and are careless of presenting as united a front as possible to the rest of the world.

This book does not profess to be an epitome of accepted economic theory. It is much less learned than that. Nor, on the other hand, does it seek to controvert any particular body of theory or to put any new theories forward. It is a straight-run account of economic theory as it appears to one who has had to read many works of the masters of the science and who has probably assimilated something from every one of them. For the result, however, no one is to blame but the author, who is not without his own opinions of the relative merits of the various works from which he has learnt. If the book is designed to oppose and refute anybody, it is intended as an antidote to the economic cranks and amateur economists whose nostrums have often been credulously swallowed by the public for want of any theoretical standards or technique with which to judge them. Even a brief and defective textbook on physiology would give some basis for criticising the pretensions of patent medicines.

Economics is not an occult magic. Nor is it a matter of simple formulae and definitions which anybody may learn up in a few minutes. It is a body of specialised technique and careful thinking about income and wealth and prices and production and so on, which has become complicated not through academic involution but through the tangled character of its subject-matter. But its data and its conclusions are threaded so intimately into the fabric of all our lives that no student of public affairs, no one, indeed, with any part to play in the political or social, industrial or commercial, or even in the religious conduct of affairs can safely proceed without some study of them. This book may help, because it is designed to bring to the fore those parts and aspects of

economic theory which are related most closely to the leading problems of the day—unemployment, the gold standard, reparations, the business crisis itself.

My sincere thanks are due to Mr. Norman Crump for seeing the book through the press during my absence abroad, and to Sir Arthur Salter for generously contributing an introduction. In whatever understanding of economic affairs I have, I owe a great deal both to Sir Arthur Salter's book *Recovery*, and to his personal acquaintance.

H.V.H.

CHAPTER I

THE PRICE COMPLEX

The subject-matter of economics is sometimes said to be wealth. The economist then has to make it clear that he does not mean wealth in any moral or metaphysical sense at all, but wealth in so far as it is measured by price and is exchangeable from one hand to another. The material of his thought is scientific in that it is capable of numerical determination and algebraical manipulation; you cannot subtract a fur coat from an automobile, nor the pleasure of wearing a fur coat from the pleasure of riding in an automobile, but you can establish the difference between the price of the coat and that of the automobile. Economics, then, is a quantitative science, and the quantities in which it deals are prices. They may be actual prices at which objects and services are bought and sold, or they may be merely imaginary price-tickets placed on objects or services which are not for sale, so as to bring them into some definite comparison with what is exchanged for money. The latter alternative needs some explanation. In some of their functions, for instance the computation of national wealth, economists have to take into account goods and services which either are never exchanged or are transferred gratuitously, like the housekeeping services of wives (whose marriage might otherwise appear to diminish the national income by the value placeable

on their work) or the produce of allotments and small-holdings which are consumed at home without ever having to enter into the family account of income and expenditure. Sometimes the attribution of prices to such things is very difficult and involves a personal and fallible judgment of what their money value would be under certain circumstances which do not and could not exist.

The important point, however, is that the economist is interested only in the price aspect of things material and spiritual. Now there may be all sorts of reasons why things should have the money value that they do have. Every human trait helps to determine money values—vanity, ambition, love, generosity, jealousy, greed, bare physical desire—on the side both of the seller and of the buyer. The psychological causes of value are not, of course, altogether irrelevant to the science of economics, since they may help, for instance, in forecasting what value some new thing will have, or some old thing will have under new circumstances, but it is not the profession, right or duty of the economist to pass judgment of a moral kind on those causes or on their results. Half the traditional economic controversies have arisen from non-observance of that rule. Karl Marx, for instance, as an economist, showed how the worker who had toiled with his hands to produce some object received in return for his labour the equivalent of only part of the value of what he had created, a surplus remaining which was the perquisite of the capitalist. Aware as he was of the shocking contrasts between riches and poverty, more fearful in his day than in ours, he concluded that the capitalist as such was an immoral exploiter and the hand-worker an innocent victim; therefore, he said, the

whole system must, indeed inevitably will, be overthrown that engenders such an evil state of affairs. Now whether he was right or he was wrong, he could not have reached those conclusions as an economist but only as a moralist or a politician, and the science of economics is not to be blamed for his or his opponents' errors of moral judgment or the disputes between them. One of the most pernicious blemishes that can creep into economic theory is what we may call the 'fallacy of attribution', that is to say, ascribing to each person who contributes to the production of wealth (capitalist, brain-worker, manual worker, landlord) a right to whatever portion of that wealth fell to his lot in the general economic process. The labourer, runs the fallacy, is worthy of his hire, neither more nor less. Economics, on the contrary, is not interested in what a man deserves, only in what he gets.

The first chapter in a work on economics must concern the formation of prices. Before we proceed with the chapter, however, let us be quite clear that the idea of a stable price structure is an unreal abstraction. Everything happens in time. If we could take an instantaneous snapshot of the economic system we should see a great collection of things and people upon whom we could pin tickets—'This object cost a hundred pounds to make, and that sells for half a crown': 'This man's labour can be hired for a pound a day, and that man makes ten thousand a year'—but those numbers only acquire reality in the process of production and exchange, which takes place in time and which itself alters all the numbers. What is more, some of the valuable items with which economics deals have no instantaneous existence. The services of bus conductors, domestic servants, opera

singers are not embodied in any objects to which our price tickets could be pinned. We are dealing with a process, not with an aggregate of things. Now the production and sale of one thing, which serves to form its price, affects the production, sale and prices of all other things. To take a simple instance, if for some reason—meteorological calamity, perhaps—the price of food goes up, people have less to spend on other things and the whole system of prices and costs and incomes is altered. Even under any given set of economic circumstances, changes of weather or fashion or personal character are continuously altering relative prices. Then we have to reckon with inventions, improvements, the organisation of trade unions or other associations, with human enterprise or human cowardice, with a thousand changes and chances of this mortal life. Above all, the whole scale of numbers may be in process of alteration through some monetary disturbance.

The relation between the fluctuating general level of prices and the momentary system of relative prices is perhaps the most difficult problem of economic theory. The simple answer that is sometimes given, that the relation is that of the static to the dynamic, of the height and wave-motion of the sea at some moment to the movement of the tide, is clearly inadequate, since, as we have already observed, the price system is a vain abstraction except when considered over a period of time. (Perhaps the idea becomes clearer if we think of the subject-matter of economics as being the reverse of prices, namely incomes.) What is outgo to the buyer is income to the seller. Thus incomes emerge from prices and, by being spent, themselves go to determine prices. An income obviously has no momentary existence, being

rather so much—so much money or so much enjoyment—per unit of time. If we use the marine metaphor, let us ask what we mean by the sea at Brighton. We know perfectly well that the particular composition of the water in that part of the English Channel visible from Brighton Pier is constantly changing under the influence of natural circumstances and even human intervention. We know, too, that the height of the sea varies from hour to hour with the fluctuation of the tides; we know that it is sometimes rough, sometimes calm, sometimes warm and sometimes cold. Yet withal we can talk about the sea at Brighton and still mean something. So, although we are aware that in actual practice relative prices are constantly changing, that over a long period of time the whole composition of the price structure is changed (new objects, new tastes and new standards of life emerging), that there are tidal fluctuations of prices in general which we cannot altogether distinguish from the waves and eddies affecting particular prices, yet we are not altogether wasting our time with figments when we talk of a stable price structure as being the background of economic thought. It must be clear, however, beyond question, that the idea of a stable system of prices is an abstraction for the purposes of analysis and not a description of what actually exists or is capable of existing.

Perhaps the best way of evading unreal hypotheses is to forget to bother why the level of prices, costs and incomes is what it is and assume that it was so to speak born in the prime of life. And then let us consider why a single object costs what it does in the shop; say, why a packet of cigarettes cost sixpence. A packet of popular cigarettes costs sixpence because millions of people with every variety of income, from an unemployment dole

upwards, are willing to pay sixpence for ten such cigarettes and because the manufacturing firm is willing to sell them at that price. But as soon as we go beyond that ludicrously obvious proposition we find difficulties and complications. How does it come about that the unemployed man and the millionaire are both willing to pay sixpence for the same packet of cigarettes? Somewhere among the consumers of these cigarettes there are purchasers who can just afford to buy them; if the price were eightpence instead of sixpence they would buy a poorer variety of cigarettes, or spend the money on something quite different like beer or shaving soap, or buy fewer of the same variety. Comparing the relative importance of their various family wants, they can just afford to pay sixpence, and sixpence, we may say, is what ten such cigarettes are worth to them under the given circumstances of their income and the prices of other things. But we could not be so sure that ten cigarettes were worth sixpence to the wealthier consumer in the same sense. If the object of value in question were one to whose consumption human capacity set no final limit, like house-room or domestic service, or even one whereof the limit of pleasurable consumption had not been reached by the particular purchaser, we could say that the last unit which he bought was worth to him just the price he paid and no more. Some economists, especially those devoted to drawing curves, have elaborated the theory that because the earlier units were worth presumably more than the last (his needs having been then further from satisfaction) the consumer was obtaining on them a surplus of value for which he did not have to pay, was enjoying (as they said, drawing an analogy from another part of the price

structure) a 'consumer's rent'. Now that notion, however interesting to the hedonistic psychologist, is of no real concern to the economist; indeed it is puzzling and misleading, since it suggests that unto him that hath shall always be given, and its pursuit will only lead the economist into the attractive but dangerous paths of metaphysics and morals. All he is concerned with is the fact that with the cigarettes at that particular price so many packets will be sold, and that any variation of the price will alter the number sold and thereby the profit to the manufacturer and distributor. In this case, the price is sixpence because it is a convenient unit, and the lowering of the price would be unlikely to gain many more consumers. If they are sought it must be through the means either of improvement of quality or of advertising, both of which affect the producer's rather than the consumer's side of the bargain, and which probably tend rather to divert demand to this brand from others than to extend the total demand for cigarettes.

On the producer's side the reasons for the ability to sell at the stated price are of much greater importance to the economist. Momentarily, the producer may be selling below his cost of production, because times are bad and he hopes they will improve, because he is starting on a new line and wants to extend his market by undercutting his rivals, or for other reasons. But in general we may assume for the purposes of this part of economic analysis that the cost of production is no greater than the normal selling price. What does that mean? It means, of course, that the *average* money cost of producing the quantity sold is no greater than the price obtained, but it means more than that, for it must mean that the cost of producing the last unit is likewise

no greater than the price obtained for any and every unit. The 'cost of the last unit' is a fictitious abstraction which may be defined as the difference between the total cost of producing n-1 units and the total cost of producing n units of the same object. It is technically known as the 'marginal cost' of production, and is one of the most important conceptions of modern economics. If the commodity in question is such that the economies of mass production are realised, then the marginal cost of production will tend to decrease with the increase of the scale of production, but since even under such circumstances there comes a point where marginal cost tends to increase through the elaboration of overheads, the increase of rents, and the shortage of available labour or capital, it is legitimate to begin by assuming that marginal cost increases with an extension of the scale of production, provided we remember that in a mechanical age that assumption becomes progressively further and further separated from the facts. We then have the proposition that the lower the price of some commodity, the more the consumers will buy, while the higher the price, the more the producer can afford to sell, although at the same time the more he sells the higher the cost of production. If we were to represent the two sides of that proposition by curves we should see them intersecting at some point which would represent the price that would naturally result from the 'higgling and bargaining of the market'. But at once it is necessary to qualify the proposition. If by the more economical use of machinery and the distribution of overhead costs the cost of production decreases with an advance of the scale of production, then there may be two or more points at which the curves intersect. A manufacturer of,

say, ready-made clothing, may make a profit by selling a comparatively small quantity of suits at four guineas a suit, but will be able to make possibly an even larger profit by selling suits of the same quality at two guineas, since he will be able to sell so many more of them.

Now the forces of supply and demand may themselves be determined by price conditions, that is to say by the forces of supply and demand for other commodities (with which term is included services and other exchangeable values, such as labour or the use of capital or land). What a manufacturer can afford to pay, for instance, for his raw material depends on the conditions of the market for his final product, and conversely the price at which he can afford to sell the final product will depend on the price of his raw material. The last unit of material that he can afford to buy (using 'last' in a similar sense to that defined above) will possess for him what is known to economists as 'marginal utility', just as the 'last' unit that he produces will be produced at 'marginal cost'. Where commercial considerations are involved, the idea of the variable utility or desirability of different quantities of purchases, implying a 'purchaser's surplus' (which, as we saw, is only of philosophical interest when the purchaser is a final consumer), becomes vitally important, since the manufacturer's profits will depend on the existence and the size of that surplus. In the sale, therefore, of intermediate products (that is to say raw materials to be worked up, or fuel or lubricants or other stuff consumed in the process of further production, or machines and tools), of labour and of the use of capital and land, the price of one thing, A, varies with the price of another, B, because the marginal cost of A, which is associated with the marginal utility of B to the manufac-

turer of A, varies with the marginal cost of B. There are four further reasons for the interdependence of every item in the price system. First, there is almost always a possible substitute for any commodity of exchangeable value. If labour is too dear, more capital will be used, if railway fares are too high people will travel in motor-cars, if spirits are too expensive they will drink beer—or rather some of them will—and the relative demand for those commodities will change and along with it, under the normal play of economic forces, their relative prices. Second, the supply of or demand for certain commodities is inextricably associated with the market conditions for other commodities. For instance, the demand for automobiles is directly connected with the demand for tyres and hence for the materials that compose tyres. Ink and paper, malt and hops—the reader can think of a score of examples of what is called joint demand, and of its counterpart, joint supply. The supply of wool varies with the supply of mutton, the supply of coal gas with the supply of coke. One of the most interesting instances of joint supply in these days occurs in base metal-smelting, in which other base metals, and sometimes silver, emerge as minor products of the smelting of the primary metal. If their price were to rise far enough they would, of course, themselves take the character of principal products, and for this reason it is always dangerous to use the term 'by-products'. Conditions of joint supply or joint demand present interesting problems in theoretical analysis, and mathematical economists have devoted many pages to their elaboration, but here we must be content with summary mention. The third reason for the interdependence of prices is that what any individual spends out of his income on one commodity leaves him

more or less to spend on all other commodities, and the redistribution of his income among its various possible uses, because one of the uses has become more or less expensive, may affect the price of any or every other item in his budget. Fourth, what is the cost of living to one man is the reward for working to another, and a change of price of an article may affect the incomes of everyone engaged directly or indirectly in producing it, and through their incomes their demands for different commodities and therefore the prices of those commodities.

The extent to which demand will vary with any given change in price varies, of course, according to the commodity in question and the circumstances of the case. The measure of the variation is called the elasticity of demand. Thus if when the price of an article is reduced by x per cent the quantity of such articles sold increases by x per cent, so that the total amount spent on them is constant, the demand is said to have unit elasticity, and so on; if the index of elasticity is less than unity, the demand is popularly called inelastic, but technically that term should be reserved for cases where the index is less than zero, that is to say, where the lower the price the fewer the number of articles sold. Such an instance sounds impossible, but it does occur, though rarely, when fashion and ostentation are concerned, the object of purchase being displayed as an advertisement of the purchaser's wealth. The last paragraph has indicated that the elasticity of demand for any commodity depends on the prices of other commodities, and that so does the corresponding elasticity of supply, which may be defined as the proportion in which the supply of the commodity will be augmented in response to any per-

centage variation of price. When we come to 'intermediate values' that consideration is of the first importance. The demand for certain base metals, for instance, like tin and nickel, depends to a large extent on the manufacture of motor-cars, and the demand for them is therefore extremely inelastic, since a reduction of the price of tin could not affect the cost of motor-cars sufficiently to make any difference to the demand for them and thereby to the demand of the motor manufacturer for tin.

The elasticity of demand for labour is similarly dependent on the prices of, and elasticity of demand for, the products of labour, but it is important to remember that 'labour' in general, as an object of purchase and sale, is a fiction of the economist, often a delusive one. Although there are usually world-wide or country-wide forces tending to drive all wage rates up or down together, and although in the long run any great discrepancy between wage movements in one industry and those in others would be adjusted through the gradual transfer of man-power to more attractive occupations, yet at any particular time the markets for the work of blast furnacemen and agricultural labourers are as separate, and as subject to different conditions of demand and supply, as the markets for steel rails and turnips. Remembering this, and ruling out of account for the moment variations in the demand for labour caused by a general movement of prices upwards or downwards, we can nevertheless perceive that there is such a thing as an elasticity of demand for labour, dependent on the particular market conditions for other factors like capital and for final consumable products. The supply of labour is not by any means as constant as a first glance might

suggest, since hitherto untapped sources, women for instance or young men who would otherwise be subject to higher education, may provide a fund of labour if the monetary or the patriotic inducement is strong enough, while even without bringing new persons into the market the suply can be varied by overtime, or short time, by variation of hours or of the ages of retirement from industry. Moreover, as we know to our cost, a country sometimes has to support a large and fluctuating body of able-bodied unemployed, whose chances of work vary with, *inter alia*, the demand for labour based on its price and secondarily on the conditions of demand for the products of labour. On the other side of the counter, the demand for labour obviously varies with the prospect of using it with profit. There is no such thing as a 'fund of work' or a fund of money available to spend on labour. The demand for labour is the resultant of the hopes and doubts of all employers about the chances of using it to their advantage, and while other factors will come in (especially, as we shall see, the monetary factor), one determinant of their feelings will plainly be the price at which labour offers. It may, however, be true that considering the conditions of demand for final products at any place and time a change in the price of labour may make very little difference either to the total quantity of work offered (in which case the demand for labour would have an elasticity approaching zero) or alternatively to the total amount of money spent on labour per annum (in which case the elasticity of demand for labour would be approximately unity). It is fairly certain, for instance, that in the post-war period the total income of the working-class population of the United Kingdom, perhaps even omitting the amounts received

in unemployment pay through the general funds of the Exchequer as distinct from those provided by levies on employers and employed, was greater with the actual large volume of unemployment than it would have been had wage standards been lowered sufficiently for the bulk of the unemployed to be absorbed. But it is not true that a reduction of wage standard would have had no effect on the demand for labour at that time. Under any particular circumstances the price of labour is fixed by economic forces in the same way that the price of material commodities is fixed, to the extent that if any given volume of employment is to be available there is a price, determinate within narrow limits, at which it can be afforded; the function of trade unions, then, may be conceived as securing for the workers the benefit of that narrow margin and of combining the disadvantage of unemployment with the advantage of higher wages to the maximum benefit of the working class.

Mention of trade unions recalls the vital question of competition and monopoly. The classical economists started with the assumption that conditions of free competition in production, distribution, sale and purchase of all values (including labour and the use of capital) prevailed, and afterwards made allowances for variations from that ideal. In these days it is not certain that the reverse analytical process might not accord more exactly with truth. Competition is not limited merely by legal conditions, by actual monopolies, price rings, trade unions and the like, but by brands, patents, advertisement, tied contracts and rebates, and by the 'uneconomic' preferences of the consumers themselves. There is nothing in the general analysis of price-formation given above to rule out any of these possibilities. The supplier

of anything, whether a final or an intermediate product, aims at getting the maximum out of the transaction for himself. If he can raise his profit by securing a monopoly, by himself or in conjunction with former competitors, he will do so unless restrained, though it is important to remember that the existence of monopoly will not necessarily entail an increase of price, since the maximum profit may be obtainable at the lowest price on account of the associated enlargement of demand. Indeed there are circumstances where the existence of a monopoly is the condition of minimum prices—for instance, a national postal service. There are also circumstances under which competition limited as to the number of participants but not as to its intensity may be disastrous despite the fact that it secures the lowest prices to the consumer. For instance, imagine a limited market being supplied with motor-cars by two firms in competition with each other. Now automobile manufacture requires a high capital outlay and a large and continuous turnover so as to secure the economies of mass production. If, then, for some reason (either because one of the competitors extends its capacity or because public demand falls off) the market becomes insufficient to support both the two firms at a level of production which will yield an adequate return on their capital, there is no alternative for each of them but to cut its prices in an endeavour to redivide the market to its own advantage; the course of a curtailment of production is not open since costs would immediately increase. But the last state is worse than the first and in the end the industry may be completely disorganised and the capital of both firms be lost, while the advantage of the purchasers of the motor-cars will be purely temporary. This kind of disturbance has been

quite frequent in the course of the depression that started in 1929.

In the condition of complete competition, that is to say where there is so great a number of producers or consumers of approximately equal economic size that the disappearance of any one of them would not make any great change in the circumstances of the remainder individually, then the price at which any article is sold measures at once the 'marginal utility' to the buyers and the 'marginal cost of production' to the sellers. The curves of utility (or desirability) of the product for the different buyers, presumed to be buying for further sale or for use in manufacture, may vary greatly among themselves, but competition will assure that each of them will be buying at such a price that were it to rise by a little he would have to curtail his purchases, or if it were to fall could extend them. That is just what we mean by saying that the price equals the marginal utility for the buyer. Similarly although the individual conditions of production might vary greatly, each producer would be selling at such a price that if it changed by a little he would have to alter the scale of his production. If the price were higher than his marginal cost of production, it would pay him to produce more until the equality was established, for competition would prevent him from gaining any monopolistic advantage, whereas if it were lower, although his *average* cost of production remained below the price so that he still gained a profit, he would enlarge that profit by changing the scale of his production until price equalled marginal cost, either because the cost fell or because the price rose through curtailment of supply.

Mathematical formulae and philosophical arguments

have been adduced to prove that under such circumstances the wealth of the community is at a maximum. Certain of the nineteenth-century economists were particularly anxious to show that the individual pursuit of private gain under competitive conditions, by adjusting prices, wage rates, interest and rents to their 'economic' level—just sufficient and no more to attract the quantity necessary to supply the demands of the consumers at the prices they were prepared to pay—ensured that all was for the best in the best of all possible worlds. How should it be otherwise? If the cost were more than necessary then competition would reduce it, just as it would reduce the price to the lowest level compatible with the costs; if the consumer were not satisfied with the relative distribution of his real income between the various commodities and services, guided by the 'cost-resistances' to his demands, then he could redistribute his expenditure until he was satisfied. This somewhat complacent doctrine had first to be modified so as to admit the possibility of exploitation; it was no answer to criticism of cruel working conditions that a child did not have to go to work in a coal mine at the age of six unless he wanted to. Gradually, too, the world and the economists came to realise that legal regulations, while they could not alter the forces of competition, might restrain them within certain lines and therefore might be used as an instrument of social improvement. It also had to be admitted that competition itself did not always produce the most economical results, especially where mass production was involved. Further, it must be agreed that the human animal cannot always be relied on to know what it wants. Of course, no one else has authority to say what the animal wants, but the community of men

has a right to prevent or hinder individuals from satisfying wants which hinder social advantage, provided it is not forgotten that liberty is the first benefit that the community can grant.

Fortunately, the economist need not concern himself with the question whether a man wants what he pays for, still less whether it does him any good, but he may legitimately point out, as a technical expert, where the pursuit of private gain does not accord with the achievement of maximum public gain even if the idols of individualism are held in veneration. Competition may defeat rather than ensure efficiency by limiting the scale of production. Institutions with important public responsibilities, like central banks, cannot be exposed to the forces either of unrestricted competition or of the unrestricted pursuit of private profit. And, in general, maximum private gain will differ from maximum public gain in the ordinary economic process wherever the social costs of any transaction or process of production differ from the private expenses. The reader will be able to think of a score of examples for himself, but a few typical ones may be cited. A factory belching forth grimy smoke from its chimneys does not have to charge in its cost account (except in some small measure through the deterioration of the health of its workers) the physiological and aesthetic injury wrought to the community; on the other hand a well-designed building in a city street reaps for the bank or shop that occupies it only partially and indirectly the reward of the beauty which it grants for the appreciation of all passers-by. Those responsible for the construction of a highway (usually of course a public authority) profit only indirectly, unless special precautions are taken, by the increase of rental

values that their enterprise achieves; on the other hand they do not pay for the greater wear and tear of life caused by the larger volume of traffic to residents on already existing sections of the highway. An industry with a high labour turnover, like the dock industry, leaves to the community the burden of supporting in unemployment the reserve of labour which it maintains to its own advantage. In any case, the agreement of private profit with social advantage is accidental and has no moral significance. Even were it to occur in every case, moreover, it would still be open to reformers to claim that the attainment of a maximum total worldly income for the community was not the ultimately desirable objective.

The division of the community's income among individuals and classes has itself an economic as well as a social significance. Textbooks of economic theory frequently contain a separate section on the 'distribution of wealth'—which must not, of course, be confused with distribution in the sense of wholesale and retail trade, transport and delivery. But distribution is only the reverse aspect of price-formation, and incomes, like the prices which they mirror, are churned continuously out of the economic machine by the forces of demand and supply. There is no separate factor to which can be attributed the fact that such and such a proportion of the total product falls to the manual working class as a whole, or to the capital-providing class as a whole, any more than a separate factor is responsible for the division of the product between those engaged in agriculture, those engaged in manufacturing industry, and those engaged in trade and other services. Both sets of relations vary with changing circumstances such as in-

ventions, weather, or fashions in public demand, and both can be altered by legislative action. Attention has already been drawn to the 'fallacy of attribution', the fallacy of attaching to any contributor to the process of production and exchange any right to some proportion of the result, of supposing that what he obtains, by fair means, for his contribution need bear any relation to his deserts. It may, or it may not. The point is irrelevant to economists, just as economists are exploring territory foreign to their subject when they enquire *why* things have exchangeable value. They are not, as economists, concerned with so-called 'real values' or 'real costs'. Money values and money costs are their material, and the price system, whose formation we have examined, is the starting point of their analysis. Thus they are unconcerned with such questions as 'What is value?' or 'Who creates value?' To them the willingness of anyone to pay in money or kind for a thing makes that thing valuable, and in the creation of value the commissionaire outside the moving-picture theatre is more important than the ploughboy because he is paid more. That sounds cynical, but it is intended only as a pointed way of saying that to the economist value is not specially connected with material objects or with the primary stages in the complicated process of supplying the consumer's needs.

At the end of this chapter it cannot be too strongly emphasised that the process of price-formation is one which is constantly going on, and that although it must start somewhere it is interesting as a dynamic process. Prices themselves are meaningless except in relation to a volume of demand or supply which by its nature (its dimensions, the mathematicians would say) cannot be

instantaneous, and many of the objects of value—services, for instance, indeed any kind of labour, or the use of capital—exist only through a period of time. Elasticity of demand is not an attribute which attaches to a commodity like its size or weight; it is ascertainable, and possesses reality, only in the course of time and of changes in the circumstances of supply and demand. A static framework for economic analysis is not merely useless; it has no valid meaning. A system moving but moving in equilibrium so that prices of objects and rewards of services are unchanged—what we have called a stable system—has some meaning and may be useful as an analytical jumping-off place, but it is very remote from actuality and the attention of economists is far more profitably devoted to the problem of isolated changes in prices, and rewards, leading naturally to the problem of changes in the general level of prices and in the relative rewards of different sections of the community.

CHAPTER II

CAPITAL AND INTEREST

In the previous chapter the price of the use of capital has been mentioned as one of the prices that emerge from the general process of formation of money values, subject to the same forces as the price of wire nails or a bricklayer's labour. It is indeed so, but it is of very peculiar interest and importance in the price system, because it is one of the regulators of the volume of purchasing power available (it will be recalled that the discussion of prices started with the assumption of a certain level of incomes in the community) and therefore of the general level of prices; thus it is a link between one system of prices, moving relatively but not as a whole, and a later system, emerging from the former, in which the whole scale of prices has altered. It is thus a first clue to what is plainly in these times the economist's first problem, the broad fluctuations of prices and of production with their attendant social, political and economic phenomena.

The use of capital has economic value because men are willing to pay for it, just as they are willing to pay for all kinds of material objects and services both vain and useful. There is no need to enquire, therefore, with any particular suspicion, what is the cause of interest or whether it should be vilified as usury or exploitation. Of course, as with labour in general, there is no such

thing in practice as the price of the use of capital in general. Each particular transaction in the capital market—the arrangement of an overdraft by a private depositor, or the flotation of an international loan—establishes its own particular price, although the various forms of capital-use may be grouped and the price of each considered for convenience as a uniform entity. For short-term bills of exchange within certain categories, for instance, there is always a very uniform price so that they may be bought and sold in the discount market with scant reference to the particular transaction to which any bill relates. The main gradations of capital-use which it seems convenient to employ are (1) Short-term money, including day-to-day loans from the banks to stock-jobbers and bill-brokers with which they ply their trade, and bills of exchange and other short-term or self-liquidating, negotiable instruments representing the debt of one person to another; (2) overdrafts, advances and open-book accounts, dependent on the personal relations between lender and borrower, and therefore not giving rise to negotiable paper, though in common with the first category they will probably be extended for a limited period of time and the lenders will be banks or other firms having a professional interest in the capital-market; (3) bonds, debentures and notes, issued to the public by governments, public authorities, limited liability companies or private firms, usually backed by some specific security and essentially bearing a fixed rate of interest; (4) Shares, participations and any other form of capital instrument giving rights to a variable surplus of money, whether issued to the public or only to those privately concerned in the enterprise. These categories have obviously no clearly defined

boundaries; mortgages on real estate, for instance, might be placed in the second or in the third, or might be allowed a special class to themselves, while preference shares, again, although carrying a specific and limited rate of interest, and therefore classifiable in group 3, may have that rate of return varied downwards, especially in the early years of a new company, and, likewise in common with group 4, involve a claim only on the surplus assets of the company after the creditors have been paid off in the event of a liquidation. For some purposes, it would be more valuable to classify capital-use according to the purposes to which it is devoted, that is to say, the financing of the current exchange of commodities and securities, the creation of new 'real capital', enterprise not involving the creation of fixed capital objects, or personal expenditure on current consumption.

Each category of capital-use has its own particular problems and its own set of prices. Nevertheless there is a connection among them, so that there is a tendency for all sets of prices to move in the same direction. This might be expressed by saying that in each there is a pure 'interest-component', cleared of any trace of price for risk-taking or reward for enterprise, or of any dependence on the period of the loan. But that conception, though valuable perhaps analytically, is artificial, and it seems better to put the point concretely and say that in their personal estimation of the profitability of any bargain concerning the terms of capital-use the lender and the borrower are both influenced in some measure by the conditions existing in the markets for other forms of capital-use. Thus a private investor, however intent he may be on obtaining either security or the chance of high reward, will always consider the relative

attractions of more or less risky forms of investment, so that the prices of bonds cannot rise far without diverting some money at least into the market for equity shares; while, to take an example from the borrowers' side, a government which feels assured of a continuance of cheap money in the short-term market, enabling it to float treasury bills at an advantageous rate, will hesitate before applying for a loan to a comparatively expensive bond-market; or it may, as the British Government did in the summer of 1932, take the risk of a conversion of its bonded indebtedness to a rate of interest lower than that currently established by the market, implying as such a course must the raising of money at short or medium term to pay off former long-term bond-holders who decline to convert. The influence of any change in prices in one part of the capital-market upon prices in other parts of the market is much more certain, swift and direct in normal times than at times of crisis. During a bad slump for instance, very low rates of interest on short-term paper may have very little effect in cheapening long-term borrowing.

The classification has illustrated the fact that the rate of interest and the price of the use of capital, though comparable are not identical. Incidentally, it cannot be too strongly emphasised that although one may use the phrase 'capital-price' as a convenient portmanteau, it is not capital that has a price but the use of it. The term 'capital' may ambiguously stand for either a sum of money being lent, invested or repaid, or a mass of material objects of a more or less durable character on which saved or borrowed money has been spent; in the one case it clearly has no price, since a sum of money has no money value but itself, and in the second case its

price, regarded merely as an aggregate of material objects, does not differ essentially from that of any other material object whether regarded as capital or not. In order to be clear on this point, let us make some definitions which will both be logically sound and agree as far as possible with common usage. The 'Supply of Capital' in connection with the price of its use, will be a supply of money available at any given time for lending, or for direct investment by the owner—money, of course, meaning not cash specifically but any generally accepted means of payment. 'Real capital' will mean the sum total of all valuable objects at some place and moment, or any named part of it, including the food in the housewife's larder as well as the machines in the factory and the stores of raw and finished goods in the warehouses. 'Instrumental capital' will mean that part of real capital which is used in the process of production of goods for consumption, that is to say fields, forests and factories, mines, raw materials, fuels, machinery and tools, means of commercial transport and storage, shops and offices, and goods in the course of wholesale and retail trade up to the moment of final sale to the consumer. 'Fixed capital' will mean that part of instrumental capital, like land, factories and machinery, which, although it may not be fixed in the sense of being physically attached to one site, does not appear in any form in the object of final consumption, nor is consumed immediately in its manufacture, but through which in some direct or metaphorical way the final object has to pass at some stage of its manufacture and distribution. Working capital will then comprise the remainder of instrumental capital.

Let us exclude for the moment from our consideration,

not because it is altogether unimportant but because it is subject to rather different forces, the use of capital for purposes of private consumption, such as instalment credit, credit accounts with retail stores, borrowing from moneylenders, or from banks or housebuilding associations on mortgages on houses personally occupied, or private overdrafts at the bank. Then we may say that the demand for capital-use depends on the expectation of future profitability. If a man borrows a thousand pounds at 5 per cent to invest in his business he only does so because he believes that its employment will yield a return of at least fifty pounds per annum without impairing the capital-asset which he has bought with it. But that only shifts the real question one stage ahead without answering it. Why is his expectation justified? Why, by employing it in industry or commerce, is a man enabled to pay back in a year £105 for £100 that he borrows now? There need be no hocus-pocus about money breeding, or analogies with natural reproduction and growth. The answer simply is that people are willing to pay, and can be reasonably counted upon to remain so willing, for articles which need time and capital for their production; and that one of the costs of production is the price of the use of capital, which is established in open-market competition between those who have, or might have, money to lend and those who imagine they can make a profit by satisfying the public's future wants. The use of capital can be regarded as a raw material or fuel of manufacture, trade and finance. Raw materials and fuels have, of course, a cost of production which goes to form their price by supplying a counter-force to that of demand alone, whereas capital has no such direct cost, but even if people were willing

to provide capital without return (without, at least, any interest-component in their return) a positive price would nevertheless emerge owing to the competition of manufacturers and traders for a limited quantity of capital to use. Indeed if there were no such thing as a rate of interest one would have to invent it, because otherwise there would be no means of reckoning the comparative desirability on the one hand of devoting the available human effort to making things for immediate consumption, and on the other of devoting it to making things which after a greater or less interval of time, and more or less indirectly, will serve to produce things for consumption. A communist state pays interest merely by passing money from one pocket to another, that is to say not at all, but it has to have some way of calculating whether it is more worth while making consumable goods, or machinery to make consumable goods more cheaply, or more expensive machinery to make consumable goods more cheaply still. In the communist state the expectation of disposing of the goods is, of course, a certainty; but in the state of private capitalism the calculating factor, or price of the use of capital, will depend, as far as the users are concerned, on the expectation of finding a market for the output of the capital-investment at a price which will yield the cost of the capital according to the terms of the market. The expectation may be ill founded, and the borrower and /or the lender may lose their money, but if it is well founded it will be based on the public's estimation of the comparative merits of things present and things to come, that is to say on the rate at which they unconsciously discount future advantages, not individually but as a composite consumer. It is obvious that the expectation

of the profitability of investment of capital will also vary with the state of technical development of the community and on the price payable for other means of production. For instance, if the price of labour is rising in relation to the price of commodities there will be a tendency for people to turn to capital as far as possible and to cut down the direct labour-component in production, and thus for the price of capital-use to rise in response to the increased demand. On the other hand, an invention which economises the use of capital will tend to drive down the rate of interest. As with other prices, the actual level of the price of capital-use is not so important as the forces making for changes in it.

Now let us turn to the supplier of capital. The supply of capital—a flow, remember, not a continuing sum—is to some extent variable at will in a modern credit economy. How, it is often asked, can a bank or similar fiduciary institution lend money which it has not got? The preliminary answer is that it does not lend money in the sense of legal tender issued by the government or other central authority, but it lends a deposit in its own books, which the borrower does not draw out in cash but retains until he draws cheques on it in favour of those who have supplied him with goods and services, and they in their turn pay their cheques into their banks. If there were only one bank in a community it could count on getting all its loans back again in the form of other customers' deposits, less a small deduction for cash needs, and even where there are several banks the loss of cash is most unlikely to equal the advance, certainly not if the other banks are simultaneously enlarging the volume of their advances. The fact is that the credit which emerges from lending by banks is for most commercial

purposes as good as cash. However, as we shall see later, if the banks as a whole consistently lend more than is lent to them, not only will their own technical position be weakened unless there is a corresponding increase in the volume of legal tender, but the whole price system will be altered, a contingency which for the moment it is best to omit. Let us therefore assume for the moment that the banks are only channels through which lending is conducted, and that they use their power of credit creation merely to smooth out minor fluctuations in the volume of new lendable money coming forward from day to day or in the day-to-day demand for the use of money.

Money available for lending is money unspent. One would say immediately money saved, but for the moral tinge that unfortunately colours that word. We all know that a large proportion of the money becoming available for investment through not being spent on current consumption can only by a very broad stretch of fancy be associated with the idea of thrift, of putting-by against future emergencies, which the word 'saving' calls forth. The undistributed profits of public companies, the surplus incomes of very wealthy people, the yet-unspent but later-to-be-spent balances of our own incomes or those of local and central governments to whose revenues we contribute, have but the remotest relation to such personal saving. In fact, what is most obviously saving in that sense, the accumulation of money of the realm in the peasant's stocking or the miser's safe, is not available for lending at all. The science of economics, and especially this particular branch of it, is choked with definitions and with misbegotten word-inventions, so we will use the word 'saving' in spite of its disadvantages, re-

membering that it means merely not-spending. Now the supply of capital, formative of the price payable for its use, is the present flow of new saving. The amount saved in the past, and already employed by borrowers, is irrelevant to the supply of capital to-day, though it may affect the demand for it. For instance, if a statistician wished to assess the comparative importance of 'small savings' in providing the country with capital for its future development he would be concerned not with the existing total of savings-bank and building-society deposits and of national-savings certificates, which would measure merely what small-savers had achieved in the past, perhaps many years ago, but with the rates of increase of that total, which would show what small-savers as a class were now performing.

It is clear, and a matter of common experience, how the price of a material article affects the aggregate supply thereof; it is not so certain how the price of the use of capital influences the current supply. In the first place, as has already been pointed out, a large volume of saving is automatic and is scarcely affected by the rate of return obtainable by investment; in the second place, a good deal of saving properly so called is done with the object of securing a certain minimum income at a later period, so that the lower the rate of return the more must be saved. On the other hand there will always be 'marginal' savers who would not think it worth while to save quite so much if the monetary inducement were diminished. It seems impossible statistically to measure the relative importance of these different factors of supply, since in practice the variation of interest rates (except over such long periods that the changes in the social habits and material condition of the community render

comparison irrelevant) on any appreciable scale is invariably accompanied by other economic phenomena which have a much more profound effect on the volume of saving and of investment, namely, changes in the general level of incomes and of prices. Even if an individual's circumstances otherwise remain as before, the prospect of price changes on a large scale must considerably influence his determination to put by. For instance, if prices are in steady decline the longer he can postpone his purchases for consumption the better. Unfortunately this is not a self-corrective but a cumulative process, since the postponement of his purchases will itself contribute to the downward movement of prices.

Thus the only general statement that can be made about the formation and variation of the price of the use of capital is that they result from the reaction of a demand based on expectation of the profitability of future production (itself based fundamentally on the proportion in which the community as a composite individual discounts future benefits) to a supply limited by the willingness to save (itself likewise founded on the premium placed on future benefits), and that the reaction will vary according to the general economic condition of the community and to the progress of material civilisation. The price is clearly not a uniform one for all forms of capital-use. In the short-term market the rates bounce up and down very swiftly, since the amount available for lending varies greatly according to the momentary circumstances of the lending banks and firms, while the demand, though more stable from day to day, is likewise subject to large fluctuations in accordance with the volume of commercial bills coming forward, the level of prices and the rapidity of turnover of

securities held on margin; it is only the comparatively long-period variations of the short-term market that affect the markets for long-term capital, in which on the whole quite different borrowers and lenders participate. Rates in the bond market, though not by any means all the same, also may be said to have a common interest-component, since they all tend to move together, but the element of risk is more obvious than in the short-term market, and also the element of variation in the purchasing power of money. In some measure the interest-component is traceable in the share market also (who has not heard people arguing with themselves in some such terms as these: 'Why should I put my money into government stocks at 4 per cent when I can get 7 per cent by buying Dentosalve Toothpaste Company shares, which have paid the same dividend for five years?'); but in the equity market the price of the use of capital is not a preconcerted percentage but a share in the product of its use, in the shape of whatever surplus may remain after paying costs, and the price has to be judged on its merits in relation to the possibility of any surplus emerging and to the attraction of other forms of investment. It is artificial and therefore misleading to say that profit is composed of several elements—interest, compensation for risk, reward for management and so on; but if the division must be made the analogy of insurance indicates that the risk element is itself divisible into an equalisation factor—a profit on some investment to make up for a loss on others—and a reward for taking the risk.

Profit, however, cannot properly be so divided. Though profit can be secured in other ways, as a return on share-investment it is an offer to the potential lender

of capital which he may take or leave according to his circumstances, personal character and appreciation of the prospects of the borrower. As a price for the use of capital it competes with interest and merges into interest, but it is not interest and does not, logically speaking, contain interest. Nevertheless, if we ask why there is such a thing as profit, we see that profit is a cost in the sense that if experience did not show that there was a reasonable average prospect of the emergence of profit on a scale competitive with current interest rates no one would lend money except at fixed interest, and that then the variation of profitability would merely be transferred to the chance of a default on the loans. Thus in a capitalistic society profit in general is necessary to attract capital for experiments and advances in production and in order to meet changes in public demand; profit in particular instances emerges because the enterprisers were correct in their judgment on the one hand of costs and on the other of the willingness of the consumers to pay. Profit is therefore at once the price of fallibility and the reward of prescience.

In this treatment of capital and the return on it, no distinct analysis has been accorded to land and rent. In classical political economy this was a division of major importance, and often rent was argued to have a quite different cause from interest on capital. The theoretical excuse for the differentiation, though expressed in a number of different ways, was fundamentally this: the supply of land is fixed, in this sense, that whereas investment of capital implies the creation of some new wealth you cannot create land but can only buy it from someone else. Hence monopoly was the essence of the Ricardian theory of rent, which may be summarised

roughly as follows. Under a given set of economic circumstances, there is some land which is just capable of producing crops at the prices ruling, including in the cost nothing more than the price of the labour and the raw materials of farming. On such land clearly no rent will be paid, but on every acre of better land—the prices of labour, of materials and of the crops being the same—a surplus will accrue to the landlord and will form his rent. As the pressure of the population on the food supply increases, poorer and poorer land comes into cultivation, what was previously no-rent land procures a rent, and rents all round will be enlarged. Now apart from the fact that this theory (which was really inspired by the conditions ruling in England during the Napoleonic wars) was based on a theory of the reward of labour which has since been discarded by economists, its analysis is vitiated as soon as the possibility of applying capital to the land is admitted, or as soon as allowance has to be made for competition between different possible uses of land. Very often, especially in comparison between old and new countries, the difference between good and bad land lies not in anything inherent in the land itself but in the amount of capital that has been applied to it. Criticism of Ricardian and neo-Ricardian theories of rent, therefore, must be founded on a re-examination of the peculiarities which, it is claimed, distinguish land from capital.

Clearly land must first be stripped of all capital associated with it, and must be considered in its virgin, unimproved state. What is it then but natural resources in a certain place? The natural resources may be manifold —the land may be good for growing wheat on the surface and full of minerals below—and the value of those

resources may vary enormously with the situation: for instance, the value of agricultural fertility is of no importance whatever if the land is in the middle of a city, while the value of the minerals might equally be negligible if the land were in the depths of some death-dealing tropical forest. What else is any kind of capital but natural resources in a certain place? A brick-clay quarry is land; hew out the clay and already it is liquid capital; set up the bricks in the walls of a factory and they are fixed capital. And still that capital is composed of natural wealth in a given position which determines its value. Is the distinction, then, that human industry has been necessary to change the position and augment the value? But the firing of the bricks is akin, surely, to the manuring of the land, and, if it be true that the situation of land cannot be altered by human agency, Mahomet can go to the mountain that will not come to him. There is no essential difference between enhancing the value of the North American prairies by colonisation and enhancing the value of the brick-clay by transporting it to centres of population where bricks are needed. The defenders of the difference between land and capital have another line to fall back on; every activity of man requires extended space, and the peculiarity of land lies in its being alone capable of providing extension, and therefore in its forming a necessary ingredient of all forms of production or enjoyment of the fruits thereof. True, but the value of space in the sense of spatiality is not fixed and immutable, but is itself a matter of degree. The application of manures to agricultural land so as to procure a higher yield per acre is a means of limiting the need for mere extension, and so likewise is the construction of sky-scrapers. The owners of land, as a group,

have indeed a monopoly of extension, but they are competing with each other and with a horde of devices to curtail the need for it. Hence there is no need for making any logical distinction between capital and land, between interest and rent, though there may be value in a practical distinction on account of the greater variations that the value of the land section of capital has in respect of its mere situation. A factory is more valuable in one place than a precisely similar factory in some other place, but under normal circumstances the variation is never so extensive as between the value of land in one place and the value of precisely similar land, as far as natural resources are concerned, in some other place. This raises vital questions of practical politics, since the variation may be caused by public policy such as the construction of roads, and since social justification may be lacking for the way in which the laws of real property operate in passing on to a sleeping partner in industry rewards obtained through the energy and enterprise of others, but it does not warrant analytical separation of land from other forms of capital.

The phrase 'factors of production', therefore, is to be taken to mean not land and capital and labour, as in classical political economy, but simply the last two. In some connections a further factor has to be associated with labour and capital, namely risk-bearing, which is as necessary an ingredient in production as the other two and which likewise has to be paid for. Nevertheless in some senses it is not comparable with them. There is no definite and ascertainable supply of it which may or may not be fully employed; and, moreover, as we have already observed, the price of it cannot be disentangled from the price of the use of capital. Risk-bearing may,

indeed, be regarded as a category of capital-use, and mention of it reminds us that the terms capital and labour are, as has been pointed out before, convenient abstractions merely. There are many different kinds of labour, only very indirectly competing with each other, and there are likewise many different kinds of capital-use, the prices of which may vary independently.

CHAPTER III

INTERNATIONAL TRADE

So far, the implicit assumption has been that there was a single community throughout which the price structure was uniform. The analysis needs little modification to allow for the obvious differences of price which occur through limitations of distance, accessibility and local competition, as well as through variations of income levels in different parts of the community on account of shifts in the industrial centre of gravity. But what alteration will have to be made to admit the problem of relative prices as between two different communities, that is to say the problem of international trade? Some economists have been inclined to poohpooh the suggestion that any more modification is necessary for the consideration of trade between Great Britain and the United States than would have to be made to consider the trade between different parts of a single country; it is, they urge, just one aspect of the general price problem. But that is not the whole story. There are a number of reasons why international boundaries make a difference to the analysis of trade and prices. First, the government of a sovereign state is concerned with certain non-economic considerations which may justify interference with international trade which it could not legitimately apply to internal trade; it may be concerned, for instance, to build up, even at a

heavy economic cost certain industries held to be strategically essential. Second, international boundaries constitute natural and administrative barriers to movements of population or of capital, and thus prevent adjustments to economic changes; for instance, if the wages of unskilled labour are appreciably and continuously higher in one part of any country than in some other part, then labour will move and the price both of labour and of its products be equalised, whereas the transference of labour between two different countries, say from Great Britain to the United States, is hindered both by the reluctance of workmen to emigrate and by the national economic policies of both countries. This may be reflected, even in the absence of actual tariff barriers, in a permanent difference in the prices of some objects of value, such as services or, where limitations on the international movement of capital exist, of securities. Third, there is the purely economic consideration of different monetary systems. We are at present accustomed to national independence in monetary policy, and although the existence of an international system like the gold standard sets a practical limit to national variations, even then the monetary system of a country can be in some measure independently manipulated, and the need for independent manipulation may become a valid excuse for interference with trade in goods. Fourth, monopolies, trade unions and other price-fixing organisations are usually on a national scale, and although again their independent ability to operate as concerns commodities entering freely into international trade is strictly limited, they may profoundly affect the prices, compared between country and country, of other goods—building material and labour, for instance, which cannot be

transported abroad, or goods which can be 'dumped'. Finally, the economist has to take account of the fact that national governments have already interfered with trade passing over their frontiers and that the action of any one Power in that respect may affect the economic as well as the political propriety of such action by others. Though the final answer might be the same, the growth of tariffs abroad had to be admitted as a most relevant factor in the post-war controversy in Great Britain about the comparative advantages of free trade and protection.

Those who deny the relevance of international boundaries in the analysis of trade are, however, undoubtedly right in insisting that trade is a mutual exchange which is only carried on because both parties gain some advantage from it. By abstracting the money element and regarding trade as barter, as an exchange of goods for goods freely conducted by both parties, we see at once how it is that foreign countries sell to us because it pays them to buy from us; but the abstraction is dangerous because it takes away from the picture all those vitally important elements in international exchange, like movements of capital and interest, which depend essentially on the money-relation. Rather we may observe that, say, a Frenchman profitably sells goods to England only because he is (or at any rate confidently believes himself to be) able either to use to his own profit the pounds sterling that he obtains in return, by spending them in the only place where they are current, or to sell them to somebody who will so profitably spend them. In other words, we buy things abroad because we can get them more cheaply there than we can at home, and foreigners buy from us because we in our turn are the cheapest market for some other commodities. But how

can the two sides balance, say where everything in country A costs less to produce (because of a lower standard of life) than in country B? The answer is that it is not *absolute* but *relative* cost that determines what commodity will be exchanged. In the presupposed absence of international monetary relations, presumably labour is the basis of the cost calculations; then let us imagine that in country A commodity x costs 3 units to produce and commodity y costs 4 units, while in country B the costs are respectively 6 units and 5 units. Then, if there were no international trade, producers of x in country A would have to pay four-thirds of a labour-unit for a unit of commodity y, whereas producers of y in country B would be selling their product for five-sixths of a labour-unit. On the other hand producers of y in country B would be paying one-and-one-fifth labour units for a unit of x, whereas producers of x in country A would be accepting three-quarters of a labour-unit. It is obvious, therefore, that if there are no artificial barriers country A will sell commodity x to country B in exchange for commodity y. This artificial analysis cannot profitably be pursued further, but it serves to illustrate, if not unquestionably to prove, the general proposition that under free conditions of trade every country produces, and sells in international trade, those commodities for which it is relatively best suited, even though the absolute cost of producing them may be less in the importing countries. The actual 'barter terms of trade', that is to say the rate of exchange of units of absolute cost, will depend in the first place on the average level of efficiency in each country, and in the second place on the non-commodity items in the balance of payments—exchange services, payment of interest, export of capital, etc. In-

efficient or industrially backward countries, along with countries with a heavy service of interest to pay abroad, will have to exert a far larger real effort to produce what they sell abroad than went to produce what they are able to buy with the proceeds.

Incidentally, though one would not willingly attempt to base a final refutation on so unreal an abstraction as served for the argument above, this seems a convenient point at which to deal with the fallacy of supposing that tariff barriers are capable of defending a local standard of life. The only way in which they could do that is that, under certain infrequent circumstances they might enable an internal monetary policy to be conducted which restrained industrial fluctuations to a minimum. A standard of life is not capable of arbitrary fixation. It is determined by efficiency in production and commerce, by the size of income from past capital-investment abroad (investment at home being already allowed for in the efficiency factor), and by the keenness of the world's insistence on having the products of the community in question. It is measured, that is to say, by the volume of home production and by the barter terms of trade, with adjustment for exchange of services, so that the less the quantity of goods that has to be sold to obtain a given quantity of imports, or conversely the larger the quantity of imports that can be obtained for a given quantity of exports, the higher the standard of life. A 'favourable', that is to say an outward, money balance of external trade in goods and services indicates an accumulation of credits abroad (capital export) which can only be achieved by a reduction of the standard of life for the time being. On the other hand, if monetary considerations indicate that the inwardness of the balance

of trade is excessive, that is *prima-facie* proof, not that the internal standard of life is being lowered by attack against which a simple defence is possible, but contrariwise that the standard has been set at too high a level and is actually putting up too obdurate a resistance to necessary reduction. Thus the real argument for a 'defensive tariff' in Great Britain in the period 1926-31 was not that it was essential in order to maintain the standard of living of the people but that it was perhaps the simplest means, in view of the rigidities of the system, of lowering the standard. In practice, unfortunately, this relation between standard of life and balance of trade, the opposite of what is sometimes assumed in political controversy, is obscured and its working-out prevented. One potent reason is that the general economic conditions which produce a reduction of lending abroad and therefore an inward change of the balance of trade, instead of producing a rise in the internal standard of living or an increase of home investment, either of which is rendered possible and desirable by the cessation of external investment, has the opposite effect. In 1929 and 1930, for instance, as compared with 1928, the external balance of trade of the United States was changing in the direction first of an increase of imports and then of a reduction of exports, the outward flow of capital having been much diminished; and this circumstance should have been accompanied, if there were to be no dislocation, either by a rise in the standard of consumption (to the extent to which the reduction of lending abroad represented a reduction of saving at home) or by an increase of real investment at home (to the extent to which it represented a transference of investing power from foreign to home capital markets), whereas in fact

home investment had been declining, according to the commonly accepted measures, since the fall of 1928, while the standard of consumption, though artificially inflated by the swelling of paper capital-values, was ultimately sharply diminished on account of the industrial recession with its inevitable unemployment and pressure on the wage standard. Hence the augmentation of imports seemed not an advantage but a menace.

These parenthetical observations, based as they are on what has been called the 'Robinson Crusoe' method of economic analysis, that is to say the method of building upon unrealistically simplified suppositions from which the monetary complication has been altogether eliminated, do not advance much further the general theory of international trade and exchange. It is not only boring, it is intellectually muddling, when one asks a question about, say, the rate of exchange between dollars and marks, to be invited to 'suppose one country produces only cotton and another only safety-pins'. Suppose, therefore, that any ordinary country, Alphaland, is producing a normally wide range of goods and services and is capable of producing others if it becomes worth while, and that to begin with the country has a certain determinate set of exchange rates on the currencies of other countries. Then by multiplying the internal prices by the exchange rates, everything Alphaland produces will have a price for every foreigner in terms of his own money, after allowing for import duties, cost of transport and so forth; and similarly the citizens of Alphaland will perceive the price in their own money of everything produced anywhere in the world. And at these various prices, Alphaland will be buying certain articles from the outer world in certain quantities, and

will be selling others to the outer world. It does not follow, of course, that Alphaland will be making only those things which it makes more cheaply than the rest of the world (at the given rates of exchange) and buying everything else abroad; patriotic and personal preferences, tied markets and industrial standards, the expense and in certain instances like houses or other fixed objects the impossibility of international transference, all will be superimposed on the initial cheapness in determining the demand, quite apart from governmental interference. Now leaving aside any international payments other than those made for goods and services, if under the given circumstances the citizens of Alphaland wish to buy a greater total value of goods and services than the value of what they can sell, there will be more sellers than buyers of her currency, which no foreigner wants permanently to hold for its own sake, and therefore the foreign exchanges will move against Alphaland. It would be ridiculous to presume that they all would move simultaneously and equally, but they will tend to move together because there are always *arbitrageurs* waiting to snap up the profit of any three-cornered deviation of international exchanges, and because the same process is going on among all the other countries of the world. Obviously the United States could have not a high exchange against Great Britain and a low one against Canada, unless Canada also had a high exchange against Great Britain.

If there is no buffer, such as that imposed by a metallic monetary standard, to restrain the exchange at any point, then the adjustment of the international trade relations will be automatic, since the depreciation of the exchange will cheapen everything in Alphaland for

foreign purchasers, and make all their products more expensive for the people of Alphaland. Some commodities will pass out of international trade, and others enter, or the flow actually be reversed, Alphaland becoming an exporter instead of an importer; or the volume exchanged will alter, according to the elasticity of demand for the various commodities. But if Alphaland happens to be on the gold standard, then as soon as the exchange rate on any other gold-standard country, Betania, falls below the point at which it becomes profitable to export gold, on comparing the mint selling price in Alphaland with the mint buying price in Betania less the expenses of transhipment, then gold will tend to flow out of the country. If it does actually flow out, the sale of gold will make up the trade deficit and prevent the exchange from falling further (*arbitrageurs* again preventing any sudden or great depreciation until the exportable gold has all been lost). But the authorities of Alphaland may not wish to see gold exported on the scale necessary to make up the trade deficit, and in that case they will have to resort to restriction of credit, which will have a dual effect on the balance of payments. First of all, it will make Alphaland a more profitable place to lend in and a less profitable place to borrow from; and in the long run, if the reduction of internal purchasing power through the restriction of credit is allowed to have its effect on prices, then it will make Alphaland a more profitable place to buy in and a less profitable place to sell in.

Two opposite examples will illustrate the point concretely. In 1925, Great Britain returned to the gold standard, after her wartime desertion, at the pre-war parity with the dollar and with gold itself, although

admittedly her internal price level was too high in relation to those of other countries to justify that rate of exchange. There was therefore a constant tendency for her to import more than her exports enabled her to afford, so the Bank of England was constantly at the necessity of adjusting its credit policy rather to the defence of the exchange than to the stimulation of industry in Great Britain. It was hoped that the result would be a reduction of British prices to an internationally competitive level; but although the reduction could not be avoided in the more exposed industries the resistance to cost-reductions in the sheltered trades was so great that the balance of commodity trade continued much as before and even tended to alter in an inward direction. What happened instead was that the maintenance of high interest rates restricted the export of capital and attracted a great volume of short-term money to London up to 1928; thereafter the short-term funds tended to flow out, because of the attraction of Wall Street in 1929 and for other reasons, and the position became progressively more and more difficult for the Bank of England. In 1931 it became apparent that the short-term remedy for the effects of too high a local price level had been at first too successful, while the failure of the long-term remedy had created difficulties worse than those which the remedy was intended to cure. The opposite example is that of France, who suffered in 1925 and 1926 a great outflow of capital which drove down the exchange value of the franc below the level indicated by relative prices. When she stabilised in 1928, the franc was still undervalued, so that she was still, comparatively, a profitable place to buy in and a difficult place to sell to, and this, combined with the reflux of capital and the payment of

reparations, enabled her steadily to acquire gold. But the comparative inflexibility of her monetary system denied that corresponding liberation of credit which would have sharply driven up her internal prices and caused a reversal of her trade balance as well as a reversal of the inward movement of capital. Nevertheless, the correction though not deliberately made was not deliberately prevented by the French banking authorities, and prices in France did not fall in step with world prices, so that her trade balance turned inward and by 1931 showed a definite excess of imports over exports, while the high internal cost of living was inspiring a demand for higher wages which would still further handicap exports.

The so-called 'purchasing power parity' theory of international trade and exchange has obtained a great deal of notoriety since the war. Briefly, it asserts that if from a given starting point at which the rate of exchange is stable and mutual trade is in normal equilibrium the purchasing power of money in country A falls relative to the purchasing power of money in country B, then the rate of exchange between them will move against country A in exactly the same proportion. For example, if prices in A rise by 20 per cent while prices in B fall by 10 per cent, then the exchange rate of A's currency on B's will fall to 90/120ths, or three-quarters, of its former level. In other words, relative purchasing power expressed in either currency remains constant. Now however valuable that proposition may be as a rough-and-ready description of what happens when large and widely extended movements of prices occur in different countries, as during the inflations of the wartime and the immediate post-war years, as a universal proposition it

has no claim to logical accuracy. In the first place, the terms 'purchasing power' and 'average level of prices' are very vague conceptions subject to innumerable different interpretations. Wholesale prices are presumably the prices that are relevant to international trade, but what wholesale commodities should be included and what weights should they be given in the calculations? For instance, should the prices of commodities which for one reason or another scarcely enter into international trade be included? There might be wide variations in the prices of very bulky or perishable goods (bricks or milk) without their having the slightest effect on international trade save indirectly by influencing the cost of production of other goods. If such articles are to be excluded, is the exclusion to stop at those articles which actually enter into international trade in one direction or the other or at those articles which might enter if the variation of price levels were large enough? As for the weights to be used in constructing the index of purchasing power, it is logical to presume that relative importance in international trade would give the weights best applicable, but the relative importance not only changes over a period of time but would itself vary with a variation in relative price levels; and that raises another important question, namely that of the elasticity of demand for different goods. If the demand for certain goods were relatively inelastic, then a rise in their price would make little change in the volume of demand for them, whereas a simultaneous fall in the prices of other goods might result in an enormous stimulation of demand. The essence of this first criticism of the purchasing-power parity theory is that it is based on the assumption, which cannot be justified in theory or in practice,

that the prices of all commodities in any community move at the same time in the same direction and to the same extent.[1] In the second place, the theory seems to take no account of the effect of non-trading items on a country's international balance of payments. If, for instance, country A starts lending to country B, the augmentation of local purchasing power in B means (as instance after instance, say of United States lending to Latin American countries, could be adduced to show) an increase of local prices, but because the flow of capital makes up the difference the balance of trade between the two countries moves against A and towards B, and it is A's and not B's exchange that tends to depreciate. No theory of international trade in goods and services, in fact, can be complete or sound which is not based on an analysis of the whole balance of international payments, which includes the balance of commodity trade but is greater than it.

1 'Our calculation of the purchasing-power parity rests strictly on the proviso that the rise in prices in the countries concerned has affected all commodities in a like degree.' Gustav Cassel, *Money and Foreign Exchange after 1914*, p. 154.

CHAPTER IV

BALANCES OF PAYMENTS AND THE REPARATIONS PROBLEM

A country's international balance of payments is made up of a great number and variety of items. They include imports and exports of commodities; gold movements; payments for the services of shipping, banks, insurance companies, dealers and merchants and so forth; remittances by emigrants and the expenditure of travellers abroad, in both directions; interest and dividends on international investments, both at long term and at short term; reparation dues and other governmental transactions; current international borrowing and lending, and the balances of the accounts of corporations operating both at home and abroad, where these are not classifiable under other heads; and, if the currency of the country is not stabilised on some international standard, speculative dealings in the currency, or, even with a stable exchange, arbitrage transactions which smooth out minor fluctuations. These several items, though all interconnected in one way or another, can vary along very different paths, and a general cause which affected one of them in one direction might affect others in the opposite sense. Thus a local industrial boom which, by raising prices, enlarged imports and diminished exports, establishing an international debit, might very well encourage the inflow of speculative capital, which would grant a credit, while the accom-

panying enlargement of personal incomes would mean greater tourist expenditure abroad and a greater volume of remittances by immigrants—both additions to the debit side. Moreover, of course, some items have a delayed but inevitable and usually contrary influence on others; thus the export of capital soon produces an income in dividends and interest, while the credit gained on account of the money that immigrants bring with them is before long converted into a debit on account of what they send home.

The balance of payments, in this inclusive sense, always balances year by year and day by day. There is never any remainder that is not taken up by short-term investment, gold movements, or momentary holdings of cash by professional operators in the expectation that they can be disposed of very soon at a figure more than sufficient to cover the cost of keeping such an unproductive asset. The regulator of the balance is, of course, the rate of exchange, which always sees to it that from moment to moment the volume of, say, sterling coming forward for exchange into dollars is equated to the volume of dollars coming forward for exchange into sterling. The question therefore arises, if one item is altered, by what process, and by the alteration of what other items, is the balance achieved? The complicated interconnection of the various items has already been mentioned, and in the previous chapter the possible results of an attempt to correct a deviation from equilibrium in the balance of trade by means of credit control were summarily reviewed. There is another aspect of the problem which acquires great importance through its prominence in current political controversy, and that is the effect of tariffs and other forms of governmental

restraint on items in the balance of payments other than those towards which they are immediately directed. Suppose, then, that a protective tariff succeeds in diminishing the amount payable for its imports by the country imposing it. Then it is possible that a simultaneous relaxation of local credit conditions would enable a greater volume of capital to be lent abroad, and the balance be effected in that way. On the other hand, if the protection resulted in a stimulation of local industry, capital might actually flow in from abroad, either directly into the industries concerned or in order to share in the short-term profits associated with the corresponding stock-market rise, and that would mean a *still larger credit balance* to be compensated somehow. A possible means of compensation, and one which operates as frequently and as plainly as any other, is the reduction of income from previous investments abroad, or from inter-government debts, through the inability of the debtors to pay. If they are prevented from paying in goods or services, and are unable to pay in gold, and if the day of effective payment is no longer postponed by the movement of capital to their countries, then they must inevitably default. Should none of these possibilities prove adequate to balance the international accounts after the upset caused by the new tariffs, then, assuming the effect on minor items to be negligible, the result must be a reduction of the exports of the country in question. That contingency has been stated as if it were the last possible alternative when all others had failed, whereas to some extent it is bound to take place at once through the reduction of purchasing power abroad and the increased costs of the exporting industries if not through the operation of retaliatory tariffs.

The above analysis has been based, of couse, on the assumption that the exchanges were stabilised and that therefore adjustment was not automatically secured through an upward movement of the exchanges which would cheapen imports and handicap exports. The automatic adjustment under free currency-exchange conditions is not always achieved. Expectations, in such circumstances, are often more important than accomplished facts; and expectations which, as regards some items in the international account, tend to correct and compensate shifts from equilibrium will have a cumulative effect as regards other items. A French importer, for instance, who foresaw a depreciation of the pound sterling in terms of French francs would hurry to buy in Great Britain before the franc-price of British goods was thus enhanced, and his very action would tend to arrest the depreciation; but a French capitalist having the same belief as to the future would be even more precipitate in withdrawing his capital from sterling investments lest both his capital and income in terms of francs should waste away, and his action would accelerate the expected depreciation of sterling. In any case, whenever exchanges are in a continuous state of fluctuation, the possibility of changes of value far outweighing considerations of security and interest-return limits the international movement of capital to speculative investment or loss-cutting, but where previous stability is merely qualified by a chance of large or sudden variations, or at moments of crisis in the condition of public confidence, the movement of capital is a much more powerful (and more dangerous because not self-corrective) determinant of the exchange rates than the balance of commodity trade or any other items on current inter-

national account. Meanwhile, the variation of the exchange beyond the limits set by the alteration of the trade balance cannot help affecting the trade balance itself and thus producing the most baneful dislocation of world trade. What other countries have really to fear in the depreciation of some currency is not the fall to a level at which a new equilibrium of commodity trade can be established, since that adjustment would have to be secured somehow and is desirable for all concerned, but only the further depreciation that is brought about by movements of capital commonly described as speculative although the speculation may be the most conservative self-defence. In other words, 'anti-currency dumping' measures are misconceived if they are directed against actually depreciated exchanges instead of exchanges in the process of depreciation.

The fall of exchange rates beyond the figure indicated by the necessities of the trade balance has been a common feature of post-war monetary history. For instance, between the first nine months of 1930 and the first nine months of 1931 the external balance of commodity trade of the United Kingdom became more 'adverse' to the extent of only £5,000,000, and although there was simultaneously a great reduction of British earnings from shipping and other services and of income drawn from previous investments abroad that was largely counterbalanced by a big cut in long-term lending to oversea countries; whereas withdrawals of foreign short-term capital from the London market, which in the sum had been small and possibly even negative in 1930, attained a rate of £200,000,000 in two months in the summer of 1931. Obviously then, the moment and extent of the immediate depreciation of the sterling

exchanges were determined far more powerfully by financial movements than by the need for securing adjustment in the balance of commodity trade. It follows that the lowest level to which the exchange was forced almost certainly put a premium on British exports and a tax on imports into Great Britain greater than would have been necessary in normal circumstances to adjust the balance of trade to the difference between world prices and British prices. A still more certain and emphatic example is given by the German inflation of 1923. Currency inflation resulting from an utterly disorganised budget and the cost of conducting the passive-resistance campaign in the Ruhr was one of the chief progenitors of the inflation, but even more important was the 'flight of capital' from Germany when confidence collapsed after her failure to meet the payments demanded in the so-called London Ultimatum, and the exchange rate was multiplied far more rapidly than the internal note circulation. During July, 1923, the value of the mark fell from 160,000 to 1,100,000 to the dollar. In any case, the prices of commodities could keep pace neither with the inflation of currency nor, *a fortiori*, with the exchange depreciation, so that an enormous, though swiftly melting, premium was placed on German exports in the markets of the world. Even so, when the balance of payments for those hectic years came to be struck it appeared that Germany had only paid her way, after allowing for the panic-stricken flight of German capital, by the aid of the losses of foreign speculators in mark notes and other assets expressed in paper marks, who wasted as much as £400,000,000 in the space of three years.

As this is not an academic textbook it is permissible to

turn aside from the treatment of general questions to a particular aspect of world balances of payments which has exercised politicians and publicists ever since the war, namely, reparations and war debts. The importance of these items in world trade and finance has, perhaps, been exaggerated almost as often as it has been forgotten. For Germany, of course, they were a critical and therefore a dominating factor. During the Dawes Plan period (1924-30 inclusive), Germany paid roughly £500,000,000[1] in reparations, which must be set against exports of goods and services totalling £4,000,000,000, and an import of capital totalling £900,000,000. That is to say, the reparations debit represented on the average just over 10 per cent of Germany's aggregate gross credits on international account, or 12½ per cent if capital movements are excluded. At the other end, the United States received in war-debt annuities and reparations the sum £292,000,000 during the same period, while the total of her imports of goods, net payments for freight transport and governmental transactions abroad, net total of immigrant remittances, gross tourist expenditure abroad and gross interest payments was £8,156,000,000, to which must be added £1,094,000,000 for her gross exports of capital. That is to say, the war-debt credit corresponded to little over 3 per cent of the gross international debit of the United States, or less than 3¾ per cent excluding capital movements. Another comparison worth noting is that between the capital value of reparations debt and the world's aggregate international debts. The capital equivalent of the Young Plan annuities (£2,100,000,000 at 4¼ per cent) represented little more

1 The sterling figures in this chapter are all expressed in terms of 'gold pounds', equivalent to $4.86⅔.

than one half of the investments abroad of Great Britain alone, and certainly no more than 20 per cent of total international indebtedness excluding non-economic debts arising out of the war.

Nevertheless, those other international debts were gradually piled up over a long period and presumably both lender and borrower supposed that the interest and redemption-service would be possible out of the normal economic product of the countries in which the investments were made. The figures, indeed, while they show that reparations and war debts were not on so vast a scale that their assimilation into the world system of trade and finance was out of the question, show also that they were large enough to influence appreciably all other items and, if dislocation were to occur, to wreck the whole system. Ten per cent does not sound, perhaps, a very high proportion, but a ten-per-cent variation of, say, the exports or the imports of Great Britain might mean the difference between industrial stagnation and boom prosperity. The question is often asked: What is the difference between reparations and war debts on the one hand, and international commercial debts on the other, that warrants their being singled out for peculiar political and economic treatment? The answer is that it is primarily a political and not an economic difference. From the economist's point of view the problem of raising money by the government and of acquiring foreign exchange is much the same whether the debt was incurred as part of the penalty of military defeat or in the sound economic development of the debtor country; on the other hand there is a world of difference in the public mind, and therefore in the effect on confidence which is the basis of all trade and finance, between the

forgiveness or repudiation of a political debt between governments and the similar treatment of a loan voluntarily raised and issued to the public. He is a rare and misguided patriot who urges upon his country the repudiation of its commercial debt; whereas a successful insistence on a downward revision of its political debt probably enhances rather than depreciates a government's credit in the eyes of foreign investors. But apart from all such political and semi-political considerations there is an economic reason for differentiating reparations and war debts from the general body of international indebtedness, and that is the fact that they are represented by no equivalent asset which would aid the debtor in their repayment. A similar description, of course, applies to a great many publicly issued loans, often those ostensibly intended for economic development; nevertheless that fact, coupled with the unwillingness—or at best grudging agreement—of the debtors to pay and the doubts of the creditors about the right and the wisdom of receiving, justify the treatment of reparations and war debts as an economic problem by themselves.

The problem is twofold. First, money has to be raised by means of taxes or other methods of levy, so as to form a surplus over and above the internal expenditure of the debtor government; and then that money has to be converted into foreign currencies—which alone will satisfy the creditors—without throwing the exchanges out of gear. (The payment of war debts naturally raises precisely the same problems as the payment of reparations. The British Government had first to provide in its annual budget for £32,000,000-odd of war-debt obligations to the United States, and then the Bank of England

on behalf of the Government had to buy the equivalent in dollars while yet not breaking the sterling-dollar exchange.) These two aspects of the matter may be called the tax problem and the transfer- or balance-of-payments problem. Economists of different schools of thought have expended thousands of words in arguing whether the two problems are really separate or one problem only. The truth surely is that they are intimately connected but that the solution of one does not necessarily imply a complete solution of the other. If, for instance, the establishment of an outward balance of trade, or still more certainly the import of capital, enables a sufficient surplus to be secured on the country's external accounts to provide the requisite sum in foreign currencies, then those circumstances will also enlarge the taxable capacity of the country and thus ease the difficulty of raising the sum in local currency. On the other hand the curtailment of public and private purchasing power through the levy of taxes whose proceeds are not distributed in civil service and military wages and salaries or in social services, but are reserved for external political payments, has the direct effect of lowering the standard of living so that less imports, foreign travel and other expenditure abroad can be afforded by the community, as well as the indirect effect of forcing upon the monetary authorities deflationary measures calculated to drive down prices and eventually to stimulate exports. Nevertheless the dissociation of the one problem from the other was recognised both in the Dawes Plan, which threw upon the reparation creditors the onus of transferring the payments in marks across the foreign exchanges, and in the Young Plan which abolished the Transfer Committee but provided ma-

chinery whereby in certain eventualities the annuities might be handed over in reichsmarks for reinvestment in Germany until the transfer into foreign currencies could be safely accomplished.

It is interesting, in the light of these observations, to trace the way in which up to the commencement of the Hoover moratorium reparations were actually paid by Germany. Before 1923 no regular plan for the payment of reparations existed. Germany paid by whatever means she could devise whatever could be squeezed out of her, except that certain payments in kind were insisted upon, both non-recurrent payments like the delivery of ships and military material and recurrent transfers of coal and potash and other commodities. Those deliveries had, of course, to be paid for by the German Government, sometimes at prices well above those at which they were credited to Germany in the reparations account. That aspect of the problem, however, hardly came into the picture during that period, since the budget was never balanced in spite of large increases of taxation. Transfers in kind apart, the amounts actually transferred in cash up to 1923 totalled approximately £100,000,000; at the same time Germany accumulated a deficit of some £400,000,000 on her external balance of trade, and suffered a flight of capital which cannot be accurately estimated but which was certainly of the order of £300,000,000. Against these debits must be set a certain income from shipping and other services, a sale of gold to the tune of £75,000,000, and credits from charitable relief, short-term loans, and other items; but by far the greater portion of the deficit was made up by the sale of mark notes and other paper assets which after the inflation were all but worthless.

Thus it is legitimate to say that up to the invasion of the Ruhr and the commencement of the Dawes Plan Germany had not paid reparations at all but had merely been an intermediary, to her own profit, in the transfer of wealth from the pockets of foreign speculators to the treasuries of the creditor governments. It was the 'suckers' in Great Britain, the United States and elsewhere who paid for the rehabilitation of German industry after the war.

The Dawes Plan, by contrast, laid down the actual methods of taxation whereby a great part of the reparation annuities were to be raised in Germany, and provided machinery for maintaining the stability of the currency. Nevertheless the combined budgets of the German Reich, states, communes and Hanseatic cities, whose finances were inextricably linked, for the five fiscal years 1926-31 (that is to say from the date at which the Dawes Plan first laid a charge upon the general budget of the Reich to the cessation of reparation payments under the Hoover Plan), show an aggregate deficit equal to one half the total (£440,000,000) of 'external war charges' debited against those budgets. If the special contributions provided for in the Dawes Plan are omitted from the budgets, along with an equivalent sum in reparations payments, then the deficit is just about equal to the reparation charge. In other words, outside those special contributions the German taxpayer did not provide, in the sum, a penny of reparations except indirectly through the monetary reactions of continuing public deficits. When we examine the other aspect of the reparations question in those years, the transfer of reichsmarks into other currencies, the conclusion is not much different. From 1924 to 1930

inclusive, Germany incurred a net debit of roughly £160,000,000 on her balance of trade in goods and services, bought gold to the total of over £100,000,000, and paid out more than £120,000,000 in interest and dividends on investments by foreigners; at the same time she transferred nearly £520,000,000 in reparations annuities. This feat was, of course, accomplished only by means of imports of capital, which are estimated to have exceeded £900,000,000. The proceeds of the borrowing were not, of course, used directly to pay reparations, but they were the instrument which enabled reparations to be paid, and it is a truthful summary of the story to say that in the sense of having so exerted itself as to provide a surplus on internal and external account available for delivery to foreign countries the German economy has not, in the aggregate, paid any reparations. But the phrase 'in the aggregate' conceals the most important fact of the whole tale, namely the violent dislocation that resulted when the cessation of foreign lending rendered repudiation the only possible alternative to payment in that strict sense. In 1928 Germany's inward balance of commodity trade was £65,000,000; two years later, when her annual imports of capital from abroad had fallen from £215,000,000 to a bare £35,000,000, she had acquired an outward balance of £75,000,000 in her external commodity trade. It was not by accident that the £140,000,000 turnover affected particularly the countries who were the ultimate recipients of reparations. Germany's imports from the United States, for instance, fell in the space of those two years from £101,000,000 to £65,000,000. Her efforts for the first time to pay reparations by the only means whereby they can ulti-

mately be paid, that is to say by the export of goods and services in excess of imports, were undoubtedly one of the most powerful forces that contributed to the world-price decline with its attendant industrial stagnation and drying-up of trade. It is possible, of course, that a new equilibrium could be established on the basis of continued payments of war-begotten debts on the old scale, or something like it, but it would be essential to equilibrium that the necessity for the existence of corresponding balances of trade should be recognised and the attention of governments be no longer devoted to defending their countries against payments which they themselves insist should be made.

It seems necessary to add a word about the investments in Germany which concealed the want of effective payment of reparations from 1924 to 1929. A census taken by the German Government at the end of July, 1931, showed that foreign investments in Germany[1] totalled roughly £1,154,000,000, including £555,000,000 of long-term investments, £149,000,000 of acceptance credits and £450,000,000 of other short-term loans. These may be compared with a capital value of the annuities due under the Young Reparations Plan calculated at £2,100,000,000. The distribution of the investments in Germany according to countries was as shown in table on following page. It is noticeable that nearly half this foreign capital came from one of the two chief ultimate recipients of reparations, namely the United States.

1 This leaves out of account 'direct investments', that is to say real property, partnerships, shares in German firms not issued on international markets, and other forms of securities directly acquired by foreign creditors and expressed in terms of marks. These have been estimated at £300,000,000.

FOREIGN INVESTMENTS IN GERMANY

Creditor Country	*Short-Term Loans*	*Long-Term Loans*	*Total*
	£'000,000	£'000,000	£'000,000
United States	157	317	474
Great Britain	103	77	180
France	33	22	55
Netherlands	103	56	159
Switzerland	94	51	145
Other countries	109	32	141
Total	599	555	1,154

This is scarcely the place to debate whether these loans were justified and whether the Governments who are so exercised about the future of war debts and reparations have not the unwisdom of private investors to thank for their difficulties. It is, however, relevant to enquire into the position of these and other post-war loans in the general world economy. Undoubtedly some of the investments in Germany and other countries that were made from abroad after the war were ill advised and wasteful. A period of excessive pessimism was followed by a period of excessive hope, a new and inexperienced class of international investor having arisen. This was especially true of the United States, where the cheap-money policy pursued by the Federal Reserve System from 1927 to 1929 liberated resources for investment in all sections of the community, providing legitimate prey for the bond-salesman, whose employers were often more concerned with gaining a quick profit for themselves than with safeguarding the interests of their

customers by dint of their own experience and examination of the facts. That criticism applied to international lending everywhere and not particularly to German loans, which on the whole appear to have included a smaller proportion of 'duds' (in the sense of their proceeds being wastefully employed) than the average. The particular trouble about Germany was that investors contented themselves with regarding her condition as she was then as a result of the operations of other investors and forgot to take note of how she might shape if, as happened before long, the flow of capital into Germany ceased while she had yet to shoulder the reparations burden. Suppose all those who were contemplating lending money to German borrowers in 1925 had said to themselves: 'Germany has a turnover of external trade, imports plus exports, of £1,050,000,000, on which, after allowing for services, she has now a debit balance of £100,000,000, and she is borrowing £150,000,000 a year out of which £50,000,000 goes out again in reparations. Now she cannot count on that inflow of capital for ever, and if, in four or five years' time, when her reparations debt has gone up to £125,000,000 a year and she probably has to pay £40,000,000 a year or so in interest on her borrowings meanwhile, she has to do without foreign capital, then she will have either to increase the value of her exports by 60 per cent or cut down the value of her imports by nearly one half, or achieve a combination of both. Can she do it?' In that event surely the flow of international investment would have been far sager if shallower. It may equally be argued on the other side that the only chance of Germany's eventually being able to pay reparations lay in the restoration of her economic life

through the use of foreign capital, her own liquid resources having been utterly depleted by the inflation, and her national income having been diminished by the demands for reparations coming on top of the dismemberment of her economic system by the treaties of peace. The answer, of course, to the question, 'Can she do it?' might have been 'Yes,' on the assumption that world events did not bring about such a fall of prices as actually took place, and that the unwillingness of creditor countries to receive payments in goods when they were no longer exporting capital did not cause Germany's efforts to pay reparations themselves to depress world prices. But what is to be said of the investors who went on investing in, say, Hungary, when already the service of her existing international indebtedness promised to exceed the total value of her exports, let alone the balance after allowing for essential imports?

The question, indeed, is a particular instance of a general problem affecting international investment wherever and under whatever circumstances made. A new country like Argentina, for instance, borrows money from abroad—or perhaps one should more accurately say, foreign money is invested in Argentina, since the argument applies equally to private investments in commercial undertakings as to the borrowings of governments and established corporations. There is no doubt of the propriety of such lending in general, since the new country has no capital of her own and her material development is a condition of advancing standards of life throughout the world. So long as the lending continues, income levels in the borrowing country tend to be high and nevertheless the balance of payments looks after itself, since the inflow of capital takes

the place of exports. But the interest burden grows, and exports have to be built up in spite of the continuance of lending from abroad. The imported capital will itself have produced wealth available for export, either directly or, if the loans were governmental, through the cheapening of costs of production by the provision of public services. Income levels, however, are still adjusted to a balance of payments containing a large capital item (not all of which will be spent on imported real capital but some of it on local labour which will make up the balance by demanding imported commodities) and if for some reason the inflow of capital fails then grave difficulty may be experienced in securing realignment. Moreover, the declining national income associated with the withdrawal of capital, and the difficulty of the efforts to diminish imports or increase exports, make the borrowing country look a poor proposition to potential lenders abroad, so that the diminution of lending, once begun, tends to perpetuate itself. Is the answer to the problem, then, that there can never be any safe curtailment of lending to foreign countries, and that therefore artificial expedients must be used to secure its continuance when normal economic forces would spell a reduction? And if that is the answer would it not follow that the lenders would have to go on investing, and keeping their money invested, till kingdom-come, since they could neither stop lending nor withdraw their capital without creating conditions under which it would be impossible to obtain the interest due and still further out of the question to obtain repayment? That sudden and violent cessations of lending or attempts to withdraw capital must spell economic disaster is beyond doubt; but provided such collapses are avoided then the

only other condition that must be fulfilled is that neither in the lending nor in the borrowing countries must there be such rigidities in the economic system (tariffs, or inelastic scaffolding for wages and prices) as would prevent adjustment through the achievement of outward balances of trade by the borrowing countries. In the words of the Macmillan Committee:[1]

'It is the simultaneous reluctance of creditor countries *either* to lend *or* to buy which is the cause of the crisis.'

It is the intervention of tariffs and different monetary and wage systems that differentiates international from any other form of lending and borrowing. After allowing for the additional risk that the investor takes on account of the distance of his assets and the difficulty of properly supervising them (as well as his inevitable suspicion that foreign governments are laxer in their finances than his own), the flow of international investment is determined by relative rates of interest offering, which in turn depend on the comparative 'productivity' of capital, that is to say, the comparative expectation of profit from its employment. In any given set of economic circumstances, as we have seen, there will be a certain premium on the production of future goods. A general lack of capital, in relation to the mechanical and scientific knowledge of the time and the standard of world saving, will establish a high premium on future goods and therefore a high rate of interest, whereas if plenty of capital is available compared with the remaining opportunities for its employment, or if the progress of invention points to a smaller proportion of capital in

1 Report of the Committee on Finance and Industry, Cmd. 3897 of 1931, p. 136.

the production of consumable goods through all stages, then the capital-market will reach saturation point and the rate of interest will sink. General circumstances would therefore always indicate a movement of capital from old countries to new, but the attractive force will vary and there may be times when, other things being equal, the rate of long-term interest would tend to be higher in industrialised than in raw-material-producing countries. That would happen, for instance, if public demand were to shift in the direction of goods requiring a very high proportion of industrial capital—if, for instance, as a community grew richer it went on demanding more and better roads and bridges and railways. That condition is not, on the whole, generally fulfilled, since increasing incomes associated with industrial advance are either saved in greater proportion, or taxed more highly for the sake of social services, or are privately expended not on goods at all but on services like entertainment and local transport which require only a small proportion of capital compared with the turnover; but it is fulfilled in some parts of economic life, for instance in the production of heat, power and light. A housewife who burns wood under her oven and has candles for light involves the community in very little expenditure of capital compared with the price of the products; raw coal and mineral oil need a higher proportion of capital, and coal-gas still more; while the production of electricity from hydro-electric power and its transmission to the very point of consumption is almost entirely a matter of capital outlay and upkeep. As, however, in the present stage of our material advance, the collateral phenomenon, the use of progressively less capital in the production of raw food and materials, does not often occur, we may

look forward for some time to a continuance of a flow of capital from old and industrialised to new and primary-producing countries, unless complete want of confidence or governmental interference prevents it.

CHAPTER V

THE CHANGING PRICE LEVEL

In Chapter I we examined how the prices of individual commodities are formed, but although it was obvious that prices are interesting to the economist, not so much as they happen to be but rather as they move, we did not consider the problem of a general movement of prices. In order that every factor in the price equation should not be relative and variable we started from the assumption that the incomes of the community stood at a certain level, the question being how they would be distributed among different purposes under various circumstances. But incomes are merely the reverse aspect of prices, a movement of one instantly affecting the course of the other; and it is obviously not impossible that the total of money incomes, and not merely their division between different individuals and classes, might change with a shift of prices. The real problems of economics begin when the system of prices is viewed as a whole, and relative movements of prices in a theoretical vacuum are replaced, in the argument, by actual movements in the complicated and mutable circumstances under which we live. The strange fact is that economic theory has often stopped short precisely at the point at which it began to have practical importance, either because the further problems were shirked or because they were genuinely regarded as abnormal variations from a static

or stable system which constituted the economic norm. The economist has no more right to deal in analytical norms than the biologist has to regard genetic mutations as an abnormality irrelevant to the general evolutionary system, or the physicist to analyse and describe the structure of the universe 'as if' matter were continuous.

The first and fundamental question to be answered is what do we mean by a rise or fall of prices in general and how is it to be measured? Prices are continually changing, because of weather or seasons, shifting fancies and fashions, inventions and improvements, discovery or exhaustion of natural resources, and a hundred other reasons. Save under very exceptional circumstances like a catastrophic inflation of currency, some prices will always be going down while others are going up, and *vice versa*. There is an infinite number of ways of combining the prices of different commodities to form a general index of their movements, according to the statistical weight attached to each and the class of commodity included, and it may as well be confessed that there is no unimpeachable scientific test for deciding on a set of weights, since the circumstances which gave rise to one set of weights will change with the variation of the prices to which they are attached. (That consideration is of considerable practical importance to statisticians who attempt to measure changes of prices over long periods of time, since the relative importance of commodities in trade or consumption varies greatly with the passing years and the percentage change in the aggregate index may be quite different according as the weights chosen are those appropriate to the beginning or to the end of the period; and to get round this difficulty moving chains of indices in which the weights are

continuously amended have had to be invented.) It should therefore be made clear from the start that the whole argument about changes in the general level of prices is of an *a-posteriori* character, and that its scientific validity depends on two propositions, namely (a) that the equalisation of costs and the redistribution of demand tend to cause all prices to move together whenever there is a general cause affecting the total spending power available for the purchase of goods and services, and (b) that as a matter of mathematical analysis, wherever there is such a tendency among statistical data, the particular weights attached to the items are of minor importance in the determination of a composite index provided that the items are numerous and that care is directed to broad classes and to any large abnormalities. (The reader can experiment upon the truth of the latter proposition by taking a long list of quantities, say the prices of different classes of raw produce at the beginning and end of a year, and satisfying himself that he gets much the same result with straight averages or random weights as by combining the figures in hand-picked proportions, so long as he does not consistently attach high weights to rising prices, for instance.)

It must further be made clear that in the analysis of changes in the general level of prices no class of values, that is objects of price, must be arbitrarily excluded. Of course it is impossible to include, in an index, the price of everything in the world, but in choosing a representative set the economist must make sure that it really is representative; for instance, he must satisfy himself if he can that a series of wholesale prices is representative of the prices of services as well as of material goods, or that a series of retail commodity prices does not exaggerate the

importance of one kind of services, namely distribution. The tendency has been for services to be neglected altogether in the price structure, although with advancing material prosperity a rising proportion of the world's wealth is devoted to them, and that neglect has created a number of puzzles in the analysis of industrial fluctuations whose solution was probably quite simple. For instance, a student of business cycles, observing many of the monetary and social symptoms of inflation in the United States in 1928 and 1929, might knit his brows for a long time over the fact that commodity prices were lower, in that country, in 1929 than in 1926, the volume of factory employment no greater, and the index of industrial production only 10 per cent higher, unless he was aware that the country's surplus income was being spent in larger and larger proportions on entertainment, retail trade, transport, and financial and other services. Another and similar problem that must be cleared up at the start is that of the position of security prices in the analysis of general price movements. We have seen that the price of the use of capital is determined by the same process of supply and demand as material commodities (though the supply is more easily variable), and that might be taken as an argument for including the price of the use of capital or interest rate in our general price index. But the result would not be very illuminating because cheap money goes with *rising* prices though often also with *low* prices; hence movements of one part of the index would tend to smooth out or distort the movements of the other part. On the other hand, there are many reasons why in the analysis of price movements the prices of securities should be included with the prices of goods and services. They are one of the

items on which consumers spend their incomes; their transference from hand to hand effects a redistribution of income, and while, from the personal point of view of the purchaser, the money has not been spent but saved, from that of the seller his profit on the sale represents potential income which he can 'spend on credit' if he does not yet wish to realise it in cash; while the trade in securities, and the accumulation of stocks of them, absorb credit from the available supplies in the same way as, and in competition with, the trade in and holding of commodities. The general price level, then, is to be taken as including the prices of services and of securities as well as the prices of goods, though of course it may be analytically necessary to split it up for particular purposes into a wholesale price level, a retail price level, a security price level, or indices of the prices of labour, land, or any other class of values. Which price level it may prove desirable to stabilise (if stabilisation is indeed the goal) is not yet to be presumed.

This discussion of what is meant by prices in general has indicated the impossibility of formulating any simple theory about money and prices. The whole idea of a general price level being so rough and empirical, precise equations can never be formulated, and all propositions ought strictly to be expressed in terms of tendencies, or if set down mathematically then with directional signs in lieu of signs of equality. The so-called Quantity Theory of Money, for instance, as an account of dynamic changes is inaccurate, or as an instantaneous truism is a mere definition of the terms composing its equation. In its simplest form it states that the general price level equals the volume of money available for its purchase, multiplied by the velocity of

circulation of money and divided by the quantity of goods coming on the market. If one were to ask the propounder of that theorem what he meant by the price level he would have to answer in effect that he meant an average price the inverse of which would result from dividing the quantity of goods (and services or whatever else he saw fit to include) by the amount being spent on them, equalling the total sum of money available conditioned by the rapidity with which it was spent. If one then asked him what he meant by the quantity of goods coming on the market, in view of the fact that, weight and size and so forth being patently irrelevant, the only common attribute that would enable chalk to be added to cheese is their prices; or by the volume of money available, in view of the fact that for the economic system, as for the individual, the amount of money available for spending varies with the desirability of spending it; he would again have to extract his definition from the equation. Most important of all, since it is the most artificial conception, if one were to demand an explanation of 'velocity of circulation' the answer would first of all be, that it was an average of the rates at which sums or pieces of money were turned over from hand to hand by purchase; but if the enquiry were pursued, to seek how the average was constructed, and whether each transfer of money counted—from final consumer to retailer, through various traders to the initial producers—or only one transfer for each article entering into the price system, then the final definition once more would be that the velocity of circulation was the ratio of the total value of the goods coming on the market (price multiplied by quantity) to the volume of money available, whose velocity of circulation it was required to know.

In algebraic form the quantity theory as it has been expressed above may be written $P=MV/G$. Now of course the mathematical dimensions of that equation are sound enough, but it relates an *actual* price level to a *definite* flow of goods and of money, whereas what we are interested in is a *moving* price level in its connection with a *variable* flow of goods and money. The theorem would be practically more valuable if it stated that the change in the general level of prices as between two moments of time is proportionate to the change in the volume of money available for spending that has occurred during the same time, provided that meanwhile no change has taken place in the rapidity with which that money is spent or in the volume of goods flowing on to the market; alternatively that provided no change has taken place in the volume of money or the flow of goods the change in prices would be proportionate to the change in the rapidity of circulation of money, and similarly for a variation of the flow of goods, other factors being constant. In that dynamic form, however, the proposition arouses doubts as to its validity, since it is far from obvious that the change in prices between two moments need have any such direct relation to the volume of money, as yet unspent, available at the latter of the two moments, whatever its potential velocity of circulation might be.

Misuse of the quantity theory often takes the form of assuming that the velocity of circulation is a fairly constant factor in the price equation, the essence of which is the multiplication of prices through the multiplication of means of payment. In practice, however, the velocity of circulation is often the most variable factor, so that the volume of money (currency in circulation plus

credit available for spending in the form of bank deposits) sometimes increases while prices are declining. The curve of velocity of circulation moves in very close sympathy with the curve of business activity. One school of modern economists discards the velocity-of-circulation factor in favour of one relating to the amount of money kept by the public, including the business public, unspent in the pocket or in unused deposits at the banks, and thus indirectly to the length of time for which money is kept unspent, assuming there to be a regular turnover of money. Mr. Keynes's expression of the quantity theory takes the form

$$n=p\ (k+rk_1)$$

where k and k_1 represents the number of consumption units over which the public requires to hold purchasing power in the form respectively of cash and of bank deposits, and where r is the average ratio of cash to deposits maintained by the banks, n is the volume of money and p the level of prices. Now because this is practically a tautological, it may be fairly represented as an unquestionable proposition, but it is sometimes treated, especially by critics of the quantity theory, as though it implied the fixity of the expression within the brackets, so that the *change* of price from one moment of time to another might be calculated exactly from the *change* in the volume of money. But in so far as it is a fundamental truism the quantity theory is not dynamic but static, and so fails to fulfil the demands that must be laid on the basic theorem of monetary analysis, that it should indicate how prices move rather than what they are at any moment of time. (Mathematicians, of course, will set themselves to differentiate the static equation in order to obtain its dynamic form, but they will not find

the result very illuminating since it will either expose deficiencies in the original equation or will contain factors whose relation to the statistically measurable entities of ordinary economic life is quite obscure.)

As soon as we try to obtain a dynamic theorem that will stand on its own merits we are met by the problem how does it happen that the rate of spending at one moment, which arises out of the rate of creation of incomes at the previous moment, that is to say out of the scheme of prices at that earlier moment, is not sufficient, or is excessive, for maintaining that level of prices at the later moment? We have observed how the demand for any particular commodity varies according to the cost-conditions of supply and the disturbance of public tastes, but we have not yet enquired how the total of incomes, which are the reverse aspect of prices, can come to be more or less than the aggregate of prices coming into effective existence by sale and exchange in an equivalent period to that in which the incomes were created; such a deviation would naturally cause prices in general to move upwards or downwards to meet the change in money demand. From the point of view of the producer, every one of his costs represents an income to somebody —workman or capitalist—which should be available for purchasing, some of it his own products, but all of it the products of industry and trade in general, which is throughout giving rise to incomes equal to its costs. Obviously some producers will fall into error in their expectations, and will not obtain for their output as great a sum of money as they supplied in incomes; but *prima facie* other producers, more foreseeing or luckier in their prejudgments of the way in which the incomes to which they and their fellow-producers are giving rise will be

spent, will obtain for their product more than they paid out in costs. But the question that monetary theory has to answer is, how can all producers together, or the average of them, be receiving less or more in prices than they paid out in costs. In terms of the elementary quantity theory, the question is, how does M_2, the sum of money available at one moment of time for the purchase of the values entering into the equation, come to differ from M_1, the amount of money available at some earlier moment, so as to change P_1 into P_2, seeing that M_2 is merely the reflection of P_2. The question lays bare the limitations of the crude quantity theorem even as an analytical starting point, because by itself it cannot explain why, if a change of prices is once started it ever stops, since if $M_2 = qM_1$ then $P_2 = qP_2$ (q being any given multiplicative factor), and then, since P_2 is the parent of M_3, the latter equals qM_2, that is q_2M_1—and so on *ad infinitum.*

Before the problem can be explored from this angle, one or two preliminary difficulties must be cleared away. The first relates to the character of non-consumptive spending. Money that is not spent by the income-receiver personally but is invested by him is, generally speaking, spent on something, and the spending is on a par with spending for consumption from the point of view of the general price level (including the prices of 'capital goods' as well as those of consumable goods). Of course the errors of the producers who are making things in advance of the market for them, and not just to order, may take the form of wrongful presumption on the part of makers of capital goods, as a whole, concerning the proportion of total money incomes that will be spent on their products, but this is a possibility of secondary im-

portance. (The judgment referred to is, of course, a corporate one; the mistake of any individual producer may be based on lack of knowledge of, or control over, the plans of his competitors in the same class of goods.) For one thing, it is misleading to suggest that there is such a thing as a separate class of capital goods. In connection with the price of bricks, it is irrelevant whether the demand comes from the construction of factories or offices or from the addition of garages to the amenities of private houses; yet the first purpose would be regarded as investment and the latter as consumption. Similarly a demand for iron may arise from expenditure on rails and bridges or from expenditure on saucepans. Provided due weight is given to all classes of goods and services the critical point is that the money should be spent somehow by somebody on something.

Let us therefore enquire into the spending of our money when we entrust that spending to somebody else by investing it in, say, the shares of a new firm engaged in retail trade. The gross proceeds of the share issue we will suppose are £100,000. Then the cost of advertising, printing prospectuses, stamp duties, and other expenses of legal incorporation and the issue of shares may total £10,000. All of that will have been spent in the same sense, and partially on the same kind of things, as my money would have been spent had I kept its expenditure in my own hands for my own purposes, including the payment of taxes. Another £30,000 will be devoted to building new premises, providing new delivery equipment and so forth and this portion too—the only part to be represented directly by fixed capital—will also be certainly 'spent'. If this is a typical issue, perhaps £50,000 will be paid over to promoters and former pro-

prietors for stock in trade and for that intangible asset, based on previous experience of profits, goodwill. That portion provides no direct answer to our question, since the transfer of unsold stocks of goods from one owner to another is not a normal transaction affecting the level of prices, and the services of promoters, though they are services which from time to time the public are willing to buy at high and perhaps exorbitant charges, can hardly be included in the list of goods and services whose price level we are considering. Spending power has just been transferred from hand to hand without affecting the price level, as it might be transferred by gift or by the multiplication of different transactions in bringing a given commodity to its final market. (The latter process is less common than its opposite, the elimination of money-using transactions, by vertical combinations in industry or commerce, such as the amalgamation of spinning, weaving and merchanting firms into one large textile corporation.) We must therefore shift our question ahead and ask whether the recipients of the money spend it, to which we can only get the answer that they may or they may not. In any case, even if the spending of the whole sum can be ultimately traced, it is clear that every such transfer entails some delay in spending and the risk of some of my money not being spent, provided non-spending is possible at all. The remaining £10,000 of the proceeds of the share issue will be reserved for working capital, that is to say as a non-spent balance against current contingencies and for gradual spending on new stock, wages and salaries and so on, if and so long as these expenses cannot be met out of turnover. This analysis shows that while presumptively investment—in the sense of putting into enterprises money

which is not personally spent—is equivalent to spending (and such we will assume it is, for simplicity's sake, in subsequent analysis), in practice it may involve delay in spending and the chance that a part of it may be indefinitely reserved from spending.

The second preliminary difficulty that must be overcome is the intervention of international trade in the money-price-income-spending-saving complex. The analysis is straightforward enough, if arduous, so long as we are considering an isolated community with a single currency in which we can calculate and a price level which we can regard as a whole; but what difference may not be made by the existence of other communities with different monetary systems and possibly with their price levels moving in different directions, buying and selling, lending and borrowing, in their complicated economic relations with the community in question? The effect of monetary policy in one country on monetary policy and thereby on the price level in some other country can be set aside for the moment, not because it is irrelevant but because it is indirect and does not seriously modify the analysis of the relation between money and prices. The direct effect of changes in prices elsewhere cannot be so dismissed. Suppose that prices fall in some foreign country, and suppose that the rate of exchange is pegged somehow, so that adjustment to changes in relative price levels is not automatically secured through variations in the foreign-exchange market. First of all, imagine that the trade between the two countries is entirely non-competitive, as it might be between, say, the United States and Java. Then the relative elasticities of demand of Americans for Javanese tea and rubber, and of Javanese for American chewing-

gum and automobiles, will determine at what fresh level the interchange of goods between the two countries will settle (we are ruling out changes in their relations with third countries, and, for the moment, in the balance of non-trading exchanges between them). It will certainly settle at some level or other, let us suppose at a lower one in monetary value. Now American citizens will be spending less of their aggregate incomes on Javanese products, and will have correspondingly more to spend on other things; on the other hand exporters to Java will be receiving just that amount less, so that the total amount available for spending in the United States will be unaltered. Hence although there will have been a redistribution of income, a redistribution of demand and therefore perhaps a change in relative price levels, there should be no change in the average price level, except in so far as the redistribution of consumer demand entails a need for more or less money than before, for instance, by a multiplication of monetary transactions necessary to bring the goods to the consumer, or by a variation in the proportion of capital used in producing them.

Now let us vary the conditions by supposing that instead of being compensated by a reduction of the value of American exports to Java, the cut in the value of the imports is balanced in the international accounts by a greater export of capital to Java than was taking place hitherto. It might seem fair to presume that in such an event the loss of purchasing power through sending capital abroad would be exactly the same as the loss of purchasing power that had previously been supposed through curtailment of exports, but confirmation of that presumption demands some enquiry into the relation

between the international capital-market and the supply of money. From the point of view of the individual investor, of course, it does not matter whether he puts his money into home industrial shares or foreign government bonds; he has resigned his purchasing power to someone else, and in the one case it will remain in his country and in the other be transferred abroad whence it must exercise its effect on the volume of spending at home through the balance of trade. But the establishment of a deposit in favour of a foreign firm or government may have rather different effects on the money market and monetary policy from the establishment of a deposit in favour of a local borrower. The home demand for advances will not be relieved, nor will more currency be required as the deposit is used up. On the other hand, in so far as the spending of the credit is reflected in an increase of exports, the volume of foreign trade bills will be enlarged and the banking system will be encouraged to expand its output of purchasing power on the strength of those highly favoured paper assets. In other words, there will be a tendency to an expansion of the volume of money. This appears to have been the effect of the great export of American capital that was stimulated by the cheap-money policy of the Federal Reserve Board in 1927 and 1928; instead of withdrawing purchasing power from the home market, the transference of purchasing power abroad actually encouraged the authorities to continue enlarging the volume of money (cash plus credit), because the resultant expansion of exports and of the volume of foreign trade bills provided a legitimate base for the magnification of credit, and the foreign bonds themselves were used as collateral for borrowing by those who had initially re-

signed their purchasing power. Nevertheless, if that indirect qualification is borne in mind, it is proper henceforward to neglect variations of non-competitive price levels abroad in the analysis of the relation between monetary phenomena and the local price level.

Next, however, let us suppose that the country whose relative price level shifts is in direct or indirect competition in trade with the country with which we are primarily concerned. As far as the readjustment of the balance of payments is concerned, the new balance must be secured by one or other of the general means already considered—that is, either in the trading or in the financial items. With the qualifications that we have already noted, that readjustment in itself need have no effect on the average price level. But let us consider the process by which the adjustment has been obtained. A tendency for the exchange to depreciate may have been the signal for the monetary authorities to apply restrictive measures, which in the first place would secure a temporary adjustment of the international balance by discouraging the export of capital and encouraging its import, and in the second place would have had some effect on the internal price level in a manner and to an extent which we have still to investigate. More directly, local producers will have been constrained to cut their prices in order to meet the aggravated competition from abroad. Will that mean a lowering of the price level, in the absence of any monetary action? Now it certainly is possible that if the total spending power of the country were unaltered a cut in the prices of internationally competitive goods to meet a falling price level abroad might be compensated by a rise in the prices of other goods and services, as a child's balloon, pressed in one

part, swells out in another, and this is indeed what apparently happened in Great Britain between 1925 and 1931, where prices and wages remained constant at a high level in sheltered industries and in some instances were actually raised, even while they were falling reluctantly and painfully in industries like cotton and coal exposed to the full force of international competition. But, to continue the metaphor, the capacity of the balloon to expand and contract so lopsidedly is limited both by the tension in its walls (the tendency towards the equalisation of costs between different industries, for instance through the gradual transfer of labour from the poorly paid to the well-paid occupations) and by the increase of the total external pressure, comprising the local restriction and the pressure of the atmosphere throughout (the reluctance of any part of the economic system to submit to changes in prices, upward or downward). There are indeed quite narrow limits within which *relative* prices can vary under the stimulus of international competition.

It is quite fallacious to suppose, as some economists appear unconsciously to have done, that the monetary circumstances are always the cause and the movements of the price level the effect. The causal chain may move in just the opposite direction, indeed as often as not it does. Falling prices, even if confined to one part only of the economic structure of a country, induce in producers and merchants, even to some extent in final consumers, a reluctance to spend, and therefore cause a reduction of the velocity of circulation, or delay in spending the incomes created by former prices, according to the method of analysis favoured. There is always a lag in the transference of any part of a fixed volume of spending power

from one kind of purchasable thing, to another, and the psychological and practical mischief may be done during the period of that lag. With the fall in prices, credit will be automatically thrown back from the competitive industries into the banking system, which will naturally hesitate in correspondingly increasing the credit advanced to the non-competitive industries; hence the total internal purchasing power will fall even in the absence of specific measures to restrict it on the part of the monetary authorities.

Those digressions have been necessary in order to clear the way for the discovery of a satisfactory answer to the question, how is it that the amount being spent on goods and services at one time is less or more than the former aggregate prices of those goods and services in the light of the fact that the prices themselves represented the total of spendable incomes. It will be recognised that the digressions have not provided any serious qualification which would invalidate an analysis confined to an assumedly isolated community, though they have illustrated the all-important consideration that prices are sometimes themselves the motive power and monetary circumstances their result. Moreover, it has emerged in the course of these preliminaries that the fundamental monetary cause of a variation of the general price level is the difference between the extent of non-spending for consumption and the extent of non-consumptive spending. That is expressed, in the most recent forms of monetary theory, as a difference between saving and investment, but if we are to use these terms we must be quite clear what they mean. Saving covers all reservations from spending by all classes of income-receivers, including for instance the undistributed

balances of public companies, increases of the credit balances of local or central governments or the reduction of their debit balances, and the temporary reservation from spending of portions of private incomes (which may not be intended to be saved in the personal sense at all), less in every case the amount normally kept unspent. Allowance must be made for negative saving, which occurs when spending for consumption takes place by borrowing or by the exhaustion of the balances normally reserved. The total of community saving is therefore the difference between the volumes of positive and negative saving. Again, investment in this connection does not mean the personal process of buying securities or real property or of putting money on time deposit, which must rather be classed as the mechanism of saving, but the actual spending of borrowed money (except in so far as its expenditure for current purposes by individuals or governments has been covered already, in order to accord more readily with the ordinary senses in which these terms are used, by negative saving). Nor is there implied in the term 'investment' any necessary emergence of an equivalent capital asset from the community point of view, though presumably the greater part of investment does take the form of the creation of fixed or liquid capital; for investment might be called 'transferred spending', without any qualification as to the character of that spending except so as to allow for negative saving. For instance, some part of investment may well be the payment of the salaries of those directing the construction of some new enterprise. Further, international investment consists not in the process of lending money to governments or individuals abroad but in the consequent outward balance of current items,

including of course interest and services as well as commodity trade (a balance which may emerge by every variety of indirect process and may have no connection whatever with the production for export of capital goods.) A great deal of the criticism of current monetary theory that has appeared in the course of popular controversy seems to be founded on a misunderstanding of the sense in which the terms saving and investment are technically used.

How does the divergence between saving and investment come about? The answer is fourfold.

(a) By private hoarding, that is to say the refusal to lend what is not spent, through the accumulation of money in stockings and safe-deposits or conversely by an acceleration of spending of available reserves. The acceleration of private spending may be accomplished on a large scale, under present-day conditions, through the device of instalment selling, or, as it is variously termed, part payments or consumer credit. In view of its possible contribution to the world slump of 1929 onwards, that aspect of purchasing-power variation will need detailed treatment later; meanwhile it is sufficient to suggest the preliminary comment that although the credit necessary to cover the sale of goods in advance of complete payment detracts from the ability of the banks to lend to others, that credit has been apparently doubled since it has provided purchasing power alike for the instalment buyer and for those whose incomes emerge from the production of the goods sold.

(b) By the action of governments, regarded not as borrowers in competition with private citizens or corporations for available savings but as note-issuing authorities, in incurring deficits which they meet by

the creation of new money or surpluses which they liquidate by retiring money.

(c) By the non-spending on the part of the borrowers of the purchasing power placed at their disposal by the lenders. Apart from the inevitable delay in spending, which they will naturally cut to a minimum, borrowers are not as a class so uneconomically minded that they pay interest on money which they merely sit and admire, but a certain amount of money borrowed ostensibly for new capital purposes will be transferred to former owners of income-yielding property or to promoters and the like who may be content to reserve it indefinitely from being spent.

(d) By the power of the banking system to lend more or less than it borrows, and the variability of its willingness to re-lend what is saved and placed on trust with it.

When violent changes in monetary and price conditions are taking place, or have already taken place, as for instance in the United States in 1931 and 1932, the variation of hoards is perhaps the most important factor in determining the changes in total purchasing power. Under circumstances such as those of war or of similar extreme strain upon public finances, it is the second possibility that comes to the fore and outweighs all private divergences between spending and saving; at all times the action of government as a great spender and borrower is of the first importance, but normally its excessive or deficient spending cannot be financed by direct and arbitrary variation of the note issue but has to be reflected in action by the banking system which would come under the final head. The third class of possible divergence, not in itself of enormous importance except at times of sudden capital inflation, merges into

the fourth, since the banking system itself can be regarded as a borrower who does not always spend as much as he borrows, though he may spend more by devices of his own. It is the variations of purchasing power through the medium of the banking system that are normally of the greatest importance, and it is upon these that the examination must now be concentrated.

A commercial bank's balance sheet shows two main classes of liabilities; first, capital and reserves and perhaps some bonded indebtedness, and second, deposits (omitting contingent liabilities balanced on the opposite side by complementary contingent assets). The first may be called its fixed and the second its variable liabilities. The assets are divisible into four groups; securities, advances, bills, and cash or its equivalent (in Great Britain deposits at the Bank of England, which are withdrawable at call and do not bear interest, are always reckoned as cash). Of course these are only very broad groups, and may conceal, in the shape in which they are published, hidden reserves and other assets and liabilities not corresponding analytically to the names of the groups. Advances cover such diverse categories as loans to industrial companies for the prosecution of their business, advances on collateral to the money market for the purpose of dealing in shares or bills of exchange, and the overdrafts of private customers to alleviate a temporary personal stringency. Deposits, too, will vary in character from the unexpended balance of a monthly salary to a time-deposit permanently maintained by a financial firm as a first reserve against contingencies. Some of the deposits will be merely the reverse aspect of newly extended advances, which will take the form of a credit opened up at the bank in favour of the borrower. From

the point of view of the economic theorist, the criteria according to which the items should be divided are the purpose to which the advance (or more indirect form of lending by the bank) is devoted and the source of the deposits (that is, whether they arise from saving or otherwise). As for the latter division, there is no practical means whereby banks, with the keenest desire in the world to publish valuable statistics, could so classify their deposits, and in illustrating or testing his theory by application to facts the student has to assume that time-deposits (deposit accounts, in English terminology) represent, or at any rate vary with, the volume of saving.

It is not necessary to enquire how the various items in the balance sheet of a bank, or rather of the aggregate balance sheet of all banks in the community considered together, came to be what they are. The point of interest is what happens when they vary and how they may be deliberately varied. We may assume that the available spending power of the community comprises the cash in the hands of the public, together with the aggregate current deposits held by the banks, after eliminating duplicates occurring where one bank holds deposits for another. The cash in the banks themselves is not 'available purchasing power' any more than the gold held against the note issue by the central bank or other monetary authority is cash. It is, perhaps, puzzling at a first glance that it is what the banks have borrowed and not what they have lent that constitutes purchasing power, but of course their advances represent what was lent, and may have been spent, long ago, and imply the existence of current purchasing power only in so far as they are reflected in cash in the hands of the public or in unexpended deposits. Of course that aggregate is not

available for spending in the sense that the deposits could all be withdrawn from the banks and the cash passed from hand to hand without dislocating the whole system; it must be remembered that we are not concerned with actual amounts but only with changes in them, so that it is irrelevant whether the idea of a quantum of purchasing power at any moment is meaningless or not. It must also be borne in mind that all these phenomena take place in time, that spending power is a portmanteau expression for rate at which money might be spent per unit of time, and that the object of our research is not the measurement of a difference between one price level and another in terms of the instantaneous monetary phenomena apparent at either end of the period separating the two levels, but exposure of the causes, and measurement of the intensity, of a rate of change of prices in terms of the intervening monetary circumstances.

To resume the enquiry into how the banks can vary this total of spending power by lending more than is entrusted to them out of new savings, let us consider what happens when an individual saves. His bank balance increases, and he transfers some of it from current to deposit account. His bank's increased liabilities are balanced in its books partly by a greater accumulation of cash, in so far as the sums that he would have drawn had he not saved would have been taken out in cash and not returned to the same bank; partly by a larger balance at the central bank, in so far as those sums would have been transferred by his creditors from his bank to their accounts with other banks, causing a clearing-house debit against his bank, and partly by smaller deposits made by the creditors in whose favour

the money would have been spent. The general effect will be an increase of the proportion of cash to other assets. Now a bank is a profit-making concern, and therefore it aims at holding the largest proportion of interest-bearing assets compatible with reasonable security. In practice, the proportions in which the assets consist of marketable securities, advances to customers, short-term paper and cash, determined as they are largely by tradition, vary little from bank to bank, while any one bank, or the banking system as a whole, alters them but slowly. Thus the saving of the individual, which raises the cash proportion, will encourage the bank to bring the proportion down again by enlarging the volume of its advances, and/or its portfolio of bills and securities, and to that extent losing its cash or enlarging its deposit-liabilities, according as the transferred spending power fell into the hands of other banks' customers or its own. Now under any fixed circumstances of monetary habits and organisation, a given flow of purchasing power requires a more or less constant proportion of cash to credit. Thus if there were only one bank the adjustment of its lending policy to the need for maintaining an invariable cash ratio would ensure that all saving would be passed on into investment, that is to say that all the purchasing power reserved from spending by some of its customers would be transferred to others. Similarly the single bank could procure the investment of more or less than was saved merely by lowering or raising its cash ratio. The same conclusion holds where all banks are moving together, but of course where banks are in competition none of them dares expand its advances out of step with its competitors, on any considerable scale, even though the saving of its

customers indicated such a course, because the result might be a disproportionate loss of cash which would endanger its liquidity. Hence under such conditions (which are those usually obtaining), since the ability of any one bank to extend credit depends partly at least on the policy of the others, the efficiency of the banks in their social purpose of equating investment to saving depends on the general sentiment of optimism or despondency. It is a regrettable fact that the course of *prices, on which so much of* human welfare and misery depends, is so largely influenced by the conflicting desires of bankers and their customers for security and profits, which at times of big fluctuations one way or the other means the dominance of fear or greed; and that no mere improvement of banking machinery can supplant those two primitive emotions in our economic governance.

There may, however, be a force outside the private banking system enabling the banks to increase or compelling them to contract their advances under any given conditions of community saving. An extension or contraction of the total volume of cash in the country is inevitably reflected in an increase or reduction of the cash reserves of the banks, however it originates. If it arises directly from government spending which is covered by the printing of notes, then some of them drift into the banks and are not withdrawn. If it originates by purchase of securities by the central bank or corresponding monetary authority, then either the banks directly supply the securities and are paid cash for them, or they do so indirectly. Thus an additional output of cash spending power is accompanied by an increase of credit spending power, just as an increase of credit

spending power requires an increase of cash spending power either through a reduction of the cash ratio of the banks or through an increase of the total issue of cash in the country. The central authority may use not the purchase and sale of securities, known as 'open market policy', but the indirect method of variations of 'bank rate' to secure changes in the volume of credit. Bank rate means different things in different countries; in Great Britain it means the rate at which the Bank of England will rediscount prime commercial bills for the private market, while in the United States it means the rate at which each Federal Reserve Bank will rediscount 'eligible' paper for its member banks. The effectiveness and rapidity of the control of bank rate over the general interest system of the country varies, too, with the organisation and the loyalty of the banking system, but bank rate always exercises some power, especially if coupled with the appropriate 'open market policy'. We saw in an earlier chapter how the price of the use of capital, or system of interest rates, varied with the supply of and demand for money capital; now we may add that the actual system of interest rates may be maintained, by the power of bank rate or other instruments of central banking or governmental policy, at a lower or higher level than the 'natural' system of rates, that is to say the system at which investment would be equated to saving.

Having discussed the means whereby spending power comes to differ from the previous aggregate of prices, through the divergence of saving from investment, we must now attempt to set up some relation between a given such divergence and the extent or rapidity of the resultant change of prices. The reader who is uninterested in mathematical formulae, which, it must be con-

fessed, are rarely of much practical value, will be well advised to skip the next five paragraphs, so long as he is prepared to accept the conclusion that the greater the divergence between saving and investment, and the shorter the interval that normally elapses between the 'manufacture' of incomes in the process of buying-and-selling and their being spent, the faster will prices rise or fall.

Let P stand for the set of prices ruling at any given time, and V for the rate of flow of values (goods and service and any other thing of value which may be included in the general price level). We may regard V as constant, for the time being. Let t be the average interval between receiving incomes and spending or investing (not saving) them, and let p be the change in the price level—assumed to be uniform—that occurs during that interval.

Now it may be objected that the average interval between receiving incomes and spending them for consumption is different, and varies in different ways, from the average interval between receipt of incomes and investment. In order to overcome this difficulty we must refine slightly our conception of saving. Saving, positive or negative, must be defined as any variation from the normal, continuous flow of incomes back into expenditure for consumption. We must remember that there is an unending stream of incomes on the one hand, an unending stream of spending, saving and investing on the other. An individual will be spending this month what he earned last month, but from the point of view of economic analysis the interval is irrelevant provided he is spending at the same rate as he earned and continues to earn. Any variation, from that viewpoint, is saving as

soon as it occurs, not when the individual begins to call it saving. Bearing this in mind, we may regard any income as being spent immediately it emerges by the sale of some value. Incomes distributed in advance of sale are regarded as temporary investment, and incomes reserved from spending until after the moment of sale as temporary saving, set off by negative saving when they do come to be spent. Hence the time interval between getting and spending for consumption is zero, and t represents the average time interval between saving and investment.

The rate of spending (including non-consumptive spending) per unit of time at the beginning of the interval is VP, and at the end is V (P + p). VP will also represent the rate of emergence of incomes at the beginning of the period, and therefore equals (C + S), where C is the rate of spending for consumption and S the rate of saving. We know also that V (P + p), the latter rate of spending, equals (c + I), where I is the rate of investment and c is the rate of spending for consumption corresponding to the price level (P + p). Subtracting these two equations, we find that Vp equals (c — C) + (I — S). Hence the rate of change of prices, which is p/t, is that sum divided by Vt, or (if we must have it in words) it is the sum of (a) the ratio of the excess of the rate of investment over the rate of saving to the volume of values sold during the average period between saving and investing, and (b) the ratio of the rate of change of spending for consumption to the rate of flow of values. If the rate of spending for consumption is constant, then the second factor disappears. If the rate of spending for consumption is always in constant proportion to the rate of incomes (a reasonable assumption), then let the pro-

portion be k, so that C equals kVP and c equals kV (P + p). Then the second factor becomes kp/t and the equation may be transposed thus:

$$(1 - k)\ p/t = (I - S) / Vt.$$

Now since (1 — k) is the ratio of saving to incomes, we may then say that the rate of change of prices equals the product of two ratios, first that of total incomes to saving, and second that of the difference between the rate of saving and the rate of investment to the volume of values sold during the interval between saving and investing. By a further transposition, giving the formula

$$p/t = P\ (I - S) / St$$

we obtain the result that the percentage rate of change of prices is the percentage ratio of the difference between the rate of investment and the rate of saving to the rate of saving itself, divided by the average interval between getting and spending.

The reader must be warned against the supposition that the different elements of the equation are independent variables. The average interval between getting and spending (which on our definitions was identical with the average interval between saving and investing) varies with the ratio of investing to saving. The conception is perhaps a trifle unreal, but it is the simplest form of expressing the all-important time factor, which must appear somewhere in the equation and in such a form as to indicate that the more rapidly a divergence of investment plus spending for consumption from the total of incomes is reflected in actual expenditure the more rapidly will prices rise. If the effect were instantaneous, prices would rise with infinite speed, unless, of course, the flow of goods were being increased concurrently.

Readers who have explored Mr. J. M. Keynes's

monumental *Treatise on Money* will recall that no time factor enters into his fundamental equations, which are as follows.

$$P = E/O + (I^1 - S) / R$$
$$\text{and } \Pi = E/O - (I - S) / O$$

where P is the price level of liquid consumption goods, Π is the price level of output as a whole, E is the total money income of the community in a unit of time, I^1 is that part of it earned by the production of investment goods, S is the amount of savings and O the total output of goods in a unit of time, R is the volume of liquid consumption goods flowing on to the market and purchased by consumers, and I is the value (as distinguished from the cost of production) of the increment of new investment goods. The author would not, if he could, criticise here the complicated chain of reasoning whereby Mr. Keynes reaches these equations, but in view of the attention that has been rightly attracted by the work in question it may perhaps be pointed out that the equations relate an *actual level* of prices to a *rate* of difference between saving and investment, and so indicate that *ceteris paribus* the price level would be constant if the divergence between the rate of saving and the rate of investment were constant, however great that divergence might be. This is not to attack the logic of Mr. Keynes's argument but to point out that E, the total money income of the community in a unit of time, is itself a variable that moves with the course of prices. It may be added that a certain time factor is implied in the distinction drawn by Mr. Keynes between investment in fixed capital (factories, machinery and so on) and investment in working capital (stocks of goods in process of production for sale). Increased investment representing an

increase of working capital, he says, requires that the act of saving should occur immediately; whereas if the increase of investment implies only a change-over in the character of production which will lead later on to an increased output of fixed capital, then the additional saving is only needed when the process of production is finished. The rapidity of the rise of prices varies according to the character of the excess investment. 'Commodity inflation' occurs immediately if the investment involves an addition to existing production, or, if it involves rather a change-over from consumption to capital goods, after an interval equal to the period of production. The analytical connection between this set of ideas and the conception of an average interval between the time of saving and the time of investment is an exercise which the reader may well be left to attempt for himself.

It must not be imagined that the whole story of the relation between money (through the savings-investment ratio) and prices is contained in a single mathematical formula. The movement of prices alters the other terms of the equation, which in turn may be altered by extraneous forces whereon the blame for price changes must ultimately rest. Fuller treatment of this interconnection of the various factors must await discussion of the business cycle and of the various theories that have been put forward to account for it, but one important secondary reaction of a change in the price level may be noted in passing. As prices rise in any country, the international balance of trade in goods and services tends to turn inwards, and hence the volume of real international investment tends to fall. Saving being a relatively constant factor, this should effect a narrowing of

the margin between investment and saving that is causing the rise of prices. Internally, the counterpart of this phenomenon is that an increase of investment should disproportionately raise the prices of the things upon which the invested money is spent, and thus discourage further investment in them, but the rise in the general price level, by increasing profits all round, will for the time being undo this discouragement.

Another secondary reaction is that of the variation of prices upon the rate of flow of goods, and the time has come for relinquishing the assumption that the flow of goods is constant in intensity. In the first place, the variation of prices itself inevitably has an influence on the rate of flow of goods. Though the stimulation of profits, and upward movement of prices encourages the maximum use of all available means of production, that is real capital and labour. Thus there is a tendency towards the increase of the flow of goods and services, which, while it is occurring, entails a check to the rise in prices. There will also be a similar short-run tendency towards the increase of the flow of goods through the withdrawal of goods from stock in response to higher prices. But there will also be a countervailing tendency which will not retard but accelerate the rise of prices, namely, the reluctance to sell to-day if a higher price can be expected to-morrow. As far as commodities are concerned, limits are placed on this withholding of supplies by a number of factors, including perishability, the cost of storage and of interest lost on the covering credit, the inability of producers and traders, for reasons of personal budgets, to stand back indefinitely from the receipt of income, the pressure of competition, and so on. Not all of these reasons operate, however, in the

case of shares, land values, and other representatives of capital values. It is scarcely necessary to cite the Wall Street boom of 1928-29 as an instance of rising prices, among such a class of values, accelerated and maintained by reluctance to sell so long as the expectation of further rises generally persisted. To return to commodities, the converse of this reluctance on the part of sellers during an upward movement of prices, namely the reluctance of buyers during a downward movement, when every day that passes may bring them the chance of a better bargain, is of critical importance in accelerating a fall of prices and is one of the chief ingredients of slump conditions.

Apart from the variation of the flow of goods that arises directly out of a variation of prices, circumstances 'on the side of goods' (as we are told by those exponents of economic theory who contrast them with changes 'on the side of money') are constantly affecting both the make-up and the total of the complex of goods coming on the market. Before they are considered further, however, it must be made clear that the idea of a mass or volume or flow of goods representable by a single mathematical expression is, like the idea of a general price level, both statistically and logically empirical. If the production of bacon goes up by 100,000 hundredweight per annum, and the production of beer declines by 100,000 gallons per annum, has the aggregate production of goods gone up or down? Some statistical weight must be attached to each item, and obviously just as the weights attached to prices in constructing the general index were proportionate to the importance of the various commodities in the system of trade and production, so the weights attached to the different quantities

of goods must be in some way proportionate to their prices at the base date; moreover we again must rely to some extent on the theorem in mathematical probability that so long as we are considering only movements which tend to affect all groups alike the particular weights used are of comparatively minor importance.

What we particularly want to consider is the effect on prices of any gradual tendency, through an improvement of productive efficiency, towards an increase of the flow of goods available for purchase in any economic community. Now on that point there can be only one conclusion in view of the fact that the spending power available to purchase a body of goods and services at any one time arises from the prices of goods and services at some immediately previous time; namely, that if there is no divergence of investment from saving, nor any variation of the 'time-lag' in spending, nor of the proportion of saving to total incomes, then the price level will fall in proportion to the increased flow of goods and services. But of course these different factors are not independent; for instance, the capital expenditure necessary to give the greater efficiency—if that is in fact the means whereby it is obtained—may involve an excess of investment over saving which will for the moment counteract the tendency for the price level to fall. Nor must it be assumed that a cheapening of goods through the reduction of their immediate money cost of production need necessarily bring about a fall of the general price level. The critical factor is that the quantity brought on the market should be enlarged; if it is not, then the effect of the reduction of the price of any particular article is that spenders have more to spend on other things, and unless the other things themselves are

increasing in quantity their price will rise and the average price level including the first commodity will remain as before. Is this argument vitiated by the supposition that all commodities, or the majority of them, were becoming cheaper to produce simultaneously? Certainly not, because the maintenance of total spending power at a constant level would ensure that as real costs fell money costs would rise (unless the existence of monopolies, which would be an almost essential condition of a failure to increase supplies under conditions of falling real costs, were to divert the increased purchasing power into the hands of profit-makers whose incomes are not costs in the ordinary sense of the word).

We have already gone some way towards solving the theoretical problems of over-production. Does it and can it mean anything more than a fall of prices below the level of previous costs—which, if we include normal profits in with costs and cover the whole field of production and services, means any fall of prices? Now although generally increased efficiency in production need not entail a fall in the average price level, provided it does not result in an increase of the total supply of goods, in fact competitive conditions usually determine that the total supply of goods does increase and a fall in the general price level result. A fall in prices to the new level of money costs should not necessarily spell over-production, but there are two reasons why the appearance of over-production may emerge. One is that even if produced by improved efficiency a fall of prices has some effect upon the time-lag and the savings-investment ratio, which may mean a fall in the general level of prices below the mark set by the efficiency factor; it is for instance more than possible that a sudden fall in the

prices of some raw material (the technical improvements may be gradual but in practice the falls in prices are spasmodic, following the break-up of price-fixing organisations, fluctuations of sentiment in consuming markets and so on) may cause potential purchasers to hold back in the expectation of a further fall, which is then all too likely to occur. The second reason for the emergence of seeming over-production from an enhancement of efficiency is the uneven distribution of the technical improvements. Whether it is a new process of extracting nitrates, or the development of new copper fields, or the invention of some cost-reducing piece of agricultural machinery, that is in question, some producers will inevitably be in advance of others, certain of whom may be not merely slow in adopting the improvement but incapable of doing so. Now the price which suits their readier or more fortunate competitors and which enables them to expand their production will be below their own cost level, but they will not give up and may not even cut down their scale of production because they do not realise the permanence of the fall in prices, blaming it on cut-throat competition or on monetary mismanagement, or because they lose less by continuing to produce than by closing down, that is to say because their prime costs are still less than the market price and their capital is still worth something. The process of advancement in technical efficiency thus invariably involves some producers in losses, and they will complain of over-production because from their point of view it is true that the world output of the commodity exceeds what can be taken into consumption at an 'economic price'. It is one of the great disadvantages of restriction and price-control schemes that they tend to retard the

process of technical improvement and real lowering of costs by keeping inefficient production in being.

Of course, all producers of a given commodity, regarded as a group, may misjudge the proportion of the world's spending that will be devoted to their product, and the whole industry be involved in loss or in failing profits. But, as we observed when we considered the matter in another connection, if monetary conditions are neutral, their abnormal losses should be balanced by abnormal gains elsewhere, and the fall in the price of their product be equally compensated by a rise in the prices of other goods and services.

Is, then, the over-production of all commodities at once, or the majority of them, entirely a myth? One reason why it cannot at once be dismissed as such is that just as there may be over-production, in a very definite and real sense, of any one commodity in relation to the proportion of spending power applied to it (that is to say the money demand for it), so in the same sense there may be relative over-production, let us say of all primary commodities together, or even of all material commodities together. In fact, there is a constant tendency for this to happen, for as the gradual progress of invention, discovery and enterprise enlarges the real income of the community, after a certain stage of material welfare is reached the community tends to devote a larger and larger proportion of its real income to services and to the elaboration of material objects rather than to food and raw materials, which means that if the total money income is constant less and less money is spent on raw materials. On the other hand, for a number of reasons —the existence of a large number of independent producers, the pressure to employ fixed capital such as

mines to its utmost capacity even at the price of losses, the attraction of farming as a mode of life apart from its ability to yield an economic return in money—the volume of primary commodities produced tends to increase at least as rapidly as the aggregate real income of the community.

The measure of this relative over-production of primary products in general, in terms of falling prices, is invariably exaggerated by the inelasticity of demand for them resulting from the small part that their value plays in the price of the articles in which they enter as those articles reach the consumer. In urban areas of Great Britain or the United States, for instance, the price of the wheat contained in a loaf of bread is very rarely as much as one third, and sometimes as little as one quarter, of the retail price of the loaf, so that a 50 per cent reduction of the price of wheat could not produce a greater reduction of the price of bread than 15 per cent or so, which would not greatly stimulate the demand for bread. Still more striking is the case of base metals, the demand for which arises largely from the manufacture of machinery—motor-cars, for instance—in whose total cost the cost of such raw materials is so insignificant that if it were reduced to zero the price of the machinery could not be reduced sufficiently to enlarge the demand for it more than a very small fraction. It is reasonable to conclude that the relative over-production of primary commodities is an almost inevitable concomitant of material progress, unless there should be some counteractive force. That conclusion forms a legitimate argument for the maintenance of output-restriction schemes in the interests of the community, which gains nothing in the long run by such a lack of parallelism between the

proportions into which the capacities of supply and the preferences of demand are divided. Unfortunately, not only do the advocates and manipulators of restriction schemes usually fail to understand the legitimate purpose of their endeavours, but they often apply those endeavours to kinds and circumstances of so-called over-production which have no relation to the inadvertent relative over-production that would justify them.

There is such a thing, then, as general over-production of raw materials and even of all commodities, but if it is true over-production it will be accompanied by an equivalent excess of profitability in the production and sale of manufactured articles or services. The circumstances under which over-production is most complained of, however, are commonly those under which there is no such concomitant. In fact they are those of a falling general price level, which involves primary producers in disproportionate losses on account of the low elasticity of demand that has been noted above, and the difficulty, especially among agriculturalists, of restricting their production in accordance with market circumstances. It must be borne in mind that not even the relative over-production of any group of goods means excessive production in any absolute sense. The paradox of starving millions and bulging granaries is always with us. The over-production of any commodity or set of commodities may therefore be defined as their production at such a rate that they cannot be absorbed by consuming markets at prices which yield a profitable return to the body of producers. Assuming that the return once was profitable, that can only mean that the incomes provided by the production of that group of commodities at one time are in excess of the total sum paid by consumers for

the products. If relative over-production is ruled out, then that is synonymous with a general fall of prices. The appearance of over-production, therefore, always accompanies a fall in the general price level caused by an excess of saving over investment.

We can now sum up the connection between over-production and the price level, and suggest a tentative answer to the question: Is it fluctuating production, first in excess and then in defect of demand, that causes the sequence of slumps and booms with which we are painfully familiar? The first proposition is that an increase of the supply (which is a flow and not a certain amount) of commodities, or some of them, through an improvement of technical efficiency, will bring down the average price level *pro tanto*, under neutral monetary conditions; and that under actual competitive conditions aggregate production will probably increase, and prices fall, beyond the levels indicated by the reduction of money costs and the elasticity of money demand. Proposition two is that through the composite errors of entrepreneurs in prejudging the share of the community's money income that will be spent on their products, any one industry or group of industries can relatively over-produce, and thus be involved in falling prices and in losses; and that whenever this occurs among primary producing industries the effects tend to be exaggerated by the low elasticity of demand for such products and by the incapacity of the industries successfully to adjust their production to demand. Proposition three is that such relative over-production is possible either as regards all primary products together or even as regards all material commodities, since the spending capacity of the community may be regarded as divisible in varying proportions

between raw products, the higher stages of manufacture, and services; and that since those proportions tend to shift in favour of services and advanced manufacture as the real income of the community increases there is a constant tendency towards such relative over-production of primary commodities. Proposition four is that although the relative over-production of one group of exchange values, with attendant loss of profits and declining prices, should be counterbalanced by rising profits and prices in other groups so as to keep the general level unaltered, a decline in the commodity price level so brought about, and even maybe one brought about by the enhancement of efficiency referred to in proposition one, is likely to induce a fall in the complete price level at secondhand by slowing down the getting-spending-saving-investing cycle. The fifth and final proposition is that the appearance of universal over-production must accompany a fall in the general price level, since by definition it is only the reverse aspect of such a fall, but that it only emerges as a result of the decline in prices and therefore cannot be its cause.

It seems rather fatuous that words should have been wasted in debating whether over-production or under-consumption is the dominant factor in a business slump. Over-production, as we have seen, is essentially the inability of producers to earn profits, or to earn them on the accustomed or expected scale; while under-consumption is likewise the incapacity of consumers to pay the prices for the quantities that would satisfy the producers. Logically, therefore, there is nothing to choose between them. Under-consumption, however, though still a very vague idea, is a step nearer the conceptions on which our monetary theory has been based. What portion of

income is not spent for consumption is, by definition, saved, and if what is saved is not invested—that is to say spent at secondhand—then a fall of prices will result. Hence it might legitimately be claimed that given a certain level of investment a fall of prices was the product of a failure of consumption. That indeed is true. But an attempt to correct the fall by an artificial stimulation of consuming capacity in terms of money might nevertheless bring evils worse than those which it was intended to cure. Our examination of the possibilities of relative over-production has shown that even under initially neutral conditions on the spending side the divergence of the proportions of production from the proportion of demand may cause a secondary movement of the general price level.

Now when we refer polemically to under-consumption we generally have in mind the need for stimulating the purchase of certain types of directly consumable goods (food and textiles, for instance) among limited classes of potential consumers, like wage-earners or the Chinese. If the price depression itself has not been due to a failure of total world demand for foods or textiles it is *prima facie* improbable that the depression can be ended by enlarging that demand; diseases are not commonly cured by relieving the symptoms. If, for instance, the fall of prices were caused by a decline of investment below the current rate of saving, then even although the rate of saving were reduced, by the stimulation of consumption, to match the lower level of investment, and the average fall of prices were thus arrested, the deficiency of investment below its former level would continue, and the problem of excessive productive capacity and unprofitable prices in the industries producing

capital goods remain. We have observed, of course, that there is strictly speaking no such category as capital goods, distinct in themselves from consumption goods, and that what matters from the viewpoint of price changes is not 'investment' in the sense of the creation of new fixed capital but merely transferred or delayed spending. But there are certain industries—like structural steel or building-material manufacture—whose market depends almost entirely on the flow of investment, and to perpetuate their difficulties, which are generally worse during a depression than those of industries producing consumable goods and services, could hardly be regarded as a cure for the depression even though the price level of other commodities were stabilised. Moreover, the corollary of the proposition that as far as the price level goes an increase of consumption may be a corrective for a failure of investment is that in the same respect an increase of investment may equally be a corrective for a failure of consumption.

CHAPTER VI

THE BUSINESS CYCLE AND UNEMPLOYMENT

So far the argument has proceeded as if the problem of business fluctuations were essentially that of price fluctuations, and the present slump a phenomenon principally of falling prices. But the business cycle is a cycle of business conditions, or (to use the term more familiar east of the Atlantic) industrial fluctuations are fluctuations of industrial conditions. The phases of the cycle are certainly associated with movements of prices, and they in their turn with monetary events, but *a-priori* reason suggests that these are causes rather than effects of changes in the sphere of business. It might prove to be only our momentary preoccupation with the spectacular fall of prices during the past few years that is responsible for our having put this aspect of the cycle first. That suggestion has some statistical evidence to support it. Careful investigation over a period of years covering several upward and downward movements shows that the prices of only a very few commodities reflect the course of the business cycle with any certainty. Professor Warren M. Persons found that a very sensitive index could be constructed out of the prices of ten commodities which seemed, on the evidence of the years 1900 to 1914, most surely and sharply to reflect business fluctuations, and the list is a peculiar one, including, as it does, cottonseed oil, coke, pig zinc, pig iron, bar iron,

mess pork, hides, print cloths, sheetings and worsted yarns. If the essential factor is the movement of prices in general, why do these prices in particular seem to have a specially intimate connection with booms and slumps? Of course, apart from any direct association there may be between price-swings and business-swings, the general trend of prices, upward or downward, may influence the amplitude and duration of business cycles. It appears, for instance, that in the period of falling prices in the 1870's and '90's the depressions were longer and more severe than in the subsequent period of rising prices.

In using statistical evidence to originate or support theories of cause and effect in the business cycle, the greatest care has to be taken to avoid logical error. For instance, two apparently related indices may move in conjunction not because the one phenomenon influences the other but because both come under the predominant influence of a common cause. Again, the time of any initiating sequence of events is not always precisely indicated by the statistical series recording them; for instance, a chart of industrial profits derived from balance sheets or dividend payments would show a fall in profits many months after the margin between outgo and receipts actually began to decline; while even before that reduction in the margin was recorded in the accounts of the firms concerned its imminence may have been apparent to business men, who would have adjusted their plans accordingly. Thus an unsophisticated review of statistical data might establish as effects what were really causes, simply because they appeared to come afterwards. With this need for care in our mind, we can turn to the statisticians to tell us what are the

symptoms of a typical business cycle (if such a hypothesis is conceivable) and in what order they occur. Of course if the sequence were invariable any intelligent business man could take advantage of his awareness of it to insure against the next phase, and if such precautions did not act as automatic correctives then those responsible for public policy could act so as to intercept the evils that they knew must otherwise follow. The typical, however, is not the invariable but the average, and divergences from the type are constantly occurring, perhaps through the interventions of non-economic accidents.

Now the usual sequence (implying, remember, no particular causal chain) is indicated by five groups of economic series, whose oscillations were found by a committee of Harvard economists to be separated by a fairly clear-defined interval in pre-war records. The first group, preceding the second by about two to four months, comprised the rate of interest yielded by railway bonds, the prices of railway stocks and of industrial stocks. The second group, which preceded the third again by two to four months, comprised New York City bank clearings (roughly representing financial and speculative business), the value of building permits, and the turnover of shares on the stock exchange. The third group, divided from the fourth by the same average interval, comprised pig-iron production, bank clearings outside New York (representing the general turnover of industrial and commercial business), the value of merchandise imports, unfilled orders of the United States Steel Corporation, and an index of business failures. The fourth group, from four to six months ahead of the fifth, covered commodity prices, the earnings of railways

and the average reserves of New York City clearing-house banks. The average of loans and deposits held by those banks came in the last group, along with the rate of interest on short-term paper and industrial dividend payments.

What description of the business cycle can be derived from this chain? In a downward phase it would indicate the following sequence: financial stringency—financial recession and decline of capital construction—business recession—fall of prices—financial liquidity. Professor Wesley Mitchell, whose statistical studies of the business cycle are perhaps the fullest and most reliable, has given an account of the typical cycle of which the following is a summary:[1]

During the upward phase of the cycle, the process of recovery is cumulative. The increasing volume of business causes a demand for new equipment in the shape of plant and machinery, while fuller employment means more spending and again better trade. This cumulative expansion of trade arrests the previous fall of prices and starts a rise. The expectation of higher prices accelerates the rise by inducing business men to advance their purchases. The rise of prices is quite rapidly diffused through the whole economic system, but there are always certain lags; the prices of raw materials move before those of finished products, those of producers' goods before those of consumers' goods, wholesale before retail prices. Wages lag behind wholesale commodity prices. The rate of interest on long-term investment moves sluggishly upward, while the advance of the prices of equity-shares precedes and exceeds the rise of commodity prices.

[1] *Business Cycles and Unemployment.* For the National Industrial Conference Board.

Profits mount, because costs, including labour, on the whole lag behind the prices obtainable; hence capital investment increases. This upward movement, however, is not indefinitely continued. After a while, the enhanced competition caused by the simultaneous attempts of all producers to take advantage of rising prices sees to it that costs rise faster than prices. Conditions in the money market become tense, and potential investors meet with financial discouragement. There is, in fact, a 'scarcity of capital'. Since all factors of production are now fully employed, the process of borrowing cannot further increase the volume of things but merely serves to bid up prices and to add to the load of debt upon productive enterprise. As a first symptom of recession, industries supplying industrial equipment receive a sharp setback, because when demand expanded there was a sudden need for their products, but soon scarcely more than replacement (though on a slightly higher scale than before) becomes necessary. Secondarily, the industries providing the raw materials of the equipment industries feel the backwash of this motion. Further, a certain minority of industries, such as those which can only obtain a fixed price for their products, are faced with declining profits even while profits in the majority are rising, and sooner or later this has a depressing psychological effect on business generally. The volume of trade begins to slacken.

Once the recession has set in, the problem of making profits has to be subordinated to that of maintaining financial solvency. Security prices fall through liquidation and the dimming of commercial prospects, while competition for orders drives down commodity prices. The banks, faced at once with a withdrawal of deposits

and a demand for advances, are put to an unusual strain. If they fail to withstand it then cash is hoarded and the crisis becomes acute, but even if the solvency of the banks is maintained the contraction of the volume of loans to which they are compelled enforces business liquidation and hence unemployment. Meanwhile commodity prices are disorganised by sacrifice sales. A temporary recovery supervenes after the first liquidation, because outstanding orders have to be fulfilled and because businesses set themselves to work up their accumulations of raw material stocks. But since prevailing unemployment holds down consumer demand, the minor recovery is followed by a further recession, in which the demand for new construction falls to a minimum. A sharp fall of prices is associated with the contraction of trade because efforts to keep in production the fixed plant augmented during the boom make competition all the keener. The dispersion of the price fall is as before, wholesale prices moving before retail prices, commodity prices faster and further than wages, and so on. The only prices to rise are those of high-grade bonds.

However, corrective forces are at work. Costs fall, after a while, as fast as prices. Stocks of raw materials and of finished products alike become exhausted. The replacement of worn-out equipment becomes imperative, and since saving goes on with slight remission money is cheap to borrow. Trade is stimulated by the appearance of new tastes and new commodities requiring fresh capital equipment. Moreover, the internal condition of industry is better than before the liquidation, because debts have been repaid and the weaker competitors eliminated. The cycle is about to begin another upward phase.

While not necessarily approving the causal theory implicit in some parts of this description, we can accept it as a substantially accurate picture of the typical boom and slump, although it omits the whole international aspect of the cycle, which has been vitally important in the past four years, as it was in several other notorious business crises. One test from which the description emerges very satisfactorily is comparison with the events of 1928 onwards, which occurred several years after it was penned. Whether or not recovery will take the course mapped out for it by economic history remains to be seen. There is, however, one aspect of the cycle which might well be amplified, namely the redistribution of community income. While the volume of business is receding and prices are falling, wages lag behind commodity prices, and interest returns, measured in money, do not alter until painful and disturbing liquidation has been enforced. Hence a smaller and smaller share of a declining volume of real income remains over for profit-takers, who are also enterprisers and whose consequent discouragement lengthens, indeed threatens to perpetuate, the decline. This process is, of course, reversed during the upward swing, when wage-earners get less than their equilibrial share, and the rentiers find their real incomes falling, while enterprisers reap windfall gains.

A theoretical critique of the business cycle, as the reader will readily observe, would find little difficulty in explaining how an upward or downward movement of the pendulum is continued under its own momentum. If, for instance, the volume of business is increasing and prices are rising, then profits are also increasing, enterprise is encouraged and business is further expanded; meanwhile low unemployment and large profits enhance

consumer demand. The questions, therefore, to which the theorist has chiefly to address himself are, what starts the movement of the pendulum originally, and by what process is a movement in one direction changed into a movement in the opposite direction. Professor Wesley Mitchell gives a summary classification of current theories of business cycles[1] of which the following is itself a résumé.

1. *Theories which trace business cycles to physical processes.* Meteorological theories, tracing business fluctuations to the weather, are submitted with the best credentials, including those of Professor H. Stanley Jevons. A variation is introduced by Professor Ellsworth Huntingdon, who suggests that weather cycles are reflected in health, that health affects the mental attitudes of business men which in turn influence the character and volume of trade.

2. *Theories which trace business cycles to emotional processes.* The most notable exponent of such a theory is Professor A. C. Pigou, who says: 'Optimistic error and pessimistic error, when discovered, give birth to one another in an endless chain.'

3. *Theories which trace business cycles to institutional processes.* Among those who ascribe the cycles to a change of economic institutions, Professor Schumpeter declares that innovations (inventions and so forth) come in waves and initiate periods of activity followed by crises and depressions. Theories which blame cycles on the functioning of existing institutions Professor Mitchell divides into five groups, according as the blame is laid on (a) technical exigencies of money-making, (b) lack of equilibrium in the processes of disbursing and spending

[1] Wesley Mitchell, *Business Cycles*, p. 50.

incomes and of producing values, (c) lack of equilibrium in the process of producing and consuming goods in general, (d) lack of equilibrium in the processes of consuming, saving and investing capital in new construction, and (e) processes of banking. The typical theorist of the first group is the late Professor Thorstein Veblen, who saw an inevitable circular motion in prospective profits, governing the actions of business men who have in their hands the conduct of the money economy. Other exponents observe that in a competitive system fluctuations in the volume of consumer purchases must grow larger in amplitude as they pass through mercantile orders to manufacturing and finally to the production of raw materials. Group (b) includes Messrs. Foster and Catchings, whose theory that the incomes disbursed by business enterprises to individuals are alternately less and more than the full value of the goods produced for sale has become well known. Sir William Beveridge, with his belief that waves of over-production result from 'the well-nigh universal fact of industrial competition', ranks in group (c), along with Professor Aftalion, who thought that good trade leads to a rapid increase in industrial equipment and later in output, and eventually to a decline in the marginal demand prices for consumers' goods which brings the period of good trade to an end. One of the earliest modern exponents of group (d) of cycle theories was Dr. Tugan-Baranovski, who held that in prosperity the demand for capital exceeds current savings and that the consequent scarcity of capital brings on a crisis. Mr. J. A. Hobson, perhaps the best-known exponent of under-consumption theories, believes that large incomes, which grow rapidly in prosperity, lead to over-saving and over-investment in new plant,

so that supply exceeds current demand. Although his theory of the divergence of the rate of saving from the rate of investment is fundamentally different from the views of Mr. Hobson, Mr. J. M. Keynes must also be classed in this group. Finally there are those who believe that the cycle is essentially one of money and credit. Mr. R. G. Hawtrey has put forward this explanation: when banks have large reserves they reduce discount rates, and thus encourage borrowing and business expansion, which grows cumulatively until the banks find that larger cash requirements are impairing their reserves, when they adopt a restrictive policy.

This list is not meant in any way to be a complete record of different theories of the business cycle and of their exponents, but is introduced only to illustrate the number and deviation of the various explanations current. Moreover, as some of the theories attempt to answer one and some the other of the two questions posed above, it seems preferable not to follow any regular classification but to criticise different theories as and when they arise in the course of discussion. The most convenient starting point is the idea that cycles are caused by the effect upon the economic system of some event or series of events external to it. Sunspots have notoriously been blamed, and the opinion that for some such reason the weather goes in cycles and produces variable crop conditions which in their turn set going industrial vibrations has much on the surface to recommend it. The suggestion used to be that a crop failure is the depressing factor, but recent experience indicates that agriculturalists as a whole are comparatively worse off with bumper than with poor crops. Let us say then that there is a considerable fall of total agricultural in-

come. Then the producing countries (runs the argument) are unable either to meet their debts fully or to buy from industrial countries in anything like the same quantities as before; hence machinery stands idle, men are thrown out of work, and the forces of competition drive down prices. Historically there is a certain amount of evidence in support of this view, and, in relation to the present economic circumstances of the world, theorists of this school can adduce the fact that in 1928 extraordinary good crops of wheat, especially in Canada and in Russia, forced down the price of that staple article to unprofitable levels. They would go on to say that, apart from the international disturbance thus begun, the agricultural community of the United States, where the boom had been most remarkable, could no longer afford to buy from the industrial centres on the same scale as before and thus forced down the prices of manufactures and the volume of industrial production.

Now there are two lines of argument in opposition. The first concerns the interpretation and the proportionate value of the facts. The fall in the price of wheat was an incident, and not by any means the most striking one, in a general decline of the prices of primary products which had been going on for years: its swiftness was indeed exaggerated by the deliberate and incidental accumulation of wheat stocks, a progressively greater total of wheat having been held off the final market. The second retort is more theoretical, and relates to the possibility of general over-production. If the agricultural community is receiving less for its products, the industrial community is spending less upon them, and has just that much more to spend on other things, that is to say its own products. Hence a decline of the prices

of primary commodities, in the absence of any other relevant facts, should divert rather than diminish the total demand for other goods and services. That proposition, of course, has to be modified to allow for the facts that any diversion of economic activity involves some delay in readjustment, that particular countries, Great Britain, for instance, which depended beyond the average upon exports to primary producing countries for their own prosperity and could not readily change to supplying home demand, might be involved in industrial difficulties while those disproportionately fortunate might hesitate in adjusting their financial machinery to the new division of demand; and that the psychological effect of a fall of commodity prices might be disastrous. All those qualifications were true of the 1929 slump, but it would be improper to assume without further evidence that any sudden change of agricultural conditions was initially responsible for the break in the boom.

It seems more reasonable to put forward the opinion that any sudden change in the conditions either of agriculture or of industry acts as a monkey-wrench thrown into the machinery. It might be the weather or it might be some natural calamity, some political disturbance or *détente*, some invention or new enterprise, some sudden swing-over of public taste. A war, after all, is the surest initiator of an industrial boom; in times of peace as we know them the idea of an 'excess-profits duty' seems rather laughable. Sometimes the event should be compared with pulling the trigger, sometimes with the charge in the cartridge. Apart from such wide and continuing circumstances as war, however, events external to the economic machine should only throw it completely out of gear or cause it to accelerate so quickly

that it becomes overheated if the machinery itself is naturally subject to such disorders, whose violence it multiplies. While, therefore, we may seek the *stimulus* in fortuitous events we cannot claim to have found the *cause* of industrial fluctuations until we have examined the various purely economic possibilities.

We have already noted how widely different are the views that have been put forward even by competent specialists. Some have thought that monetary phenomena, some variations of production, some fluctuations in human psychology, were the predominant factor, and the others secondary or consequential. Perhaps the most plausible type of theory is that which attributes business cycles to over-production caused by over-saving, followed by their opposites.

The argument runs like this. From time to time the community devotes an excessive amount of its energies (both its real and its money income) to the creation of capital assets. Meanwhile the price of consumable goods is kept up by the demand of those who obtain their incomes from the capital-producing industries. But the capital assets themselves serve only to produce more goods for consumption, and before long the failure of consumption to keep pace with supply results in falling prices and a discouragement of further capital construction. Those formerly engaged in the capital industries are thrown out of work, and consumer demand is still further restricted. But the cessation of capital construction, followed by the gradual scrapping of plant on account of obsolescence—a process which is accelerated during bad business times—means that as soon as consumption is revived somehow the available capital equipment is inadequate to meet the demand and saving

(i.e., investment) is thus shown to have been in defect. Now as a description of the course of the business cycle the theory is obviously by no means inaccurate, but it has certain defects as an account of why the cycle occurs. It fails, for instance, to indicate how the failure of demand for consumable goods is first brought about, since on its own showing the incomes of those engaged in capital construction provide their share of money demand, and since presumably the cost of the goods produced by means of the new capital (along with the old) does not exceed the aggregate of the incomes of those engaged both in the current manufacture of consumable goods and in the creation of the new capital itself. Nor does the theory explain unaided the revival of consumptive demand which exposes the inadequacy of the saving in the opposite phase. (It must be remembered that in this context the word saving is used, as it is by proponents of the theory, as synonymous with what we have called investment.)

The theory of over- and under-saving becomes more satisfactory as an explanation of fluctuations of the general price level if it is restated in terms of what are really quite different theories. It might, for example, be interpreted as saying that the proportions in which demand on the one hand and supply on the other are divided between consumable goods and capital goods diverge from each other, and that this deviation (or the consequent readjustment of the economic structure) involves a variation not only of *relative* price levels but also secondarily of the *complete* price level; or that the rate of investment periodically deviates from the rate of saving, directly causing a fluctuation of prices. In these last terms, the failure of consumptive demand would arise

either because saving increased or because the investment hitherto carried on was arrested, presumably on account of the exhaustion of opportunities for the apparently profitable use of capital. Similarly the reverse trend would be started by the renewal of investment or by the curtailment of saving through the reduction of personal incomes and *a fortiori* of savable surpluses. Excessive productive capacity would then appear not as the cause of the decline of prices but as the effect thereof, since in any case it means no more than the deficiency of money demand.

In contrast to saving-theories, it is possible that the boom whose collapse spells a slump may be the result of over-consumption rather than over-investment or, as it would be called, over-saving. We have observed how if what is invested exceeds what is saved a rise of prices must occur, but how can it happen that what was spent for consumption should exceed what was not saved? From the point of view of the community as a whole, of course, such a conception would be inadmissible, if only because it would impossibly complicate any attempt to account for price fluctuations, and in fact it is taken care of by the notion of negative saving. But in relation to the individual, or to the purpose of expenditure, it has a certain content of reality. The business world, anxious at all costs to sell, is compact of devices to allow us to spend what we have not got, so that by dint of instalment buying and the like expedients a man can enlarge at once his standard of consumption, in terms of money, and his standard of apparent saving, without having any addition to his money income. Thus while investment might be keeping step with apparent saving, prices might rise because consumption was in excess of the

apparent remainder of money incomes. One must use the epithet 'apparent' because of course the consumer is effectively borrowing some of what he spends on consumption, and thus committing negative saving to set off against his apparent saving, a fact which is recognised in the phrase 'consumer credit' sometimes applied to the instalment-buying system.

All kinds of different systems are in operation for the management of instalment buying, but for the purposes of analysis it is sufficient to consider a simple type, that in which the dealers and other intermediaries receive payment in full at the time of sale, the cash being furnished to them and to the manufacturer by a special finance corporation or by some other credit institution which discounts paper representing the obligation of purchaser to pay further instalments of the price, and secured by chattel-mortgage (or similar lien) on the depreciating value of the object sold. (It is hardly necessary to interpose the comment that the right of repossession is of greater practical importance as a stick with which to threaten the consumer-debtor than as a means of reimbursing the manufacturer-creditor in the event of default.) Now the process might be regarded merely as a three-cornered exchange which need have no effect on the price system or on the remainder of the cash-and-credit structure. The purchaser, from this point of view, is enabled by his advance purchase to set aside money which he entrusts to the credit system; there it is borrowed by the finance corporation concerned, and effectively lent back to him on the endorsement of the firm from which he has made his purchase—a process which would not redound much to the advantage of the consumer-creditor, since several intermediaries would

have had to take their profits out of his money *en route*, and since in practice the effective rate of interest charged on instalment purchases is usually far higher than any return which a private lender could expect on investing his money in securities. (It should be noted that if, for instance, twelve equal monthly payments exceed the cash price by only so much as 5 per cent, the effective rate of interest is over 10 per cent, since the average length of time for which the money is lent is under six months.) But actually there are secondary reactions which render the effect on the credit system far from nugatory. In the first place, the individual purchaser will not fully make up for his virtual borrowing, or negative saving, by positive saving, and therefore consumption will increase while investment will not be correspondingly curtailed; because although the credit system will have to find the money capital somehow the comparative liquidity and security of the investment, and the existence of semi-negotiable collateral paper, will encourage the system to expand its total of credit advanced for all purposes. In the second place, the industries practising the device, screwed up to the continuance and increase of the practice as they are by the pressure of competition, will be increasing their production faster than the real demand for their products expands, and therefore will be exerting an abnormally potent demand for credit both at short term and at long term. Hence the *prima-facie* judgment that we made earlier on about instalment selling, to the effect that it involved a duplication of credit, once to the industry and indirectly to those engaged in it, and once to the purchaser, is vindicated in practice, although there is no theoretical reason why it should be always or exactly true.

If, then, the process of instalment credit creates a rise of prices by keeping industry constantly catching up with its own weight, so to speak, what is its defect and how does it contribute to a fall of prices? The answer is not far to seek. After a while, even with its aid, the markets for the products of the industries using it on a large scale become saturated. Normally, that would mean a stabilisation of demand, but in this case it means a reduction of demand, since last year's orders included, say, one half of what would have been this year's, and this year's must therefore include not merely one half but the whole of next year's if they are to keep up to last year's mark. Thus the incomes emerging from those industries will decline, and the demand for credit will decline, while on the consumers' side the saving necessary to pay the instalments falling due will not be fully compensated by a curtailment of other forms of saving but will be accomplished in some measure by a reduction of consumptive expenditure. Thus instalment buying always carries the germs of an excess of saving over investment even while for the moment it is entailing an excess of investment over saving. Moreover as soon as the decline of prices and hence of incomes has set in (whether it be from that cause or from any other) there is a tendency for the volume of instalment buying not merely to remain stable but actually to decline; for the willingness of individuals and households to pledge their future incomes in that way depends largely upon the expectation that those incomes are going to increase, wherefore, as soon as there is any threat of a reduction of incomes the task of the instalment-plan salesman becomes extremely difficult. And that quite apart from the general reduction of purchasing power which falls

upon all industries and methods of payment alike. Thus production in certain prominent industries tends actually to fall behind the rate of income-earning, where previously it was ahead.

Some commentators have sought to prove the satisfactory position of instalment credit in a community's economic structure by showing that the payment of instalments is maintained with very little increase of the proportion of defaults above normal even at times and in areas of acute depression. But in the first place that unfortunately ceases to be true where the depression is deep enough and protracted enough; and in the second place the important consideration is not the rate of liquidation of past credits but the curtailment of demand in the industries that have practised the system, and even more in certain of those industries which may not have done so upon but whom the brunt of a reduction of spending power inevitably falls because of the comparative ease with which their products can be forgone. The obverse of the satisfactory maintenance of instalment dues on pianos and motor-cars when the depression set in in the United States was the disastrous curtailment of demand suffered by the clothing industry, for instance, out of all proportion to the reduction of the aggregate income of the community. This is no place to argue the personal or commercial pros and cons of instalment credit. From the economist's angle the important thing is that if instalment credit is not to exaggerate first the upward and then the downward swing of the business cycle those responsible for the control of the credit system must adjust their policy carefully, and with full knowledge, to the difficult situation that it creates.

Discussion of instalment credit has been a diversion

from the course of argument about theories of over-saving and over-production. The cyclical recurrence of over-saving (not in the sense in which the word saving has been used in the previous chapter but as identical with over-investment) is a conception which certainly provides a useful description of the chief phases of a trade cycle, but it is inadequate as a theoretical explanation. When it is used as a stepping stone to theories of over-production it becomes positively misleading because of the confused sense in which the term over-production is employed. Over-production if it means anything must mean excessive production in relation to costs, prices and the volume of demand, so that universal over-production might always be called a monetary phenomenon. But, as we saw earlier on, the relative over-production of one class of things might possibly extend to commodities in general, as compared with the whole gamut of values on which money is spent and to which economic effort is devoted. Indeed at certain stages in the economic advancement of the world such as the present, when there is a constant tendency towards using less and less effort in the production of primary commodities and towards devoting the factors of production thereby released to advanced stages of manufacture and to services of various kinds, the economic system is beyond doubt seriously liable to general over-production in that sense, which by its international effects or by its reactions on commercial psychology may very well prove the initiator of periodical slumps. The reluctance to hold stocks of commodities at times when their prices are falling, whatever the reason for that fall might be, would involve a curtailment of investment in working capital, slowing down the whole economic

machine and bringing about a decline of values even outside the range of material commodities.

But that is only to throw back the blame, not to allot it finally. In part, it is to repeat that the economic system does not readily or at once adjust itself to new circumstances, and to add that if those circumstances happen to involve a fall in the prices either of some outstanding commodity or of commodities in general, then the failure to adjust is likely to bring a further or more extensive fall. In part it is to lay the onus upon the monetary mechanism, which, if it is incapable of correcting the depressing effects of such relative over-production of commodities and of preventing their translation into a universal deflation, is inadequate to its job, because changes of that kind and order of magnitude are inevitable incidents of economic progress. But of course operation of the monetary system is indirect. The mere volume of money and the structure of institutions whereby it is regulated is only one of the factors in the determination of the price level. Money and banking structure should be regarded as an instrument for securing a correction of such forces as a tendency to over-spend, or a hesitation in buying, which have their own independent causes. Nevertheless the connection is direct in this sense, that if there are continuing rigidities in the monetary system, or other long-run deterrent forces acting upon it, then they may render it permanently incapable of doing its corrective work. Such a force might be the excess or inadequacy of the monetary base, and it is certain that long-term fluctuations in the economic system have been exaggerated if not induced, under the gold standard, by the shortage or the increase of the available gold. If gold

were coming into the world's monetary reserves at a faster rate than economic activity was expanding, then whenever the occasion came for the imposition of a restrictive monetary measure to correct an independently caused tendency in the opposite direction the correction would tend to be delayed and perhaps avoided altogether. If, on the other hand, the gold reserves were becoming relatively inadequate to support the expanding economic structure there would be a similar tendency to delay inflationary corrections and to advance restrictive ones.

The flow of gold into national monetary reserves is, of course, never evenly distributed. An excess of gold will be concentrated in some country which is for the moment in a favourable position to acquire it, and enable that country to be in the van in any world-wide inflationary movement. Classical political economy would then add that by inducing a local rise of prices the local inflation would so alter the balance of payments that the gold would be redistributed and other countries be enabled to share in the inflation. This theorem requires two important qualifications in the light of present events. The first is that the inflation elsewhere might be direct, without first requiring a redistribution of gold, since for psychological if for no other reasons the monetary authorities of other countries might be induced by the mere spectacle of inflation to take a course involving a rise in their local price levels. Hence when the period of inflation was over the unevenness of the gold-distribution would remain unimpaired. Similarly, as the events of the past decade have plainly exemplified, no country, however well provided with monetary reserves, can altogether escape the contagion of a local deflation in-

duced by a relative scarcity of gold. The second qualification is that when, as in the present economic era, international capital movements, especially of short-term money, are on a large scale compared with the international flow of goods and services, the correction of an inflationary or deflationary movement through the mechanism of the international balance may be indefinitely delayed or actually for a time reversed through a counter-movement of funds. After the war the United States had a relatively high gold reserve, which before long had its effect in raising prices in the United States compared with the movement in the rest of the world. American lending to foreign countries for a time enabled the latter to participate in the rise, but when the lending was cut down the divergence of price levels was not in itself sufficient to correct the balance and prevent those countries from having to subject themselves to deflation, because by this time money was flowing into the United States to take advantage of the speculative opportunities (and the associated high rate of interest on short-term money) granted by the local rise of prices. In these circumstances it seems more proper to lay the blame for large industrial fluctuations upon the economic system generally than upon the shortage, excess or maldistribution of gold which is incidental to it. It is not the lack of gold but the inability of the world's monetary mechanism to provide correctives for such a lack that is responsible for a secular decline of prices traceable to that original source. And, as we shall see when we come to relate theory to the circumstances of to-day, that part of the monetary mechanism which deals with international lending must be held particularly culpable.

If, then, while admitting that non-economic accidents

may be the initiators of economic fluctuations (without ruling out the possibility that they may be spontaneously generated) we are forced to blame the economic machine for its inability to provide the necessary adjustments and to prevent a jerk from becoming a swing to and fro, and if, further, we observe that forms and features of monetary mechanism must themselves be regarded as incidental to the whole economic structure, are we not bound to conclude that the business cycle is an inevitable product of the particular economic system in which we live? Business cycles occur only when a primitive barter economy gives place to a monetary economy, and the more elaborate that monetary economy becomes the more sensitive to such vibrations does it seem to grow. Since, in our present capitalist régime, profits are the chief economic force, numbers of attempts have been made to establish theories of business cycles on the foundation of profits, their variability and the delusions that they sustain. Some of the theorists of this school start with the same method of approach as has been used in this book, namely, the question how it comes about that there is insufficient or excessive purchasing power to maintain the prices of a constant flow of goods, when the previous set of prices was itself formative of equivalent incomes. They proceed to point out that whereas other incomes emerging from the process of production have already been distributed by the time the goods are sold, or at any rate enter definitely into their cost price, profits are only distributed after sale and indeed only emerge as a surplus above cost price when the market price is actually realised. Hence, it is argued, the intervention of profits destroys altogether the guarantee that purchasing power will equate with the total of former

prices, since present purchasing power comprises present costs (excluding profits) plus not present but past profits; conversely, if profits can be made to vary independently purchasing power and hence prices will vary accordingly. What is more, the movement is self-aggravating rather than self-corrective, for any independent advance of profits will consolidate and enlarge itself by providing new purchasing power; the only corrective will be the pressure of others in the community than profit-reapers to share in the increase by having their own rewards increased in proportion to the rise of prices, but there is always a lag in their ability so to share. Nevertheless, as with the theories of over- and under-saving, however accurate a *description* this type of reasoning may furnish of the actual sequence of events during a general movement of prices, it provides no real *explanation* of the rise or fall of prices. It does not explain how the independent variation of profits originates, if not from a previous movement of prices, nor why the past profits that are added to present costs in the summation of present purchasing power should come to differ from present profits. Indeed theorists of this school are sometimes content to leave their conclusions in the form of an unsolved paradox.

The analytical clue seems to be to get away from the conception of costs, above which profits are a variable surplus, altogether, and to regard instead only incomes, whatever their source. (Mr. Keynes and others put the same thing in the shape of defining profits as existing, positively or negatively, only as a surplus or deficit beyond the level of incomes, that obtains in a stable system, including the rewards of the profit-taking class; but this technique is unsatisfactory in that it leads far away from

the ordinary everyday use of terms, according to which profits exist in some measure under stable and even declining price conditions.) Let us then imagine an assembly of articles with price tickets on them, taken off similar articles which have been already sold. Now whether the general price level remains stable or rises or falls depends on the ability of those articles, on the average, to fetch the prices marked on their tickets. If the tickets have been in use for some time then the money that passed when the goods to which they were formerly attached were sold must have been distributed in incomes and become available at least as potential purchasing power. Maybe the half-crown marked on one ticket goes as to two shillings in wages and as to sixpence in dividends and interest, but if the ticket has been in constant use there will still be half a crown available to buy the article again, no matter that it will comprise two shillings of this week's wages and sixpence of last year's dividends. What we may call the time-dispersion of the spending power (incomes) arising from a given bargain has been tacitly taken care of in our formula in the factor t representing the average interval between saving and investing.

Nevertheless it is true that the course of profits is at once an index and a regulator of movements of prices. But the connection is accidental rather than automatic, resulting, as it does, from the fact that profit-takers, among all income-earners, are in the best position to obtain more than their proportionate share of the increased spending power which brings about a rise of prices, and *vice versa.* It is a matter of common experience how in a period of rising prices wages and salaries advance a step behind profits (including the incomes of

independent producers of goods or services) while fixed interest is of course hardly capable of variation. But the analysis of price variations is constantly throwing up problems of the which-came-first-the-hen-or-the-egg variety and in this case we have yet to enquire whether increased spending power itself arises out of increased profits or other incomes. The basic increase of investment over saving may arise either through a curtailment of saving below the current rate of investment or an increase of the rate of investment above the current rate of saving. The difference is one merely of the direction of the added spending power. Each individual industry will have its own conditions of elasticities of supply and demand and of internal structure—the extent of competition, the strength of trade unionism, etc. —which will determine whether, if the rate of money demand for its product rises, profit-reapers or wage- and salary-earners will as a class take more than their share of the increase. If at the moment there is any considerable surplus labour capacity in the industry, which would be true of almost every industry, at the trough of a trade depression, then there will be a tendency for labour to get less and capital more than its former share of the aggregate income of the industry. Hence it is accidental, though extremely probable, that profits increase faster than other incomes after the initial movement towards a higher level of prices has taken place, and provide a disproportionate part of the new purchasing power that tends to continue the movement. Moreover, since profits are the reward, and the prospect of them the stimulus of capital investment, the enlargement of profits tends to maintain and even to exaggerate the excess of investment over saving and thus to perpetuate

the upward (as in the reverse phase the downward) movement of prices.

There are, on the other hand, certain counteractive tendencies simultaneously at work. It may be observed that an increase of wages involves, in the general economic sense, a certain increase of the rate of investment. Since wages are generally speaking paid in advance of the sale of the product in which they are embodied, they may be regarded as representative of an accumulation of stocks of goods, which of course is 'real investment'. Also, since wage-earners generally speaking have little economic reserve and spend their incomes quickly, a disproportionate advance of wage rates reduces the average interval between getting and spending and thus accelerates the rate of increase of prices. Conversely, a decline in the proportion of wages to other incomes, which we saw was the most probable normal accompaniment of a rise of the general price level, to an equivalent extent diminishes the rate of investment and enlarges the interval between getting and spending, thus both slowing down and helping to arrest the rise of prices. On the other hand, a rise in the proportion taken by profits increases the rate of saving, since profits are withheld from distribution as personal incomes until after the price of the products concerned has been realised, and thus represent saving for the period between the sale and the spending of the incomes; and it likewise enlarges the interval between getting and spending. Furthermore, the profit-taking class are to a great extent also the personally saving class, so that there again a potential corrective is provided either to the upward or to the downward movement of prices.

Now it may not have escaped the reader that the

argument skated over some very thin ice when for the first time it treated of the actual direction and the immediate results of a variation of spending power through a divergence of investment from saving. Two distinct problems are involved; first the relative variation of different prices and second the reaction of the divergence upon the volume of goods and services flowing to market. Both of these problems have been touched on but never finally disposed of. The extent of variation of different prices depends, as has been frequently pointed out, upon the particular conditions of supply and demand, competition or monopoly, in the several industries. There is, indeed, very little that can be said in the way of universal propositions on this point, since everything depends on the particular type of divergence—upon whether, for instance, an excess of investment over saving arises from an increase of investment or a decline of saving, and whether, in the latter case, the decline of community saving results from a decline of personal saving out of existing incomes or a forced effective saving through an 'artificial' expansion of consumptive purchasing power. In short, everything depends on where the additional spending power is injected into the economic system. If, as may be expected under normal conditions, saving is fairly constant and the principal variation is in the rate of investment, then the first set of prices to be affected will naturally be those of the capital-goods-producing industries—generally speaking the heavy industries. The rise of prices, however, may be intercepted by an increase of production at the old rates of earnings and of prices; hence if unemployment and redundant capital equipment are on a smaller scale in the industries on whose products the new incomes in

the capital-industries are spent, it may happen that prices rise in them earlier or in greater proportion than in the capital industries themselves.

The second problem has also been partly dealt with already. We remarked, for instance, how a rise of prices tended to draw out goods from stock and to accelerate their flow by advancing purchases; while a fall tended to cause an accumulation of stocks and to retard purchases. But that cannot be regarded as a permanent phenomenon and may advisably be treated not as a variation in the flow of goods but as a variation of saving and investment and of the interval between getting and spending. What we have now to consider is the long-run effect of a movement of prices on the flow of goods. A great deal of accepted economic theory is based on the supposition that all factors of production are fully employed at least where equilibrium of prices exists. But an economic system may be capable of establishing equilibrium at any of several levels. Prices may be stable at the bottom of a business slump when unemployment is high and much fixed capital derelict. The example of Great Britain from 1926 to 1930 proves that it is possible for a community to support indefinitely a body of unemployed equal to perhaps 10 per cent of its working population even while the prices of goods and services are, in the aggregate, fairly constant. We cannot therefore regard unemployment (including the unemployment of capital which takes the form of redundant plant) as a passing phase of a downward movement of prices, disappearing by degrees during a period of stability at any level, but may legitimately assume that whenever an upward movement of prices begins there is a certain amount of unemployment in almost every industry. The

consequence is that if an increase of money demand appears, even after the slack has been taken up by the depletion of stocks, the effect is not first of all an increase of prices but an increase of production. (In the formula, an increase of I over S results in an increase of V.) The increased purchasing power is handed on in incomes to the full, of course, just as if there had been an actual rise of the price per unit, so that if the excess of investment over saving continues the rise of prices will almost certainly emerge later. The reverse sequence likewise takes place during a fall of prices, and thus statistical evidence shows that a decline of the volume of trade usually precedes the fall of prices, and a revival of trade precedes a rise of prices. This fact has been made the foundation of an argument that monetary causes, associated with a rise or fall of prices, cannot be the major instrument of trade depression or boom, which happens first and appears to have the movement of prices as its consequence; but without necessarily asserting the contrary we can state emphatically that the argument is an example of the *post-hoc-ergo-propter-hoc* fallacy to which the statistical method in economics is so prone. Perhaps it is as well at this point to interpose a comment on the word 'monetary'. If our analysis is sound, the division between causes of a change of prices 'on the side of goods' and causes 'on the side of money' cannot be distinctly made, since the one reacts intimately and immediately upon the other. Moreover, if the distinction is attempted then the so-called 'monetary' causes might rather be called 'investment' causes. Changes in the actual volume of money, including both currency and available credit, may, of course, be the cause of a divergence of saving from investment, but they are just

as likely to be a consequence. Indeed an increase of money in that sense is often the accompaniment of a decline of prices, since deposits increase with the curtailment of investment and since hoarding of currency increases with the failure of confidence. The influence of purely monetary events, therefore, upon prices, though it may be direct and immediate, in practice is usually indirect and delayed.

Unemployment is thus a normal accompaniment, and sometimes a forerunner, of falling prices because the decline of total monetary demand for the products of any industry—beginning with the capital goods-producing industries if the fall happens to originate with the failure of investment—reacts as well upon the volume of production as upon the prices at which the products are sold. Of course if costs, and especially wage costs, were infinitely elastic the fall in the spending power of the purchasers might be entirely absorbed by a fall in the price of the product, without necessitating any curtailment of the volume of production and hence of employment. But that would be no final solution of the problem, because if the excess of saving over investment persisted, spending power would continue to fall, at a rate proportionate to that excess, which tends to rise with every reduction of the share of wage-earners in the total income of the community. It is true that the reluctance of wages to fall tends to discourage investment and that their rapid adjustment might restore some of the confidence of enterprisers, but in practice there is a low elasticity of demand for labour during a period of falling prices, so that wages would have to fall a very long way in order to make any appreciable inroad on unemployment.

Unemployment must therefore be accepted as inevitable while prices are falling. Once they have been stabilised at a lower level then the unemployment may be absorbed by a reversal of the swing, beginning with an expansion of the scale of production, as spending power increases, and proceeding to a recovery of prices. But the low level of prices may have to be regarded as permanent, or the initiating forces of trade recovery may be held back until adjustment of costs to the lower level of prices has taken place. Hence, although the adjustment might possibly set prices moving downward again, the only alternative to a continuance of unemployment would be a wage cut to fit in with the general price system. If the price-regulating factor (savings-investment) is neutral, then at any scale of prices there will be a certain determinate elasticity of demand for labour, equilibrium being possible at different levels of wages, production, proportion of capital to labour, and thus of unemployment.

In an isolated economic system, technical efficiency and available resources will determine the maximum rate of production by the community as a whole. The proportions in which that is divided between different classes of the community, speaking very generally between capital and labour, will depend on a number of factors, including the rate of saving, the state of technical advancement in respect of economising either capital or labour, and the division of public demand between goods requiring a heavy capital outlay and those whose cost is chiefly direct labour. Then the average wage rate will in turn be determined by the volume of total production, the share of the product accruing to labour, and the number of workers among whom it has to be

divided, but it may be possible to find an indefinite number of levels of equilibrium, at certain of which, presumably those involving lower wage rates, there will be a higher volume of production and of employment. Whether the total income of the wage-earning class will be higher or lower under the circumstances of high wages with high unemployment than under those of lower wages and lower unemployment will depend on the particular conditions. It is certain, at any rate, that beside the unemployment that follows the reduction of output during a time of falling prices, unemployment may arise in a condition of economic equilibrium, through too high a price being set on labour. If there were no means of supporting the unemployed, there would always be a tendency for wage rates to fall until such a level of equilibrium was reached as would maximise employment, but quite apart from state-organised or state-aided unemployment schemes it may pay the trade unions, as representing the wage-earning class, to support a large number of unemployed by levies on those in employment.

The third cause of unemployment is the existence of a normal 'labour reserve'. At any moment, however busy industry is, there will be a large number of men shifting from one job to another, or from one industry to another, either because they personally are moving up or down the scale of labour-value or because the relative prosperity of different industries is changing. Again, certain industries, by paying a comparatively high hourly rate, are able to employ a sharply fluctuating volume of labour, and those for the moment out of a job will count, of course, as unemployed; on the whole, the least useful workers will be laid off for the longest periods, so that

some of them will indeed be chronically under-employed. In some industries, like docks, which are able to keep their reserve not by paying particularly high wage rates but by the fact that the inefficient and under-employed of other industries tend to drift into unskilled casual labour of that kind, the labour reserve is commonly excessive, so that when output is at its highest there is still an unemployed remnant, and in such cases the volume of unemployment might be reduced—as in some places like the Thames Docks it has been reduced—by organisation and restriction of the labour supply. But in other industries, the automobile industry for instance, a high labour reserve has to be afforded, and so long as the employers find it pays best to offer the high wages necessary to retain such a reserve, and so long as workmen are willing to form part of the reserve on those terms, the circumstance cannot be particularly complained of. To the list of industries requiring a high labour turnover, as it is sometimes called, must be added the seasonal trades like building, fishing, agriculture. Under competitive circumstances, when the total volume of employment is not abnormally low, these trades have to pay for the unemployment in the off season by offering high wages or other attractions, unless their workmen can find other temporary jobs, which is always possible in some measure. The danger comes when a system of national unemployment insurance—or some similar means of taking care of the unemployed on a scale broader than particular industries—maintains the unemployed, and the seasonal and other industries with a high labour turnover take more out of the pool in benefits than they put in in contributions. This is what happened under the British unemployment insur-

ance system, with the result that industries of that class were disproportionately encouraged. With this section of the unemployed may be grouped the chronically unemployable, since they are likewise a permanent feature of industry at all times and since none of them is ever absolutely off the labour market, even if his employment amounts to no more than a week a year, so that there is no sharp division between them and the casually, seasonally, and intermittently employed.

There is another type of unemployment which may be regarded as a part or an exaggeration of the other types, namely, that arising from rapid rationalisation. Rationalisation is a word very frequently on the lips of publicists and politicians as well as of economists in these days, and it is used in a variety of different senses. Technically, it means the organisation of an industry, or some part of it, hitherto subject to the blind forces of competition, either as a single firm or as if it were a single firm, for certain purposes including the regulation of production, the fixation of prices and the division of markets. The word is also rather confusingly used to mean the organisation, direction and payment of labour within a given firm in such a way as to secure the maximum output per unit of time or effort. Here we take it to mean any change in the methods or organisation of an industry, excluding inventions, which involves a lower average labour cost per unit of output. In none of its senses is rationalisation a new feature of economic life, but the combination of high rigid wage rates and falling prices has undoubtedly accelerated it in the past decade. Germany has been in the van because historically she has always been the most subject to industry-wide organisation, because her inflation of 1923

stimulated the merging of competitive firms, because foreign capital provided a ready source for the capital re-equipment necessary, and because the necessity of paying reparations reinforced the stimuli working in all countries towards a reduction of costs.

That rationalisation causes immediate unemployment in the industries affected is obvious enough, but it is not so certain that it need permanently entail an average general unemployment. In the first place, the reduction of costs thus effected may stimulate demand, and if demand is elastic the final result may be greater volume of employment than ever in the industry concerned; this, however, is not the usual course of events, especially as rationalisation is commonly devised as a means of securing profits by the aid of a semi-monopoly. Again, the reduction in the amount of money spent on the products of that industry releases spending power which will be used upon the products of other industries, and in so far as that is true rationalisation may be treated, in respect of its effect upon employment, merely as an acceleration of the general process of economic shift. But that is not the whole story. Rationalisation means as a rule that the technical conditions deciding the division of the product of industry and commerce between different economic classes shift in favour of capital and against labour. It is unlikely to mean a reduction of the real wages of labour, because the total divisible product has been simultaneously increased by the economies implied in rationalisation, but in the absence of any positive monetary forces the reduction of real costs will drive down average money prices, and with them the level of money wages at which any given volume of employment can be afforded. As money wages are extremely obdurate ele-

ments in the economic system, for natural and proper reasons, it may be concluded that only in periods when prices tend to rise, apart from the counteracting reduction of real costs of production, will rationalisation fail to cause unemployment. That condition emphatically did not hold good in the first post-war decade, since technical improvements, inventions and economies, and the rational organisation of industry were allowed, on the whole, to have their full effect in reducing not only real costs but money prices. Finally, although the use of greater quantities of capital may increase the rate of investment for the time being, the reduction of real costs of production may, as we have seen, set in motion psychological forces which will decelerate the spending process and magnify any innate tendency towards a general fall of prices. Hence rationalisation is likely to contribute to the unemployment in all three of the other classes—labour turnover, high wages, and a falling price level—although if monetary causes indicate a rise of prices the contribution may be nullified in all save the first class.

CHAPTER VII

THE WORLD ECONOMIC CRISIS

To ourselves at the moment our particular economic circumstances always seem unique. We talk of the boom of 1928 and 1929 and of the slump that followed, as if they differed utterly not merely in degree but in quality from anything that had previously happened in the world's economic history. But that, of course, is not true. While some features were exaggerated, and certain new features introduced, the events of the past four years conform quite closely to the description of the typical business cycle quoted from Professor Mitchell in the preceding chapter. While, therefore, it is not proof of the soundness of a theory of price changes and business fluctuations that it fits one particular boom and depression, the purposes of this book are adequately served if the savings-investment theory is tested by the circumstances with which every reader will be more or less painfully familiar.

The present slump has been described as a collapse of a limited and specialised boom—and hence of public confidence, which is the foundation of the credit system —superimposed upon underlying deflationary tendencies. (Deflationary may be taken for the moment to mean just price-reducing.) The first point to be made clear is that such tendencies did exist. In the United States, the contrary path of inflation was pointed out by

the cheap-money policy inaugurated by the Federal Reserve Board in 1927, but it was not long before the easy money, instead of being devoted to investment at home and abroad, was sucked into the stock market, attracting with it funds from every other monetary centre in the world. In 1929, as compared with 1928, the volume of international investment made by the United States was halved. This not merely forced deflationary monetary policies upon former foreign borrowers, but in itself constituted effective deflation as far as the United States was concerned, since instead of increasing as the rate of real investment abroad declined, the rate of real investment at home was also diminished. It is significant that in spite of the local boom there was no important rise of commodity prices in the United States; the index of wholesale prices was in no month of 1929 higher than the average for 1926. When we turn to Great Britain we find the deflationary tendencies much more obvious. Even the responsible authorities admitted that the rate of exchange at which the pound was stabilised against gold in 1925 exceeded the rate indicated by the relative positions of commodity and labour prices in the different countries, and that steps would have to be taken to bring British costs into line after the stabilisation had taken place. What happened was that the importunities of international borrowers, many of whose needs arose directly or indirectly out of the war and the treaties of peace, and whose demands for capital corresponded more closely to those of a hard-pressed citizen negotiating with the moneylenders than to those of a business firm with opportunities of expansion, tended to draw forth money capital from Great Britain on a scale which she could not afford, competing excessively with the

needs of home industries; while on the other hand the rate of real investment abroad was held down by her comparatively high level of costs and therefore inability to maintain her outward balance of trade, including interest and services, at a high enough level. From time to time the strain was relieved by evanescent factors like the inflow of short-term funds during the inflationary period in France, but on the whole the authorities were forced to maintain the rate of interest at a point above that required to equate the actual rate of investment to the actual rate of saving. The rate of saving, depressed by the weight of taxation, was not perhaps, very high, but it must be remembered that in a country so dependent upon external resources for the necessities of life (about one third of the national income being normally spent on imported commodities) an increase of the rate of consumption is bound to diminish the rate of real external investment at the same time.

The immediate indicator of the necessity for such deflationary action in Great Britain was the pressure upon the gold reserves, which reached danger point in the summer of 1929—just at the moment, mark, when the stock-market boom in the United States was at its height. Now the shortage, or (more cogently) the maldistribution, of world gold reserves has often been made the scapegoat for the depression. The relation between such monetary exigencies and business fluctuations has already received some general comment in the last chapter; here it may be pointed out that it is not the initial unevenness of the distribution of the available gold that set deflation at work (since if the system could have been started, and for a time maintained, in equilibrium with such a distribution it could have been so

continued with the same distribution) but the force of the current movements, which prevented countries short of gold from obtaining more and threatened to deprive them of what little they had got. Those current movements must themselves have had a cause outside the gold system and that cause can logically have been none other than the distortion of international balances of payments through excessive tariffs, through war debt and reparation payments on a disturbing scale, through the inability of some countries to adjust their cost levels to the conditions of international trade and the refusal of others to do so. Deflation was forced upon Great Britain, among other reasons, because France deliberately denied herself inflation and because the United States could inflate commodity prices neither through international nor through home investment on account of the suction exerted by the Wall Street vortex. France revalued her currency in 1928 at a level indicated rather by the abnormal condition of her balance of payments at that moment (including an outward movement of capital fleeing the perils of inflation) than by comparative levels of costs and prices. Hence readjustment would have required a liberal monetary policy—enabled by the inflow of gold—and thereby a rise of internal prices. Now since the credit system in France is far less highly organised and less complete than in Great Britain or the United States, the policy pursued by the Bank of France, which was not conspicuously restrictive, was of less importance than the legal structure of the monetary system, which effectively prevented imports of gold from forming the basis of a proportionate volume of cash and credit, and the action of the Government, which through the Caisse d'Amortissement, or National Debt

Office, was continuously withdrawing money from the system which it did not fully or immediately release. Hence even in France, while prices were maintained at a pretty constant level, there was no inflation to offset the deflation committed elsewhere, and it was not until the depression was already in full swing that the ultimate effect of the gold-inflow, in the shape of rising prices contrasting sharply with the world movement, became apparent.

The debtor countries of the world all underwent some measure of inflation during the period of cheap-money and record-scale international investment in 1927 and 1928, if not earlier. But their interest burdens were piling up, and as soon as the flow of loans began to disappear, in 1929, they were faced with the need for the most acute deflation. Australia, for instance, forced as she was to abandon the international gold standard in 1929, was held out as a shocking example of overborrowing, and the most deflationary régime prescribed for her by the experts. Some European debtor countries, moreover, had been able through the operation of the gold-exchange standard to multiply the direct inflation caused by an inflow of funds from abroad, because some at least of the foreign exchange thus acquired went into their monetary reserve; so when the flow dried up the need for deflation was likewise doubled.

It is small wonder, then, that the downward movement of world prices was continued and indeed accelerated even while the United States boom was at its height. But what is still more interesting is the fact that taken by and large commodity prices had been steadily sinking ever since the boom that immediately followed the cessation of war. The prices of different commodities,

of course, pursued different paths and reached maxima at different times, according to local conditions in the principal countries of supply or consumption, but the general movement was persistently downwards. From 1923 to 1929 (a period beginning after the headlong fall of prices in 1921 had worked itself out and stopping short of the equally rapid fall in 1930), indices of commodity prices compiled on the same basis for the different countries showed a fall of 20 per cent in Great Britain, 11 per cent in Sweden and 10 per cent in the United States.

It is hard to account fully for this secular downward movement by the summation of the relations between saving and investment in the various countries of the world. Indeed it is unlikely that deflation in that sense was the primary cause of the reduction of prices until the end of 1928, and we have to seek for causes rather 'on the side of goods' than 'on the side of money'. The world production of primary commodities increased enormously during these years, partly in response to demand and partly in advance of it. If we are to understand the movement we must be aware of the circumstances of that particular decade. The demand for some of the most outstanding primary commodities—base metals, rubber, etc.—arose largely from industries like the motor-car industry which had been in their infancy before the war and whose normal development had been retarded by the concentration on military needs during the war itself. Rubber, in comparison with the circumstances to which we are now accustomed, was a rare and expensive commodity before the war, and indeed until post-war plantations began to enter into full bearing. Further, after the immediate dislocations

caused by the war had been set right, the world's wealth expanded rapidly, and, logically, its surplus wealth after bare necessities had been satisfied expanded in still greater proportion. Hence it is not surprising to find the production of raw commodities increasing at a very high rate, and the price of them falling as the scale of production was enlarged and inventive skill applied to their cultivation or extraction. Between 1923 and 1929, the world production of coal increased by 11 per cent, that of pig-iron by 41 per cent, and of petroleum by 44 per cent. Among the base metals, production of copper rose by 57 per cent, of lead by 44 per cent, of tin by 37 per cent, and of aluminium by 86 per cent. Cotton production rose by only 30 per cent during this period, but the output of artificial silk advanced by over 300 per cent. As a last example, there was a rise of 81 per cent in rubber-production.

In examining the relation between this increase of production of primary commodities and the fall of prices, we have to ask how far the increase was merely a reflection of diminished real costs of production, to which, on the average, the fall of prices agreed, how far it represented relative over-production of one commodity after another because competitive conditions (coupled with an unequal distribution of the cut in real costs between the competitors) kept up production to a scale at which the industry as a whole was unprofitable, and how far it represented a relative over-production of commodities in general through a corporate misjudgment on the part of producers of the proportion in which spending power would be divided between primary commodities, the higher stages of manufacture, and services. Now clearly there is no statistical means

of assessing the exact proportion in which these different possibilities held true, and the answers to the questions must be a matter of informed judgment at best. That the demand for a great many commodities was rising at any given price we have already observed, and it is a matter of common knowledge that costs were falling simultaneously. The combination harvester, new processes in the nitrate industry, the discovery of new fields of copper, tin and nickel, the increasing use of fertilisers on the land, the coming into cultivation of new rubber plantations scientifically weeded and managed, these and the like developments could not fail to reduce the real cost of producing primary commodities. In the light of such facts, it is not surprising that the prices of raw commodities fell steadily while their production was enormously increasing, and there seems little doubt that the chief contributor to the secular fall of commodity prices up to the end of 1928 was the reduction of real costs. It will be recalled that among primary producers *as a whole* there was no vociferous complaint of the unprofitability of production up to that time, nor was there any abnormal accumulation of unsold stocks.

But that does not exclude the other possibilities from the picture altogether. The prevalence of schemes for restricting output and fixing prices is evidence that numbers of producers in industry after industry were experiencing failing profits and that their fellows whose experience was more fortunate thought they could gain more by combination than by competition. Some of the restriction schemes were merely misguided attempts on the part of producers who had been left behind in the advance of productive efficiency to retain their hold on life, but others sought to arrest the effects of genuine

over-production, implied in the fact that the industry as a whole was not receiving a profitable price. Often such over-production resulted from cut-throat competition in the industry itself (for instance the competition of native producers in the rubber industry), often again from sudden changes on the side of demand, often from corporate misjudgment of the market for the products concerned; sometimes, no doubt, it had its roots in circumstances outside the industry itself or its particular consuming markets, namely in a process of world deflation or in the relative over-production of commodities in general. To sort out and measure these various forces is an impossible task, and we can only say this, that the breakdown of scheme after scheme for the regulation of production, supply or prices proved either that the causes of apparent over-production were external to the industry concerned and therefore could not be averted by its solitary action, or that the natural or cost price of the product was really lower than the arbitrary price and that therefore the urge of competition had its way in the end. Further, the world deflationary cause was probably not important before 1929, though it then operated very powerfully, while there was always a tendency to misjudge the proportion in which money demand would ultimately be expended upon primary products. In other words, occasional relative over-production of particular commodities, which is an invariable concomitant of material progress and is associated with under-production elsewhere, was combined with at least a trend towards the relative over-production of commodities in general, which was bound in the end to have disastrous results owing to the low elasticity of demand for primary products.

So much for the background of deflationary tendencies. In part, as we have seen, they were occasioned indirectly by forces affecting production, but in part by forces which encouraged a deficiency of investment as compared with saving, in different countries for different reasons. The superimposed boom of 1928-29 and its subsequent collapse can be interpreted quite simply in terms of the savings-investment theory. The boom was predominantly an American phenomenon, though in its earlier phases the outflow of American money induced local booms elsewhere. In the United States, investment both at home and abroad was encouraged by the easy-money policy of the Federal Reserve Board, which was initiated in 1927. It took the form of vast floatations of foreign bonds, and purchases of foreign securities, with their consequent effect on the balance of trade in goods and services; of a great deal of more or less speculative expansion of industry at home; and of large-scale expenditure by public bodies, who could not only finance themselves very cheaply by borrowing but at secondhand profited by the increase of incomes and capital values on which their tax revenues were assessed. The volume of construction contracts,[1] which in default of anything better may be accepted as a very fair index of the volume of real investment, increased pretty steadily through 1927 and the first half of 1928. But it is extremely significant that after seasonal fluctuations have been eliminated from it the index touched its maximum level in June, 1928, over a year before the stock-market collapse occurred. There were several reasons for this decline. The earlier investment had diminished

[1] A three month's moving average centered at the middle month.

the obvious opportunities for more, especially as far as public bodies were concerned, since the scope for their expenditure of borrowed money was limited and they hesitated to continue mortgaging their future revenues on such a scale. Second, the effective rate of interest was being raised by the rise of capital values in Wall Street which was attracting a greater and greater proportion of the country's money savings. High rates of interest were being offered in the frequently justified expectation that the rise of the capital values would outweigh the interest cost altogether. Of course, the rate of saving was probably declining simultaneously—the method of instalment purchase involved, as we have seen, negative saving—but there can be little doubt that the seeds of the subsequent reaction, both in industry and on the stock market, were sown in the autumn of 1928 when the rate of real investment began to fall away and before long to drop behind the rate of saving. Furthermore, the same forces that curtailed the rate of home investment curtailed the rate of foreign investment also. The opportunities for profitable investment grew less, the obligations of the borrowers piled up deterrently, and the cost of their borrowing rose through the suction of funds to Wall Street. At the same time, the rising level of money incomes, and to some extent real incomes, in the United States tended to shift the balance of trade in goods and services in an inward direction, since more money was being spent abroad by tourists and sent home by immigrants, and more imports were needed, both of primary products for use in manufacturing industry, and of specialities of a more fanciful and extravagant kind. In no month from April, 1929, to a year later, was the outward balance of

commodity trade as great as it had been a year before.

If the deficiency of investment below saving began so early, why were the stock-market inflation and the semblance of industrial boom protracted for another year? Some answer at least is to be found in the conception of negative saving. Instalment buying contributed to it, and so did the abnormal rake-offs from capital transactions that were taken by bond houses, investment companies, promoters and intermediaries, for whom they became consumptive income although they represented savings to the subscribers. But the principal factor was the spending by individuals and even by corporations of incomes which they had not earned currently but which were based on non-realised capital advances. A man would say he had 'made' a thousand dollars on the stock market in a week (or ten dollars or a million dollars according to the scale of his operations) and would spend correspondingly, perhaps while the money was still invested in the stocks that had risen, or in others, using them as collateral security for his bank overdraft. The steady realisation of nominal profits of that kind by the sale of the securities would have kept down the prices of stocks to levels more in accordance with the prospect of genuine industrial profits; or, on the other hand, if non-realised capital profits had not been spent the turnover of industry would have diminished more rapidly and the stock prices have been kept down in sympathy. Even governmental expenditure was involved in the same dangerous condition, since capital profits were legally included in income for the purpose of tax assessment.

This artificial process of spending from capital could not be continued indefinitely. Real investment con-

tinued to fall away, and was further hindered towards the summer of 1929 by the restrictive policy of the Federal Reserve Board, which they attempted without success to concentrate upon the purely financial uses of money, and thus to employ as a means of curbing what was by now the obviously excessive speculation in the stock market without hindering legitimate trade and industry. One would expect that the heavy industries would have been the first to reflect the decline of investment, and indeed one of the first heralds of the approaching collapse—recognised as such by some far-seeing observers—was the fact that for the first time since the industrial advance began the earnings of the United States Steel Corporation showed a setback in the second quarter of 1929. But other industries were not slow to follow suit, and by July the general index of industrial production, corrected for seasonal variation, had checked its upward career. It must be remembered that at the same time certain quite adventitious events, like the bumper wheat crops recorded almost everywhere in the world in 1928, had driven down the prices of certain primary products and diminished the purchasing power of the non-industrial communities of the country.

The stock-market boom continued, though with ever more threatening fluctuations, for another three months because credit was still being absorbed in piling up unrealised capital profits. The industrial recession, however, and one or two ominous events abroad like the fall of stock-market values in London after the Hatry exposure, checked the enthusiasm of speculators, who betrayed a growing inclination to get out while they could, and the restriction of monetary conditions was enhanced by the withdrawal of foreign money in re-

sponse to the rise in the Bank of England rate early in September, and in order to cover losses on the stock exchanges of London and other centres. With the sickening swift deflation of the Wall Street balloon in October and November, 1929, public confidence was seriously injured and while saving was increased by cautionary restriction of spending investment was not stimulated.

There was, indeed, some revival of international investment and some consequent restoration of the balance of trade; and at home a certain number of capital works were put in hand which had been held over by the restrictive credit conditions previously ruling. Public authorities, of course, were immediately anxious to set afoot whatever construction work they could in order to take care of some of the unemployment which was even then regularly increasing. In consequence, the spring of 1930 saw some industrial revival and a considerable rally in the stock market, but the underlying forces were still those calculated to bring about a decline of commodity prices, and it is unlikely, on the evidence, that taking into account the saving being performed almost involuntarily by the unfortunates who had pledged a substantial part of their future incomes in instalment payments the rate of investment ever caught up with the rate of saving after it had once fallen into defect. The deterioration of industrial and commercial conditions in other countries, which had been induced by the selfsame forces as produced and prolonged the boom in the United States, discouraged long-term investment abroad. Henceforward psychological conditions were in the saddle in world economic affairs—those and the retribution for former risks and errors.

The same factors as had inflated the boom, when reversed, accelerated and exaggerated its collapse. The way in which instalment buying could do so has already received comment. Those who had spent their capital gains were forced to sell, at whatever sacrifice, in order to satisfy their banks' demands for cover, and were thenceforward constrained to spend less than their current income in order to make up the deficit. Speculators on margins similarly threw their assets on the market regardless of immediate losses. The public revenues spectacularly declined as the bases of assessment shrunk and even became negative; and many were the hard-pressed citizens who disposed of some failing asset in order to establish a capital loss and thus to cut down their income tax. Indeed one of the principal checks to the decline of commercial and industrial turnover was the necessity imposed on central and local governments to finance their current budgets with borrowed money, thus bringing up the rate of investment (or, if you please, negative saving), but, as British and European experience even more forcibly showed, that was a process which must sooner or later come to an end, and when the governments did set about a deflationary cure of their budgets the results might be extremely severe. In the case of no other great country, however, was the deficit proportionately so high as it was for the United States Federal Government, which in 1931-32 incurred expenditure about two and a half times as great as its revenue. That was a brake to the general decline of purchasing power through the deficiency of investment, but immense as it was it proved altogether inadequate. The deficiency of investment below saving was being gravely increased by the justifiable want of confidence

in the banking system and by the consequent hoarding of money. It may be legitimately said that the boom and the slump were caused by the alternate domination of greed and fear, and that the one was bound to resign sooner or later in favour of the other, human character being what it is; but the instrument of these emotions in affecting the economic life of millions who may have experienced neither was the relation of saving to investment, of getting to spending.

Only incidental reference has been made so far to the international aspects of the slump, but they were of critical importance, and the revision of balances of payments was the severest strain to which the world's financial and economic system had to submit. The sudden failure of international investment in 1929 was every whit as powerful a determinant of the subsequent economic catastrophe as the payment of war indemnities or the uneven distribution of gold reserves. Moreover, it exposed flagrantly the folly of some of the lending that had previously been made, since debtor countries were left with obligations which under no reasonably probable circumstances could they possibly redeem, and which forced upon them policies of deflation bound to prove disastrous to the whole world economy. The first task, therefore, with which the world was faced in dealing with the economic crisis was reconciling itself to writing off some of its international debts, and the second the elaboration of machinery which could both prevent excessive and wasteful lending, and mitigate the fluctuations of international capital movements. The story of post-war international investment has been vividly told by Sir Arthur Salter in his book *Recovery*. It is apposite here only to emphasise that the 'over-lending'

was of two kinds (presenting, therefore, two separate problems for solution), namely, lending in the aggregate to some country more than its economic system could support when it came to the unaided payment of sinking fund and interest, and lending for purposes and by methods which would have been wasteful, extravagant and unjustifiable whatever the wealth of the borrowing country.

The immediate result of the sudden curtailment of international lending was to force the debtor countries to adjust their balances of trade to the new circumstances. This was achieved partly by the uncontrolled working out of economic forces—the inability of their populations to buy so much from abroad, for instance. But in part it had to be achieved by deliberate and painful devices like prohibitive tariffs, dumping, organised wage reductions, and international price warfare. Australia, for instance, one of the first of the great international debtors to feel the draught, resorted to every one of those measures in an effort to reform her balance of trade to match the cessation of lending from London and the concurrent necessity for paying off some of her past debt and paying interest on the whole of it. What is most significant is that when the prices of wheat and wool fell to unprofitable levels, her agricultural population, pressed by the personal necessity of earning a living, began to devote serious attention to the export business in dairy produce, so that the price of butter followed suit, and New Zealand in her turn was forced to resort to similar defensive weapons, including an export subsidy on butter. Meanwhile, in another British Dominion still, Canada, a new Government had swept into power partly on the promise that it would protect dairy farmers

against the cheap New Zealand butter, to which its predecessor had allowed privileged entry by trade agreement, and thus there ensued a two years' tariff war in which the Candian motor-car manufacturer suffered perhaps as much as the New Zealand dairy farmer. That case is cited only as an instance of the way in which the swift curtailment of international lending forced down prices and dislocated international trade. The following figures have been compiled with a view to illustrating the statistical importance of the connection between the fluctuation in capital movements and the course of commodity trade.

INTERNATIONAL MERCHANDISE TRADE, 1928-30[1]

		£'000,000		
	Year	*Imports for Domestic Consumption*	*Exports of Domestic Produce*	*Balance*
20 Debtor Countries	1928	2,255	2,156	— 99
	1929	2,232	2,214	— 18
	1930	1,763	1,787	+ 24
6 Creditor Countries	1928	2,858	2,600	—258
	1929	3,010	2,619	—391
	1930	2,501	2,054	—447
World (33 Countries)	1928	6,005	5,521	—484
	1929	6,136	5,575	—561
	1930	5,013	4,456	—557

The net negative balance for the 33 countries may be ascribed in part to the omission of a certain number of

[1] This table was compiled for a chapter in the *Survey of International Affairs*, 1931 (Oxford University Press), to which the reader might refer for further statistical information on this and other aspects of the world depression.

debtor countries (China, some of the smaller Latin American States, and the dependencies of colonial Powers), in part to the fact that exports are valued f.o.b. and imports c.i.f., so that international transhipment costs appear on one side and not on the other. A correction must be made for price movements during the three years, and when that is done on the basis of a composite index averaging those of eleven representative countries the following significant results appear. Between 1928 and 1930, the volume of imports into creditor countries rose by 3 per cent, while their exports declined by 7 per cent; whereas while the debtor countries lost only 2 per cent of their exports by volume, they cut down their imports by 7 per cent.

Now the psychological strain of an inward movement of the balance of trade, and the political controversy to which it gives rise, are familiar to every student of public affairs, but what should ideally have happened if the adjustment of the international balances of debtor countries was not to disorganise the world economy and drive down prices everywhere was that the creditors should have rested content to accept their wealth in the form of imports when they were not paying it out again in the form of international loans, and should have expanded their internal investment in proportion as their external investment declined, so as to keep constant the total spending power available in their countries. Instead, the opposite occurred, for a number of reasons, the first of which was the course of financial movements between the different creditor countries, which put such a strain upon the external balance of one of them, Great Britain, that expansion of internal investment through a reduction of interest rates was out of the question and argu-

ments for a defensive tariff became unusually weighty. Another reason was the direct competition into which the debtors entered with some elements at least of the creditors' population. France, for instance, was very much interested in the price of agricultural commodities and the numerical and political strength of her peasant population saw to it that high protection was afforded against cheap grain and other products which the creditors were trying to sell in order to meet their financial obligations. Moreover, one of the greatest of the debtors, Germany, was herself an industrial country in direct competition with the principal creditors, whom it was hard indeed to persuade that the curtailment of their international lending (which for some of them had occurred because they simply could not afford to lend any more) required the relinquishment of markets to one of their greatest commercial rivals, if it were not to drive down world prices and ruin international trade altogether. The course of Germany's international balance between 1928 and 1930 has already been described in Chapter IV. It remains to note, for the sake of preserving a sense of proportion in treating of possible causes of the world-price decline, that the increase in Germany's exports during those two years was larger than the whole export trade of Soviet Russia during either of them. Russia was herself among the debtor countries who were finding it increasingly difficult to obtain further loans, and who were therefore forced by whatever means came to hand to enlarge their export surpluses—her own means being, of course, particularly devastating to her competitors.

A third reason for the failure of the creditor countries to allow the 'ideal' adjustment to take place was the

condition of the financial market in the United States. The attraction of so large a proportion of the available funds to direct or indirect participation in stock-market speculation, and the impossibility of completely separating the different employments of borrowed money, in such a way that traders and industrialists might have the advantage of liberal credit while restriction was being practised upon the financial speculators, prevented the monetary authorities from allowing internal investment to continue on the same scale as before, let alone to be increased in accordance with the curtailment of foreign investment and the actual inflow of funds from abroad. They had to choose (though they tried to compromise) between stopping the financial speculation and allowing liberal credit conditions all round, and they chose the former. When the tightening up of credit had done the undesired part of its work in starting a business recession, it became doubly difficult to view with equanimity the growingly inward tendency of the balance of trade, and when the desired part of the job, the smashing of the stock-market inflation, had been completed all too thoroughly, it was already too late for cheap money to stimulate investment either at home or abroad on a sufficiently large scale. Psychological having been added to material depression, imports seemed even more of a menace, and a new and imposing layer was added to the high tariff wall. In short, in place of the necessary corrective to the reduction of international lending, the opposite occurred, and the vicious circle was now complete. The debtor countries, being unable to borrow, were forced to buy less and to sell more; the creditor countries were unwilling to buy partly because they were selling less, and so the condition of the debtors

deteriorated still further till they became incapable of borrowing even had the creditors been willing, in general, to lend.

The enormous scale of the international lending previously carried on, and its sudden cessation under the impulse of a local speculative boom, formed one of the most striking peculiarities of the depression of 1929 onwards, that distinguish it from other downward turns of the trade cycle. The unwisdom of a great part of that lending and borrowing, resulting, if from one cause more than another, from the great wealth and equal inexperience as a creditor of one of the lenders, who had been a considerable net borrower until the war reversed her position, may be counted another. Still a third was the existence of enormous non-commercial obligations arising out of the war itself; they were dangerous because of the depressing psychological effect of their political aspect, and because like the unwise loans just mentioned their existence did not indicate any corresponding increase of the wealth of the debtors which would help to enable them to pay. Moreover they were dangerous elements in the course of a readjustment to a lower level of prices, because in contradistinction from private obligations they could not be suspended, written down or repudiated without involving long and troublesome political controversy which would lay bare old sores and keep the minds of the people despondent. Nevertheless nothing could be done towards recovery until there had been a readjustment of these political debts, very largely because people generally thought that nothing could be done until then, and therefore were unwilling to try to do anything.

Reparations and war debts were not the only peculiar

rigidity in the economic system by any means. Trade-union restrictions held up the price of labour while other values were falling, and hindered the transference of man-power from place to place and from industry to industry. That, of course, had been true during previous depressions, but never before at such a time had those rigidities been reinforced so powerfully by public social services of one kind or another, especially in Great Britain, where the unemployment insurance system allowed a man to count as unemployed for the purpose of receiving benefit despite the fact that he refused to accept work at rates lower than those to which he had been accustomed or lower than those generally ruling in his trade. This comment on the existence of these rigidities is not intended to imply that trade unionism or unemployment insurance with such conditions is necessarily bad, taken in all its aspects; nor even that social welfare would have been enhanced had the rigidities not existed and the adjustment to the lower level of prices been accomplished with greater ease and rapidity. Indeed it is beyond doubt that the existence of an unemployment insurance system, with whatever defects, saved Great Britain from the violent deflation that the United States suffered, from much social unrest during the period of adjustment (which would have prolonged it by adding to the psychological depression), and from the complete and disastrous dereliction of great areas specially given over to the industries suffering most from the slump. Just as important a rigidity existed on the other side, that is to say among the profit-taking class, who resorted to all kinds of devices for holding up prices by limiting competition. Never has that factor been so critical in a depression. The dams could not long with-

stand the flood, but their very bursting increased the force of the waters, for the sudden collapse of prices and the visible breakdown of the organisations for maintaining them sapped business confidence and retarded buying.

Finally, a peculiar rigidity was provided by the fact that a high and increasing proportion of the world's economic resources and effort was being devoted to services, as compared with the production of material commodities. Prominent among the services that were being demanded in increasing quantities were advertisement, distribution, printing and transport and all the other costs of bringing commodities both raw and manufactured to the consumer as and when he wants them. The man who starts eating a patent cereal food for his breakfast where previously he ate a plain porridge probably spends more but he is certainly not increasing the demand for grain as seen by the farmer. In between the cost of the raw material and the article as delivered for consumption, then, comes an increasing body of costs, most of them peculiarly inflexible during movements of prices and subject to a quite different set of influences from those playing upon the prices of the raw materials. This was true even as between the cost of the complete manufactured article at the factory and the same article in the hands of the consumer. Inefficiency of the distributive system, which might be corrected without encroaching on the liberty of the subject to buy and sell as he pleases or can, is partly to blame, but the real creator of those intermediate costs is the consumer himself, who demands credit, promptitude, attractive display, convenient situation, a wide range of stock, and other expensive advantages from the retailer; who likes

to shop by telephone and have his orders delivered immediately to his door; and whose mental resistance to elaborate advertising is more or less paltry.

The intervention of this assembly of costs has a dual effect on the economic system at times of falling prices. In the first place it enormously diminishes the elasticity of demand for primary commodities, so that their price can fall by great percentages without inducing any appreciable increase of demand from the ultimate consumers, and adjustment has to come about automatically or deliberately through changes on the supply side. In the second place it has a spiral effect on the resistances to the adjustment of all values to the lower level of commodity prices. There is a natural delay in passing on a fall of commodity prices to wages and salaries, and moreover the trades involved in these intermediate costs are for the most part those sheltered from international competition, and therefore those last to feel the necessity for cutting wages and effecting the like economies. To begin with, the intermediate costs will fall not at all, and the higher the proportion of them to the prices of the raw materials absorbed by the community the greater will be the divergence between the movement of wholesale prices (usually heavily weighted with the prices of raw materials of manufacture) and the movement of retail prices or the cost of living. Since the cuts in wages will be adjusted at most to retail prices rather than to wholesale prices, the loop of the spiral is complete. At times of rising prices, of course, the direction of the spiral will be reversed, so that it will enhance the reluctance of wages to follow proportionately an upward movement of commodity prices. A test of the normality of the relation between wholesale and retail prices may therefore

be devised by finding a formula to describe statistically the average lag between them over a considerable period which includes both upward and downward movements of prices; a test of that character devised by Professor Bowley showed that up to the end of 1930, anyway, there was no clear abnormal lag in the fall of British retail food prices as compared with an equivalent index of wholesale prices; sometimes they were actually lower by a point or two than the formula would have indicated.

The later phases of the slump have shown a still further peculiarity, namely the universal collapse of public and commercial confidence. To begin with, doubtless, that arose out of the other forces, especially the enormous weight of international debts, the political disaffection and the reaction from a period of fatuous optimism encouraged by the most prominent publicists and politicians. But after a certain point the collapse of confidence became a problem in itself, and was self-aggravating. A run on a bank caused by a rumour that it is failing is the one event that is fairly certain to make any independent bank fail, and involve other banks in its catastrophes. When public distrust reached its height and drove down the prices of the best government securities to bargain levels, banks and other fiduciary institutions which held such securities were one and all threatened with technical insolvency despite their liquidity and the inherent soundness of their assets; a hint of peculiar difficulties would then be sufficient to push any of the weaker brothers over the edge, and that would bring on another wave of liquidation and a further impairment of public confidence. In Great Britain the concentration of banking in the hands of a few great firms, with all its demerits, checked this vicious circle,

but in the United States there was no such barrier.

Thus in the problem of the current depression there are two distinct sets of problems; the elimination of trade cycles from a normally operating economic system in which they are endemic, and the correction of those abnormal factors in the post-war situation which exaggerated the force of the downward movement of the cycle and may have initiated it. One uses the word correction and not elimination because although it would be well and perhaps possible to abolish certain of the factors, like the non-economic international debts, the excessive speculation in stocks, and the uneven distribution of the world's gold reserves, others like the large volume of international short-term funds, the popularity of instalment selling, and the high proportion of the world's real income devoted to services and the higher stages of manufacture must henceforward be regarded as permanent and normal features of the economic landscape, and the problem is how to provide defences against their indirect potentialities for evil.

CHAPTER VIII

MONETARY SYSTEMS

The formula relating to the rate of change of the average price level did not directly connect it with the monetary system, but only indirectly through the effect of monetary phenomena on the proportion of investment to saving. That secondary connection may be looked upon from two viewpoints; either it may be said that the purpose of the monetary mechanism, in so far as it is to be regarded as a regulator of the price level, is to establish and maintain the desired relation between savings and investment, whatever that may be; or the maintenance of that proportion may be regarded as a function of banking machinery which also has the task of operating the monetary mechanism, the two functions intimately reacting upon each other. The reaction is indeed so intimate that it is preferable to regard the operation of the monetary system and the regulation of the savings-investment ratio as parts of a single function, although money is not merely an instrument for regulating that ratio and presents problems and duties which may run counter to those imposed by the need for stabilising, lowering or raising the price level.

Money is a means of exchange. It may be a commodity also under certain circumstances—for instance, when the price of silver rose to its peak in 1921, Indian rupees were freely sold abroad for the value of their

silver content, just as British sovereigns were withdrawn from hoards and sold for more than their mint value in paper money after Great Britain had suspended the gold standard in September, 1931. But *qua* money, money is not a commodity, and may have no inherent value whatever to justify its exchanging as a commodity against other commodities and services. On the other hand, commodities may become money, as coal and potash and even kilowatts were used as the basis of accounts and contracts during the German inflation of 1923, and indeed most forms of money except paper have descended by natural succession from the use of commodities, from cows to cowrie shells, as convenient units of barter; but as soon as commodities become money, they lose, *qua* money, their commodity status.

Money may be described according to its functions and according to its effects. In *function*, it serves first as an instrument for keeping accounts; second as a basis of contracts involving borrowing now and repaying later, that is to say as a repository of value, in which capacity it serves also the individual citizen who wishes to preserve for a while the right, to which his labours or other contribution to the economic machine have entitled him, to partake in the wealth produced by the community; and third as a means of distributing that wealth according to the contributions and the preferences of all those who can establish a claim upon it. In *effect*, money gives to the holders of it (whether they be owners, borrowers or creators) the capacity to draw upon the flow of values that the community is putting forth in whatever way they think fit, according to the amount of money they hold and the prices of the things in the flow.

It cannot be too much emphasised that the distribution of wealth (in the sense of its division between different individuals or classes of economic society) is not a separate function of money from that of expressing the relative values of different commodities in a common term, but is one and the same thing. The price of labour is the income of wage-earners, and the price of steel is the income of steelmasters and blast-furnacemen and all others engaged in the production of steel.

Money may therefore legitimately be regarded as the instrument of industry and commerce, not their master. But there are circumstances under which the proper regulation of money may involve coercion upon single industries or even upon industry as a whole. Although the welfare of industry must be perhaps the first concern of those responsible for the management of the currency system, they may have other preoccupations, such as the necessity for preserving good relations with foreign countries, or the desirability of effecting a redistribution of national income as between rich and poor. And in any case, 'industry' whose welfare is primarily to be sought must not be conceived in any narrow sense; it will include trade and other services and legitimate financial business. Thus the policy of the gold standard in Great Britain, which on the whole handicapped manufacturing industry by enforcing efforts to reduce prices, while it helped the bankers and those engaged in entrepôt trade by giving them an international standard of value, may very well have been rightly conceived from the national standpoint in view of the great importance of the financial industry to Great Britain and the scale of her dealings as an intermediary in trade; the measure of the handicap to industry which actually emerged was,

however, probably not present to the minds of those who first decided upon the policy.

If money is to be regarded in any sense as neutral towards industry, there must be some clear notion of what its belligerency, so to speak, might mean. Monetary variations commonly go by the name of inflation and deflation, but few of those who habitually use those terms could give a consistent definition of them. It is sometimes said, for instance, that inflation means the issue of additional paper money by the government; but what if the government were not responsible at all for the issue of money or for any other part of the monetary system? And, further, supposing the definition were amended to meet this point, what if the increased circulation of money was caused either by the natural expansion of industry or by a change in the habits of the people or in the distribution of wealth which entailed a smaller use of cheques and a greater use of legal tender for a given volume of transactions or if it were the result of hoarding brought on by a fall of prices? Someone else might define inflation as the increase of the total volume of means of payment extant; but this would surely be a rather inept definition of a phenomenon essentially connected with a rise of prices, since one of the first effects of a fall of prices is an expansion of bank deposits and possibly also of legal tender circulation, counteracted by a slower disbursement of these means of payment. Still a third might propound a whole monetary theory in affirming that as regards the demand of industry and commerce there could be no monetary inflation or deflation, since every request for money for their purposes was backed by something to spend it on; and that the decisive characteristic of inflation was budgetary de-

ficits. But quite apart from the fact that he would have difficulty in establishing the difference between public and private deficits or between the deficits of central and local governments, unless the definition were really intended as a restatement of the first one, namely, government issues of new paper money, he would have to stretch terms in order to make his view of inflation fit the events of the past few years, when what is universally described as deflation has been associated with the most enormous and glaring budgetary deficits in practically every country of the world.

The fact is that neither inflation nor deflation can be satisfactorily defined except by the phenomena associated with them apparently as their consequence. Thus what we mean by inflation is really no more than a general rise of prices, while by deflation we mean a general fall, with the assumption in each case that no cause on the side of productivity can be adduced and the fall can therefore be blamed on 'money'. We may rationalise the popular view by substituting for the level of *commodity* prices—on which public attention is fixed—the level of prices of all values, including services and even paper tokens of fluctuating money value. Then it is open to us to say, for instance, that while the course of prices between 1922 and 1929 reflected both an increase of total production and a diminution of the proportion of spending power being devoted to commodities, it also indicated a certain residuum of deflation, which immediately afterwards became exaggerated through the material and psychological reactions from the swelling and bursting of the Wall Street balloon. In this sense, inflation and deflation are nothing more nor less (if our analysis is sound) than an excess or defect of investment as com-

pared with saving, and the question, how inflation or deflation is produced by the monetary mechanism, is the same as the question how and why that mechanism brings about a divergence between investment and saving. Roughly, the connection may be stated as follows. If the banking system, which is the instrument as well of the creation as of the distribution of credit, is pursuing a course which involves lending more than is saved and then lent to the banks, the proportion of outside liabilities to reserves of currency will rise both directly through the increase of deposits and indirectly through the greater quantities of cash required as a subsidiary to the transactions for which the credit is required. Hence unless the banks are prepared to countenance a permanent reduction of their reserve ratio (a final limit to its reduction being set by the necessity of having adequate till-money) they will be able to pursue such a course only if a greater supply of currency is being provided. That can take place, assuming that the currency mechanism is independent of government printing, by a number of policies of the central monetary authority (the Bank of England, say, or the Federal Reserve Banks) chiefly direct lending to the public, to the Government or to the banks themselves on a larger scale by the inducement of lower short-term interest rates, or the purchase of securities from the banks or the public, which will have a more immediate effect on the long-term rate of interest. Conversely, if these policies are conducted by the central authority the reserve ratios of the banks will rise and profit-preservation will then dictate to them a more liberal credit policy which may eventually raise the rate of investment above the rate of saving. Thus the relation of money to prices depends on two forces

primarily: the independent policy of the central monetary authority and the balance between profit-seeking and caution on the part of the banks dealing with the public. It may be assumed that the central bank, if the central authority takes that form, either is not a profit-getting firm or is so bound by legal restrictions that profit-seeking is a minor consideration. The secondary force on which the relation between money and prices depends is, of course, the willingness or reluctance of the business public to respond to liberal or restrictive credit policies on the part of the banks.

The government is presumably always the final monetary authority since, under the limitations set by written constitutions or external treaties, it can always secure the passage of legislation altering the conditions imposed on the central bank or on the commercial banks. If it resorts to printing money, or on the other hand hoards money by acquiring credit balances and then actually or virtually retiring the corresponding paper money, this will have the same effect, generally speaking, as the liberal or restrictive policy on the part of the central bank. But the effect will be more direct and will differ in that the recipients of government expenditure are generally those who use mostly currency and little credit, so that only a comparatively small proportion of the issues of currency might find its way into the reserves of the banks and thus induce them to enlarge their credit issues. Apart from actual printing, a government has two methods of procuring a currency inflation (currency inflation meaning an expansion of currency not associated with hoarding during a deflationary period), namely, borrowing from the central bank or similar authority and borrowing from the public. In respect

of the first course, it may be regarded as comparable with a very large private borrower or bank, though the scale of its borrowing may the sooner require an amendment of the legal restrictions laid upon the central bank. If, on the other hand, the government borrows from the public, the public must be furnished with the means of lending, which implies either that currency inflation must have taken place first, as it would have done, for instance, if the government were borrowing to fund a deficit previously covered by advances from the central bank or that as the public takes up the loans, using them as collateral for advances from the banks in so far as new savings are not available, the banks must be put in the way of a replenishment of their reserves by a liberal credit policy on the part of the central bank.

The opinion (known in public controversy in Great Britain as the Treasury view on account of its being expressed by Exchequer officials in their advice to the Government regarding a plan to raise a large 'reconstruction loan' in 1929) that the borrowing of money from the public by the government does not increase total spending power because it is merely a transference of spending power from the public to the government, the latter depriving industry and commerce of the savings that would otherwise be theirs for investment, would mean either that there never could be an excess of investment over saving, and hence never a rise of prices, or that the public could never indulge in negative saving. As a general theoretical conception it is based on the view that the banks cannot lend more than they borrow and that therefore a rise of prices, whether or no an excess of investment over saving is the intermediary instrument, can only be brought about by an expansion

of currency from the centre—a proposition which we have already found reason to doubt. The fact is that public deficits and public borrowing, entailing but not directly based on an expansion of the currency issue, are the simplest and surest means of raising the rate of investment above the rate of saving, and thus of heightening the average price level.

We must now turn to the forces governing the policy of the central bank other than those associated with governmental deficits and hence official pressure to relax the legal or self-imposed reserve conditions. Regarded as a bank making profits for its shareholders or for the government, a central bank has (like other banks) the task of balancing the need for caution against the desirability of expanding its profit-earning assets, that is to say of keeping an adequate but not excessive proportion of reserves to outside liabilities. This is made particularly clear as concerns the Bank of England by the traditional division of its accounts into the Issue and Banking departments. The note issue being governed by non-banking considerations (by the state of the gold reserves and by the legally fixed fiduciary issue), a definite sum of currency which is issued but is not in circulation forms the reserve of the banking department, and must there be treated as comparable with the cash reserves of commercial banks. In other countries where that division is not practised the *banking reserve* of the central monetary authority is the volume of currency which might be issued without any alteration of the *reserve-against-currency* or of the legal limitations placed on the authority. Regarded as a national monetary authority the central bank has two duties, to regulate the course of internal prices and to prevent a loss, or an

excessive gain, of its reserve-against-currency through international transactions. The legal limitations placed upon it in the exercise of these functions may be regarded as the guarantee that the bank will not (as it might do under pressure from the government) give a preponderance to its own profit-making or the desire to inflate the currency so as to lose for the country the advantages of being on an international standard and of having some clear insurance against the extravagant manipulation of its monetary system.

If the system is the gold standard, we may then say that under modern conditions, that is to say when gold coin does not circulate, the purpose of the gold reserve is first, to absorb temporary deficits or surpluses on the balance of international payments without necessitating any departure from a fixed rate of exchange on foreign currencies which are also on the gold standard; and second, by that means to indicate to the government and central bank when the credit policy being pursued is out of alignment with the course of monetary events elsewhere, turning the temporary deficit or surplus into a permanent one. The system is therefore not automatic but managed, the difference from what is popularly called a managed system residing in the limits imposed on the powers of management by two forces, first the scale on which the authorities will be content to see their gold reserve depleted or augmented without taking steps to counteract the movement, and second the legal limits imposed on them.

The method of legal limitation varies from country to country. The Bank of England has inherited from pre-war days the system of a fixed fiduciary issue (that is to say a fixed volume of currency issued, though not all in

circulation, which is not covered by gold but by securities only); currency issued but not in circulation forms the reserve of the banking department and measures the maximum extent to which the circulation could be increased without any change in the gold reserve or in the legally appointed fiduciary issue. The maximum, as has already been observed, could never be practically attained, because that would mean that the Bank of England, as a bank holding deposits and having other outside liabilities, would have no reserve whatever with which to meet them. Under the Federal Reserve system in the United States, the legal limitations are more complicated, the reserve of currency which might be issued if necessary being dependent, among other things, on the volume of bills of the specified type and security in the hands of the banks which are members of the system. The eligibility of paper to be deposited against issues of currency has been extended by recent legislative measures designed to relax the monetary situation as much as possible and so to increase the volume of spending power in the country. In most continental European countries the practice is to set a definite minimum below which the ratio of the gold reserves, or the reserves of gold and foreign exchange itself convertible into gold, to the note circulation may not fall. These legal restrictions cannot be regarded as the laws of the Medes and Persians or as having some divine inspiration—their variation from country to country is evidence enough of that. It is open to any autonomous state to alter the restrictions placed on its central banking authorities as it sees fit. The relaxation of the limits placed on the currency-issuing powers of the Federal Reserve Banks have already been mentioned. The fixed fiduciary note

issue in Great Britain can be varied at any time by Treasury minute, and was so varied in July, 1931, the figure being raised from £260,000,000 to £275,000,000. In Germany, again, the minimum reserve ratio was lowered by government decree in July of the same year.

In order to understand the force and the value of these legal limitations, it is necessary to have a clear idea of the functions of a gold reserve. This is best seen, perhaps, through a comparison with the practice of commercial banks in respect of their reserves of cash. The latter are maintained with three objects; as till-money to satisfy the immediate demands of their customers, which fluctuate from day to day and from season to season; as a guarantee to their depositors of their solvency and liquidity; and as a means of making up occasional deficits in their clearing-house account, that is to say in the body of transactions between their own customers and those of other banks. Similarly a central bank keeps a gold reserve, if its currency is on the gold standard, with three objects: to fill the occasional needs of the citizens whom it serves for gold coins and bullion; to guarantee to those citizens, and to foreign investors in its currency, that the gold standard will be maintained; and to make up occasional deficits on the international balance of payments composed of the transactions of its citizens with those of foreign countries. In post-war days, when the circulation of gold is the rare exception, the first function is practically atrophied, and the gold reserve exists simply as a guarantee and as a means of making up international deficits. Now the height of the gold reserve necessary to support the first of those two duties is largely a matter of tradition. If it were the general practice for central banks to hold a minimum

ratio of only 20 per cent or even less against currency, instead of the 30 per cent, 33⅓ per cent, or 40 per cent now customary, international confidence in the maintenance of the gold standard would probably be just as strong. The measure of a central bank's ability to hold on to the gold standard in spite of outward tendencies in the country's balance of payments is, after all, not the total of the gold reserves but the quantity of gold which it is prepared to lose. It was generally but erroneously believed at one time that the Bank of England would never let the gold reserve fall below £150 millions; hence until that illusion was shattered in the summer of 1929 the available gold reserve of the Bank for international purposes, in the public eye, was not £160 millions or whatever it happened to be but only £10 millions. It might be concluded therefore that a central bank need hold only as much gold in reserve as it was prepared to lose, but as with commercial banks and their reserves of cash the question of public confidence is all-important, and the likelihood of the central bank's losing gold would vary with the public estimation of the adequacy of its reserves. Thus in the circumstances just referred to, in spite of the widespread belief that £150 millions was the mark that the Bank of England had set itself, when that limit was approached there was no great flight from the pound in anticipation of an abandonment of the gold standard, because there was confidence in the ability of the Bank to correct the outward flow eventually as well as in the immediate adequacy of its gold reserves; had there been such a flight, of course, the reserve would very swiftly have fallen below the £150 million mark On the other hand, when confidence was lost in the summer and early autumn of 1931, the existence of

£130 millions of gold in the vaults of the Bank of England, every penny of which could have been disposed of if the authorities saw fit by dint of a continuous increase of the fiduciary circulation, did not prevent holders of sterling investments from realising their assets at the run lest the suspension of gold payments should depreciate them in terms of gold currencies.

It will thus be appreciated that, even assuming the constant and equitable distribution of the available gold between the different countries on the gold standard, the volume of currency and credit that can be based on a given total of gold reserves depends immediately on the legal limitations imposed by the several countries and fundamentally on the education of public confidence. The public are content with a cash reserve of 10 per cent or so maintained by their deposit banks, on whose solvency their savings depend; it might not be impossible to teach them to regard a currency as safe if it were backed as to only 20 per cent by gold. The prospect of a world shortage of gold through the failure of new production to keep pace with the increase of population and trade, which is very real if present reserve conditions are retained, would then almost vanish. The power of building up means of payment, currency plus bank credit, on a given quantity of gold also depends on the internal banking habits of the different countries. In Great Britain the sum of bank deposits and notes in circulation normally bears to the gold reserve of the Bank of England the proportion of about sixteen to one. In the United States the cheque habit is still more widespread, but the high ratio of gold to note circulation depresses the corresponding proportion to somewhere between twelve and ten to one. In France it is normally

little more than half that figure. The uneven international distribution of gold reserves would be exaggerated still further if these ratios were substituted for the ratio of currency only to gold, which means much less in practice. And the exaggeration would be multiplied if the comparison were made instead between the gold reserves and the potential international liabilities which they existed to meet, including foreign deposits and a certain percentage of total foreign trade.

Measures like the reduction of standard gold-reserve ratios or the extension of the use of credit in place of cheques would definitely make *any* available quantity of gold go further. Many devices have been put forward for dealing with the prospect of a gold shortage by economising gold, in the sense of limiting the international movements of it. The expense of shifting gold from one monetary centre to another is frequently considerable, and if that could be minimised it would be something accomplished. Now one way in which commercial banks economise in the expensive and risky transfer of cash in bulk from one bank to another is by keeping part of their 'cash' reserves in the form of instantly withdrawable balances at the central bank, the transfer of which requires only a simple book entry. The Macmillan Committee put forward the interesting proposal that actual currency should be still further economised by the establishment of currency reserves at one or two provincial business centres, which would be reckoned in the Bank of England's accounts on a par with its cash in London but would enable the commercial banks to cut down their own reserves in those centres and their neighbourhood. Now the centralisation of some part of the world's gold reserves would achieve

a similar purpose on an international scale. Just as a deposit bank, on finding its balance with the central bank in process of depletion through adverse clearing balances, has to replenish it either by pursuing a policy designed to assure a credit balance on clearing account or by realising some asset acceptable to the central bank, so the countries participating in the pool, on losing claims to the gold in it, would have to replenish their balance either by pursuing policies designed to attract gold again or by depositing more gold from their remaining private reserves. In other words, they would behave exactly as they do under the gold standard, the only difference being that gold would not physically pass between them.

But then the question arises, would it not be possible for these claims on the international pool to be reckoned 'as good as gold' without being backed one hundred per cent by gold. This is virtually what occurs when a country establishes the gold-exchange standard, which was recommended by international bodies of experts after the war owing to the shortage of gold in Europe. The reserve of such a country against its note issue is composed partly of physical gold and partly of currencies themselves convertible into gold and therefore to be regarded as claims on the world's gold. But it should be noted that those currencies are not themselves backed as to one hundred per cent by gold, but only as to, say, forty per cent or less. The inverted pyramid of credit itself thus supports another inverted pyramid. The universal extension of the gold-exchange standard, as a measure of economising the world's monetary gold, was logically prevented—practically it was never contemplated—by the fact that for a large country the range

of currencies which it can reckon as good as gold is very limited, and if it were to use assets in terms of them as a monetary base it would be virtually putting itself in the hands of their monetary authorities in place of its own. France would be on a dollar-sterling standard, Great Britain on a dollar-franc standard, and so on. The failure of any one country to maintain gold payments, through the operation of its independent monetary policy, which is dictated to it by its own needs and not by those of countries who on their own initiative attach their currencies to its own, would then destroy altogether the base of the system. Now these objections would be largely overcome if the claims ranking as reserve in lieu of gold were backed not by any one currency but by a number over which the risk of depreciation against gold could be spread. The conception of risk-spreading by an investment trust, which gives to its shareholders an equity in a wide diversity of securities such as they with their limited means could never acquire even if they had the knowledge to guide their choice, is widely familiar. The pool now under discussion would be describable as an investment trust in foreign exchange. It must be admitted that in relation to gold the pool would have no chance of appreciation to offset the possibility of occasional depreciation, unless it were allowed to speculate in currencies originally or permanently off the gold standard.

While such a device would enable a greater total of credit to be eventually based on a given aggregate of monetary gold, *ceteris paribus*, it should be noted that it would not solve the problem of the maldistribution of gold and the tendencies towards still further maldistribution, nor would it in any way alter the general lines

on which the international monetary system is operated. A country with continuing deficits on its balance of international payments would lose claims against the pool just as under the gold standard system it would lose gold; then it would have to take steps to counteract that loss, or, if it were not prepared or were unable to do so it would have to abandon the pool system in the same way and presumably at the same stage as it would have had to abandon the gold standard. Similarly, in order to establish its original claim upon the pool it would have to deposit gold and/or assets acceptable to the pool in currencies other than its own. The difference would emerge in that the authorities of the pool, by using those central banks' deposits as the basis of credit, could establish some kind of independent world monetary policy, and they might also aid and advise a country which was finding its balance depleted as to the means of its being restored; for instance, if the cause were reckoned to be not the excessive inflation of the country in question but the unwanted deflation practised by others the authority might take steps, in the first place by advice, and perchance later by direct action, to persuade those other countries to relax their credit conditions. It remains to observe that a system of this character need not necessarily be on a gold basis, so that it would be available for experiment by any group not on gold but desirous of maintaining exchange stability among themselves.

It might also be added that any such scheme, including the still more ambitious plans for establishing a new currency for international trade, whether world-wide or confined to some limited group, requires some kind of central banking authority operating on its own initiative

and therefore some relinquishment of national sovereignty in monetary affairs. Furthermore, the events of the past few years have shown beyond question that in the existing condition of severe state restrictions on other forms of international economic intercourse (tariffs, restraint on migration, and so on) the greatest danger to the international monetary mechanism lies in the unrestricted surge to and fro of capital. Hence if any international banking authority were to be allowed a measure of real control even over the security of its own reserves, or if the desired monetary programme for the world were to be furthered by the mutual co-operation of central banks under the existing régime, there would have to be some censorship by that authority or by the independent central banks and governments of the international movement of capital. Countries which do not allow the free movement of goods cannot expect the free movement of money.

The central pool is put forward by its advocates primarily as a method of making the world's gold reserves go further and only secondarily as a means of international monetary management. It is based, that is to say, on the dual assumption that the danger to which the economic world is subject is deflation rather than inflation, and that the existing gold reserves are, or are soon likely to prove, inadequate unless further deflation is resorted to; which assumption might of course be vitiated on the one hand by the discovery of gold or by the employment of other and simpler means of basing more credit on a given quantity of gold, and on the other by the occurrence of systematic inflation from which the world sought relief even as now it seeks relief from the effects of deflation. The proposal that

bimetallism should be substituted for the gold standard is put forward from the same point of view. Under the full bimetallic standard either gold or silver is equally readily accepted in exchange for notes and paid out in return for notes, each metal at a fixed rate, so that the price ratio of one to another is constant. If then, there were any tendency for the price of silver to rise above its fixed gold price, it would pay to withdraw silver in return for notes or gold, and this augmentation of the public supply of silver would bring down its price again and restore the equilibrium. It is urged that the stabilisation of the price of silver in terms of gold (it is understood that initially the price would be raised, which would be natural as thenceforward monetary demand would be competing with commercial demand for the metal) would not only enlarge the gold reserves of the world and thus abolish one of the present causes of deflation, but would also 'raise the purchasing power' of silver-using countries, and encourage the trade with the East with its vast potentialities. Both these claims needs careful examination.

Scrutiny of the state of the gold reserves of the world before the slump indicates quite plainly that the world was not suffering from any absolute shortage of gold. The trouble was that countries with redundant gold would not or could not pursue policies which would have tended to deprive them of some of their gold and meanwhile to raise the general level of prices, whereas countries struggling to keep credit as liberal as possible were subjected to a drain of gold. The monetary cause of the deflation was not even the static maldistribution of gold but the tendency for countries with little gold to lose what they had. The addition of silver to gold in the

world's monetary reserves would not necessarily improve that situation. Moreover, it is obvious that a policy designed to counteract the world-wide commercial forces playing upon the gold price of silver could not be adopted by one country in isolation without adding to the other forces of instability the chance of its being instantly flooded with silver and deprived of its gold.

The merits of stabilising the gold price of silver in connection with eastern trade have also been popularly exaggerated or misunderstood. In China, while there is no proper monetary standard at all, the silver dollar is the unit of account and of trade, and it may be truly said that the spending power of her people is expressed in terms of silver. But international spending power, that is to say ability to buy from foreign countries, varies with ability to sell to them, and China is not on balance a seller but an enormous purchaser of silver. Hence, if other things were equal, the cheapening of one of her principal imports in terms of gold would enable her to buy more and not less of other things. Of course it is false to assume that other things would be equal, and in fact the depreciation of her currency against gold would have some effect on every item in China's balance of payments. It would operate just as the depreciation of the pound sterling has operated on Great Britain's balance of trade with gold-standard countries, stimulating exports and handicapping imports. A restoration of silver to a higher price level in terms of gold would subject China and the world to the same forces as would operate if it were decreed that the pound were once more to be restored to its former parity with gold and the dollar. That might or might not be a

good thing, but it must be pointed out that the depreciation of silver since 1921 has enabled China and other silver-using countries to avoid the deflation suffered by the gold-standard world and to maintain prices at a level of highly enviable stability.

Apart from changes affecting the character and composition of the world's monetary reserves, various suggestions have been put forward regarding the methods and aims of management of money. The gold standard, we have seen, is a managed system, in that the reactions from gold movements are not automatic but may be advanced, delayed or varied according to the policy of national monetary authorities. The scope of management, is, however, restricted by the state of the gold reserves and by the legal limitations imposed in respect of them; the aims of management are, in fact, necessarily dominated by that of maintaining a stable rate of exchange on foreign countries. Leaving that problem aside for the moment, the question obviously arises, what should be the objects of management and how should they be achieved.

That the general object to be pursued is the avoidance of large fluctuations in the volume of production and business, and that this involves some form of stability in the price level are points that need no defensive argument. People sometimes speak as though price stability were an object valuable in itself, and so it may be in that it assures a certain equity in the fulfilment of money contracts, but the main reason for seeking stability of prices is certainly the avoidance of periodical booms and slumps in the volume and sentiment of business, each of which carries attendant evils both economic and social. The pains of deflation are too presently acute to need

description—unemployment, vastly curtailed real incomes, decimation of trade, a redistribution of income in favour of creditors and wage-earners which does no one any good because the debtors are unable to pay and the wage-earners suffer far more injury from unemployment than the higher real wages of those in work can possibly compensate. The evils of inflation are not so sharply realised except in those countries which have suffered violent depreciations of their currency. Then, inflation meant living from hand to mouth, it meant the practical destitution of those with fixed money incomes, and stern hardship on wage- and salary-earners whose incomes, multiplied on the scale of prices of one week, were always inadequate to buy on the scale of the next week. But what is now in question is not that kind of violent inflation of currency but rather the type and scale of business boom which is the opposite of the business slump.

Would we not be better off if we were continually in a condition of business boom? There is, of course, the question of equity. If prices are rising, a creditor who contracts to receive a fixed sum of money a year or ten years hence is fobbed off, when the time comes, with much less in goods than he lent. The rentier is not a suitable object at this moment to excite pity, but his misfortunes during a period of rising prices are shared to some extent by all kinds of pensioners and wage- and salary-earners. Debtors, on the other hand, receive what seems an unfair advantage. It may, of course, be cogently argued that the debtor is the real engineer of economic progress. The creditor is the sleeping partner and the gradual relaxation of his dead hand is both economically desirable and suited to his deserts. From

the point of view of a government it may certainly be claimed that the gradual elimination of national debt through rising prices is a far less arduous and no less equitable way of repayment than the maintenance of the real incomes of the rentier class only in order to tax them again to provide for debt redemption. These arguments concerning the redistribution of incomes between classes as prices rise are perhaps very nicely balanced so long as the price rise is not too swift and sudden. There are, however, economic reasons why a business boom should not be permanently continued.

We have seen that unless it arises from a direct multiplication of consumer income it must be brought about by an increase of investment over the rate of saving. Now the real saving, in the sense of application of available energies and resources to making things for the future, and not in the sense of putting-by money, must be accomplished somehow, and it is accomplished by compelling those with fixed incomes to save and depriving them of the proceeds of their savings. That is the other side of the redistribution of income. In other words, a business boom with rising prices always implies that the resources of the world are being applied to purposes other than those voluntarily chosen by its population. This misapplication takes the form of providing for future consumption on a larger scale than people individually would choose. Now quite generally any divergence between the proportions of production and the proportions of public choice involves economic loss because it involves a loss of economic welfare—leaving aside the question of the redistribution of income between rich and poor which might simultaneously increase total welfare. No one is competent to decide

what people want but the people themselves, and again accepting the actual division of wealth between income-classes the economic machine is best doing what the world asks of it if it is producing in the right proportions, in relation to real cost, what the world wants to spend its money on.

Moreover, this gradual accumulation of means of producing goods in the future, in excess of the world's desire as individuals to do so, cannot continue indefinitely. The world revolts. It demands that the misdirection of its energies and resources should cease, and as soon as that happens the whole economic machinery is thrown out of gear, because the incomes that were to provide the purchasing power for the consumable products of the first bout of investment had to come from the second bout of investment, and if that does not take place the incomes arising from making immediately consumable goods are not in themselves adequate to buy the increased flood of goods. The incomes of to-day are not sufficient to pay the prices of to-day because the incomes behind those prices have already been spent yesterday, that is to say in the capital construction required to produce to-day's goods. The cessation of forced saving, if it is not to dislocate everything, ought to be accompanied by greater real consumable incomes all round, by greater voluntary saving, or by more leisure, whereas none of these things naturally emerges from the slowing down of investment. Thus every boom involves a misdirection of the world's economic energy and resources, and every boom involves a subsequent slump.

It is thus apparent that large business fluctuations, with their attendant rises and falls of prices, ought both

economically and socially to be avoided. But that leaves the character of the desired stability of prices open to question. Ought the level of commodity prices only to be regarded, or ought the price of services, as reflected by, say, the level of retail prices, or the price of labour and of securities, to be included? And whatever series of prices is included in the index, ought the aim to be to keep it constant or to allow it gently to rise or fall? The evils of rapid movements of prices, however steady and long-maintained, have already received what description they seemed to need, but the facts remain that on the one hand a gently rising level of prices does keep business at a high level and stimulate economic advancement by putting a premium on enterprise and taxing the unindustrious creditor class, and on the other hand the increase of total production through the reduction of real costs would produce a gradual lowering of the price level if monetary conditions were neutral (that is to say if investment were kept equal to saving). There is perhaps more to be said than meets the attention at once for the gradual lowering of the price level of primary commodities in accordance with inventions, discoveries, and advances in organisation which lower the real cost of production. It has been observed how the gradual change of the proportions in which incomes are spent on primary commodities and on higher stages of manufacture and services, as material civilisation advances, tends to induce relative over-production of primary goods, an error which would be stimulated rather than checked by the gradual rise of primary prices, or even their maintenance at a constant level. While the world was over-investing (that being the condition of the rise of prices) it would also be over-

producing raw products; and although the two excesses might for a while prove complementary there is no guarantee that they would continue to do so, and the chances of a dislocation in spite of the efforts of monetary policy would be correspondingly enhanced.

There can be no final and logical answer to the questions here propounded as to the nature of the required stability. The conclusion of the argument is a matter of judgment, partly of political judgment outside the economist's sphere altogether. It depends on the relative weight given to the different considerations, and in particular on the faith placed in the ability of the monetary organisation to counteract the forces of breakdown inherent on the one hand in the psychological depression and international dislocation caused by a fall of primary commodity prices, even if it results from a decline of real costs, and on the other hand in the collapse of a rise of prices caused through deliberate overinvestment as soon as that investment is checked.

The international complications of the debtor-creditor system need some further elaboration. If a primary producing country is also (as it commonly is) a debtor country, then it does not matter that the fall of the prices of its products is the result of a reduction of real costs. The diversion of its energies which that decline of real costs implies may be an arduous process, while the inelasticity of money demand for its products means that the maintenance of an export balance, expressed in terms of money, sufficient to pay its interest and sinking fund to the creditor countries becomes more and more difficult. It is all very well to allow the private creditor to reap the benefit of a fall of real costs; but when it comes to international debts, in the present

condition of economic affairs, payment by the debtor on the higher scale in terms of goods may be impossible and lead to a breakdown of the system of international finance and therefore of world prices.

On the whole, it may be assumed for the purpose of further argument that stability in the sense of constancy of some index of prices will be held desirable. How is that stability to be achieved by monetary organisation and policy? At this point it is important to recall that the stability of prices was not required for its own sake but in order to assure stability of business conditions. The converse of that fact is that it may be the duty of the monetary authority to pay attention directly to business conditions rather than to the course of some price index. Indeed it is a fact that as a rule variations of the volume of production, in certain industries at any rate, precede corresponding variations of the general price level; hence to await the movement of prices before taking action to correct the fluctuation would mean applying a cure after the disease had set in instead of providing a corrective beforehand. In pursuing their aim of a stable price level, therefore, the directors of monetary policy might either follow an empirical judgment based on previous statistical experience of the sequence of economic events, or they might act on some theoretical conception of the connection between, let us say, the volume of production in industries producing capital goods and the future course of prices.

We must assume that the monetary authority both knows what it wants to achieve and also has some index to point to the need for variations of its credit policy. Then its ability to achieve its aim depends on its own knowledge and judgment on the one hand and on the

other on its ability to control the credit system of the community which it serves. This is no place to elaborate an ideal banking system—which in any case would have to be varied to meet the peculiarities of public habits and traditions in the community in question, its geographical character, the state of its political and economic development, and so on—but obviously the power to induce every and any member of the community's banking system to restrict or relax its terms of credit, the ability to distinguish, along broad lines, between the different uses of credit, and between long-term and short-term purposes, and some measure of control over international lending would be essential ingredients of the ideal system as regards the central bank or other central monetary authority. Loyalty of the individual members of the banking system to the central bank, so that they would not be constantly pulling against its policy and requiring strong economic forces to restrain them, a wide and long experience of international and national banking, and confidence on the part of the people in their own credit system, are more personal essentials of the ideal system which could not be attained by mere organisation.

At the same time international and internal confidence must somehow be assured, and a check put upon the abuse of management either through ignorance or political pressure. Finance is one of the departments of life in which conservatism is valuable for its own sake as contrasted with the policies that it implies. A metallic standard, which is acceptable to the public idea of proper guarantees of monetary caution and solvency, therefore has merits of its own, and if they could be combined with a relaxation of the restrictions that it imposes upon

management that would probably be the best system of all. As a matter of fact the onset of the depression has given rise to practical attempts to combine the two advantages, among which the attempts to control foreign exchange transactions are the crudest and most harmful. Austria has experimented, not without success, with a plan of fixing an official exchange rate on foreign currencies, and maintaining that fixed relation to gold in respect of internal contracts, so that acute inflation is prevented, while winking the official eye at transactions in the 'black' market for foreign exchange which involve the external depreciation of the schilling by a considerable percentage. This is in some ways analogous to the system in force in Soviet Russia, where an exchange rate is fixed which in no way corresponds to the rate indicated by relative internal price levels or obtainable for the rouble on non-official markets; but the communistic régime has allowed the further interesting peculiarity that the difference is righted by giving to the roubles purchased with foreign currency a special status and a higher internal purchasing power. Again, when the Prime Minister of Canada announced after the British suspension of the gold standard in September, 1931, that Canada would remain on the gold standard, whereas already the Canadian dollar was depreciated well below the point at which the export of gold would have been profitable, and such exports were effectively if not explicitly prohibited, he was stating what patently could not be true, but what he meant was that the conditions governing the issue of currency would remain as if Canada were on the gold standard, the reserve ratio being fully maintained, while nominal adherence to the standard would not be taken as imposing the

obligation to counteract by credit restriction any depreciation of the exchange against gold-standard currencies.

These devices were of course only temporary expedients to meet the peculiar conditions of the crisis. Some years ago, however, Mr. J. M. Keynes put forward the proposal that the domination of exchange considerations over the internal needs of industry and commerce in the management of the currency system of Great Britain should be obviated by the periodical variation of the gold-exchange rate. While in other respects the system would work as before, and exchange stability would be one of the aims of monetary policy, the Bank of England would announce its buying and selling rate for gold once a week as it now announces its discount rate. That and similar plans must be criticised in the light of the fact that under post-war conditions the main purpose, indeed practically the only purpose, of gold reserves is international, that is to say to assure constancy of the international exchanges. If that purpose is abandoned, or even seriously modified, the retention of gold reserves seems a very clumsy and antiquated means of guaranteeing internal solvency and of avoiding minor fluctuations of the foreign exchanges. If the condition of public confidence is not fit for independent management of the currency system, is it really fit to swallow management with such fictitious and economically wasteful guarantees?

There are now under public discussion a number of schemes for securing the automatic regulation of the currency without having to depend either on the waste and inconsequence of the gold standard or on the arbitrary judgment of the monetary authority. There is no

space here to recite them in detail or to quote any of them in full. Two general types may, however, be considered. The first is the proposal that by some means or other the volume of currency in circulation should be made to vary with the volume of commercial bills coming forward. Exponents of this plan claim that it would automatically adjust the currency issue to the needs of industry, and would render it independent of any external pressure, so that industrialists could proceed with the assurance that come what might money would always be available for their genuine needs at low rates. The plan is rather more sophisticated and detailed than that, but there is its gist. Now this proposal seems to be based on two fallacies; first that the volume of bills fluctuates with the scale of industrial and commercial production, and second that the assurance of an adequate supply of currency (on which, of course, it is assumed that credit would be based) in proportion to its needs in this sense would be sufficient to avoid fluctuations in industry. Even if all business credit transactions were conducted by means of bills—open book credits, bank advances and such expedients being supplanted—experience of recent times has shown that commercial bills can be manufactured in order to cover financial transactions; what is really a cash transaction, for instance, may be disguised as involving credit terms, the proceeds of the bill being used for speculation in commodities or stocks. The distinction between the purposes of credit being impossible in practice, the stock market and other non-commercial users of credit are ever competing with business for the available credit. The second fallacy arises, apparently, from failure to observe that the volume of production and trade rises

and falls sometimes for reasons independent of the state of credit. Under the proposed system, as soon as a recession occurred, the amount of available currency and credit would be correspondingly curtailed, and the force of the monetary system in restoring trade to its former level would be neutral if not negative. The problem of monetary management is not so much the fulfilment of the needs of industry as the stimulation or restriction of its demands.

The second type of proposal is designed rather to neutralise than to prevent price fluctuations. Its exponents point out that a decline of prices is cumulatively depressing because holders of fixed money claims take a greater and greater absolute quantity of wealth from a steadily shrinking total, so that the proportion remaining for enterprisers and others whose incomes fluctuate with the conditions of industry is doubly diminished. Enterprise and investment are completely discouraged, and so the total of wealth falls still further, and the process is only arrested by the intervention of public and private bankruptcies which compel a reduction of the creditors' share. The scheme is therefore roughly as follows. While prices cannot be prevented from moving in terms of circulating money, all contracts involving the payment of money at some future time (including wage contracts, bonds and mortgages, commercial bills, leases of real property, bank deposits both business and private, pensions and insurance) should be expressed in terms of a money-of-account whose rate of exchange into money-of-circulation would so vary with the course of prices that its purchasing power would be constant. Thus if a citizen bought a government bond for £100 bearing interest at 5 per cent, and if when his first inter-

est payment became due prices had shrunk by 10 per cent, then he would receive only £4 10s. of currency in exchange for his claim of £5 in terms of money-of-account.

Now there are a great many practical objections to such a scheme. It is claimed on its behalf that as the banks and other fiduciary institutions would have both their debts and their credits expressed in terms of account-money their books would not be unduly complicated nor would they suffer losses or reap unearned gains through the variation of the exchange rate at which they would repay and be repaid. But that is not the whole story. A bank is forced for the sake of liquidity to be a considerable holder of currency, to the tune of perhaps 10 per cent of its total assets. A variation of 5 per cent per annum in the value of that currency in terms of the other items in the accounts—a far from impossible rate of variation of commodity prices—would imply a variation of one half of one per cent over the whole of the assets, which might be quite sufficient to turn the scale between profits and losses. If price variations took place on the scale of the past two or three years it would be obvious that for equity's sake the banks would have to be indemnified against losses or mulcted of their profits on the fluctuation of their money-of-circulation against their money-of-account. If the scheme were put into practice doubtless a specialised market in forward exchange between the two moneys would spring up, in response to the demand of investors, enterprisers, and particularly fiduciary institutions for a means of hedging their commitments or claims, just as there is now a specialised foreign-exchange market in which traders, the banks and others can buy or sell

forward in order to avoid or limit their speculative commitments. But that would not solve, it would only concentrate the problem.

The second practical objection rests on the fallibility of index numbers. We have observed that the idea of a general level of prices is quite empirical and that the controversy as to the kind of price average that ought to be stabilised is an open one. Even if the kind of index required to determine the rate of exchange between money-of-account and money-of-circulation were agreed upon, its particular make-up, the ascertainment of the prices composing it, and the question of its periodical review as economic conditions changed would be likely to arouse the most bitter dispute. The suspicion with which even now the index of the cost of living is regarded by one side or the other when it indicates a change of wage rates in the trades to which it is applied is a foretaste of what would happen on a grander scale if every citizen was interested financially in the variation of prices through the value of his bank account or the rate of his wages. Official and unofficial indices of commodity prices which are accepted as authoritative sometimes vary from each other by several points in a year, and over a period of years show wide discrepancies, which in this case would mean corresponding variations in the incomes of individuals and corporations.

In view of these grave practical difficulties further consideration of such schemes is largely a matter of theoretical speculation, but it should be pointed out that logically the effect of the plan would be not to minimise but to aggravate price changes. When prices were falling, every individual would be interested in holding currency rather than credit, so that as soon as the

initial fall of prices gave hint everyone would do his utmost to withdraw his deposits from the bank, to realise his securities, to withhold payments due to his own creditors, and to hoard cash. Under this pressure from their depositors, the banks would be forced to restrict credit and attempt the liquidation of previous advances; hence industry and commerce, instead of having credit pumped into them in order to restore the price level, would find it sucked out and be forced to drive down prices still further. Similarly, when prices were rising every citizen would have an interest in investing as much money as he could for as long as possible, and the banks would therefore be compelled for the sake of maintaining their proportion of interest-earning assets and of limiting the depreciation on their cash resources to lend more liberally than before, and so to induce a further rise of prices. It is not suggested that the financial sense of every citizen is so acute that these movements would occur in sudden and overwhelming waves as soon as there was any prospect of a substantial rise or fall of prices, but the tendency would undoubtedly be to accelerate the decline or rise of prices and not to check it. This is one of the clearest instances in which the aggregate of advantages to individuals differs radically from the advantage of the community.

This discussion of monetary management has not, perhaps, reached any clear conclusion. The principal excuse for that must be that there is no clear conclusion that might be reached. In the absence of international monetary co-operation or of any control over international lending, conflict may very easily arise between the duty of the monetary authority to preserve stability of foreign exchange rates and its desire to keep at a high

and steady level the business of the community that it serves. When such conflict occurs the decision as to which is to be predominant will depend on the circumstances of the time and of the particular country concerned, and will involve a political judgment regarding the probable reactions of foreign countries and of its own citizens to any line of policy. Again, the possibilities of successful management depend just as much on the temper of the people and the traditions of its financial and business community as on the monetary machinery that it sees fit to erect. Even as regards machinery alone, the whole complex of financial institutions—stock exchange, bill market, investment trusts and bond houses, merchant bankers and deposit banks, speculative commodity markets—has to be taken into consideration along with the central bank itself and the rules by which it is governed. The aims of management themselves cannot be certainly decided on economic lines alone, since they involve questions of the redistribution of national income between different economic, and hence social, classes, as well as other political questions. If one decided conclusion is possible, it is that the monetary authority's sure knowledge of what it wants, and the availability of facts to show what kind of policy to pursue in order to get it, are much more important than the particular means of carrying out that policy, and must come first.

CHAPTER IX

PUBLIC FINANCE

Nowadays we are familiar with the word economics as describing what used to go by the name of political economy. The old title, however, had much to recommend it, since in spite of its association with the opinion that political interference with economic matters should be kept to a minimum it did indicate that the practical value of economic studies lies in the criticism that they afford of attempts to influence economic events in the public interest. Political economy is the study of the wealth of nations. The wealth of individuals is of concern only as it contributes to the wealth of the community, and the means of enhancing the wealth of individuals is not within the economist's scope—however many treatises may be written in pursuit of economic degrees on how to make stock-market speculation pay, on the best method of organising chain-store systems, and the like themes. It is not for the political economist to take decisions, but if his ratiocinations are to be of any value save as a spiritual exercise for himself they must serve as the instruction to governments and other associations representing the public welfare. The wealth of nations, be it said, was once regarded as a matter largely of aggregate material wealth, but not even the flinty economic theorist can escape either interpreting wealth in terms of human

welfare, which may involve vital problems of the distribution as contrasted with the total of wealth, or adding to the study of material wealth some consideration of spiritual and artistic values.

The study of public finance is therefore one of the most important, if not the most important of all branches of economics. The aim of all government action may be held to be the increase of the welfare of the community to which it is applied, and public finance, along with industrial laws, the control of monetary organisation and so on, is one of the principal instruments of increasing or maintaining public welfare. National and local budgets are therefore balance sheets of public welfare, detractions being set over against increases, just as the budget of an individual represents an attempt so to adjust income and expenditure as to provide the maximum welfare of the household dependent on him, in the particular economic circumstances in which he finds himself. Some qualification must be made for the dead hand of the past. In these days especially, much of public expenditure and so of public taxation to meet it arises from previous action paid for by borrowing, and no question of current welfare can arise in accepting that expenditure, unless default is contemplated; nevertheless it is legitimate, if not always accurate in practice, to assume that the expenditure was incurred at the time with an eye to public welfare, which includes defence against foreign aggression and the assertion of national rights. With that qualification, public finance remains an instrument of maximising public welfare by any means open to central and local governments.

That proposition admits a rather different method of theoretical approach to the subject from that employed

by the economists of orthodox tradition, who, with their eyes on aggregate wealth and with little opinion of the possibility of permanently changing its apportionment among classes of individuals, held that the proper sphere of governments was confined to those things which governments alone could perform—defence, policing, drainage, and so on—admitting rather grudgingly that they might be allowed also to do those things which they could be shown to do more easily than private individuals, such as the maintenance of harbours and roads. In that light, the question which the economists set themselves as the central problem of public finance was how best to raise a sum of money whose amount was determined by the needs of these minimum undertakings of government. If, however, the rights and duties of government are regarded in the broader sense that has been indicated, the problem becomes more complicated, since the advisability of raising or lowering the total height of taxation or public expenditure is also in question. In respect of any class of taxation the issue is not merely how it compares with other classes as a means of raising a given sum, but also whether the economic harm wrought by the increase of that class of taxation would outweigh the public advantages of the new expenditure that its proceeds would allow; on the other side the entirely new question arises, is the value of any given or proposed item of expenditure outweighed by the damage wrought by the taxation necessary, assuming such taxation to be designed on the best possible lines.

The method of approach here adumbrated also serves to make clear one very important point, that the whole of governmental operations should be considered to-

gether. In other words, the ascription of particular sources of revenue to particular purposes of expenditure is misleading in theory and unsound in practice. This point may be considered in relation to two items in public finance, the public mail service and the maintenance of roads. If there is a surplus on the post-office account the question takes the form, is the surplus to be regarded as a tax, or if there is a deficit, then is it proper for that deficit to be made up out of the general tax revenues or ought every effort to be made to make the post office self-supporting, other items in the public accounts notwithstanding. Now the postal service is one of the instruments whereby the government pursues its aim of public welfare. It is logically conceivable, in that light, that public welfare might be enhanced by allowing the mails to pass free, just as street lighting or defence against marine erosion is free. That is only the *reductio ad absurdum* of a proposition that is by no means absurd, that public welfare may be enhanced by allowing the mails to pass at less than cost price; it is rarely questioned that public welfare is enhanced by charging less than cost price for the transport of individual letters, some of which may cost the post office many times the price of the stamps stuck on them. Whether the proposition is accepted or not depends on the value attached, in the assessment of public welfare, to the interchange of communications as a good in itself. If it is accepted, then the critical issue is whether the increase of public welfare thus secured is worth the taxation necessary to pay for it, bearing in mind the existing scale and nature of taxation. On the other hand, if it is agreed that the interchange of communication does not require subsidy, or that the cost of the subsidy is

greater than the value received, then the question is, how does a surcharge on the net cost of carrying the mails compare, in the maximisation of public welfare, with taxation of one kind or another which would have to replace it in the national accounts.

There is no essential difference in the question of road maintenance. It is plain that the maintenance of the roads in a way and on a scale suited to the economic advancement of the country is essential to public welfare and therefore a duty laid upon the government. But above that bare necessity every kind of scale and type of expenditure is possible, and the question of how far it should go is one of balancing plus and minus considerations of public welfare. It might be held that a subsidy to internal transport, by furthering the distribution of goods to all parts of the country or by stimulating an industry which was in the van of economic progress, was good in itself. On the other hand the use of the roads might be regarded as a legitimate base for taxation. There is thus no inherent reason why road-users should pay for the upkeep of the roads, nor yet why they should not be taxed on a scale higher than the cost of maintaining the roads. A system of taxation devised to make each road-user pay in accordance, not with his ability to pay, or any other arbitrary criterion, but with the damage that he effected upon the roads would be a useful means of gauging whether public welfare was being maximised by expenditure on the roads in the sense of the community's being willing and able to pay for what it got. But apart from its value as a test and as holding the scales fairly between different forms of transport, such a system would have to be compared on a level footing with other taxes as a means of providing in the most

equitable and economic manner for governmental expenditure, including *inter alia* the upkeep of roads.

All revenue and expenditure being thus considered as a whole, a general consideration has to be taken into account affecting both sides of the balance, namely, the desirability and the possibility of procuring a redistribution of national income between different economic sections of the community. The classical economists did not devote much attention to this problem in their consideration of public finance largely because they held that whatever the government might do the iron laws of economics would prevent any real alteration of the incomes received by the wage-earning class. The laws of economics are no less iron now than they were a hundred years ago, but a new statute book has been drawn up. The price of labour is determined like the price of anything else by variations of supply and demand. Assuming the supply to be more or less constant, money demand varies with the profitability of employing labour, which in turn depends on the material advancement of the community, the price of the use of capital and the technical advantages of different combinations of the two ingredients of production. Assuming investment to be equal to saving and prices to be constant, the rate of real wages and the proportion of the total income of the community accruing to wage-earners as a class would depend on the rate of saving, the number of workers, the total real income, and the comparative cost, in terms of units of effort, of producing goods in the later rather than the near future, or in a more roundabout way; with some allowance for the possibility of several different equilibrium levels, the choice between which would depend on the bargaining power of

the parties. In other words, certain fluctuating economic factors determine an equilibrium rate of wages at any moment under any given circumstances.

The redistribution of income by other means than price formation alters the rate of wages only as it alters the determinant factors. Suppose, for instance, supplements to working-class income were secured by means of taxation which curtailed the rate of saving of the community. Now the price of the use of capital would naturally increase as the flow of new capital was diminished, but it would not follow that the proportion of total income accruing to capitalists as a class would increase; that would depend on the elasticity of demand for the use of capital. As it appears improbable that say the rate of interest would be doubled if the rate of saving were halved, it may be safely assumed that even in the long run (that is to say when existing contracts for payment for the use of capital have expired) the proportion accruing to non-capitalist elements would actually increase quite apart from the redistribution by taxation. At the same time, it should be remembered, the curtailment of saving would probably have the effect of reducing the real income of the community below what it would otherwise have been, since opportunities for enterprise and development would have to be missed, and the act of taxation itself might prove a discouragement to the taxed class to put forth their best economic effort.

Be that as it may, it is certain that the redistribution of community income between different economic classes is possible even though it might (though not necessarily would) diminish the total to be distributed. Is it desirable? From the point of view of personal ethics, there is

undoubtedly force in the argument that a man is demoralised by receiving more than he earns. But that is not an issue which comes within the purview of economics, and in any case it cannot be too often pointed out that the incomes emerging from the price system that is their reverse aspect have no essential connection with deserts. In what ethical sense has a capitalist earned his interest and profits? He has a legal right to them, the economic system grinds them out for him, without their inducement the supply of savings and of enterprise (risk-taking) might be inadequate to secure the optimum rate of economic advancement, but the economic machine is not a moral instrument; nor is it immoral, it is just non-moral. Ethically, does a journalist earn double or thrice or many times what a coalminer gets for wages? These questions of desert are for the moralists to decide. The economist is concerned only in so far as redistribution otherwise than through the price-making machine, by diminishing self-reliance, might diminish effort and therefore cut down the aggregate income available for distribution. But even there he is entitled only to point out possibilities, perhaps to offer a judgment of probability, not to make any assertion of certain fact.

These issues aside, redistribution may be essential from the social and political point of view because it allays the spirit of revolt that great contrasts of income engender. The poor man on the curb, staring jealously 'while the rich man drives by in his carriage and pair' may not be a danger to society if he is a dejected down-and-out, but if he is a genuine work-seeker unemployed not through his own fault, but through that of the economic system, or a man working long hours for low wages, then for all the innate conservatism of the work-

ing class (who, so far from having nothing to lose but their chains, as the communist slogan runs, have as much at stake as have private soldiers participating in a military mutiny) he is the material for revolution. Social services are the antitoxin for Marxism, which preaches not so much the necessity of revolution as its inevitability, and practical communism is a shield and buckler against the overthrow of capitalism. The private charity of the village châtelaine has turned into the public charity of great democracies, but it is none the less the opium of the people.

Furthermore, redistribution from rich to poor, aside from its moral disadvantages and the possibility of its reducing the total to be distributed, is generally speaking desirable from the humanist economic standpoint because it increases economic welfare. The analogy from the individual to the group may be fallacious, but for the individual the curve of hedonist well-being rarely climbs as steeply as the income to which it is related, and tends to be asymptotic to the horizontal axis. For example, a man's well-being does not increase by so great a measure—assuming that well-being can be measured in relative if not in absolute quantities—when his income rises from £500 per annum to £600 per annum as it did when his income rose from £400 per annum to £500 per annum, and when he reaches £5,000 per annum an extra £100 makes little difference to the sum of his satisfactions, practically none when he has £50,000 per annum. The assumption that a comparison applied to one man with different incomes at different times is also true as between two different men with different incomes at the same time has no support in logic, and may be false in fact because the ability to

enjoy what money buys varies from individual to individual, according to personal characters and training. And the further assumption that the proposition is also true as between groups of varying numbers at different income levels is open to yet further doubt, since for instance the maximum welfare of the whole community might well be obtained by taxing large numbers of poor people at a low rate in order to enable a few comparatively affluent scholars to study comfortably in well-stocked libraries unhindered by economic pressure. These qualifications have to be borne in mind, along with the administrative risk of including the worthless with the deserving indiscriminately among the recipients of public benefits, but it remains a general proposition of public finance that the redistribution of income from rich to poor, *ceteris paribus*, is a desirable end.

In heeding this proposition, the engineer of a budgetary plan must bear in mind that the mere distribution of public revenues to the poorer classes may not effect the purpose intended if the poorer classes are themselves the source of the necessary revenues. Thus to clap on a series of duties upon bread and the like necessities of life in order to pay for a subsidy to wages could hardly be regarded as a sound piece of public finance, since it would not be merely robbing Peter to pay Paul, which is the nature of public finance anyway, but robbing Paul to pay Paul, and taking a commission for the favour. He has likewise to remember, as a matter of political expediency, that to give every citizen an interest in public finance by making him a taxpayer, if only on a trivial scale, may make him a more responsible citizen, and insure against an excess of eleemosynary

finance undertaken not for economic but for sentimental reasons.

Now let us turn from these rather vague general speculations to consideration of particular forms of taxation. As this is not a specialist treatise on public finance it will be sufficient to consider three main groups of taxation which are important in present-day budgets, namely, indirect taxes including import duties, taxes on income, and taxes on estates passing at death.

In considering indirect taxes it is important to keep separate the assessment, the payment and the incidence of a tax, that is to say the object or person on which it falls, the person who pays the money to the government, and the person who ultimately undergoes a diminution of real income. Leaving the international question aside for the moment, we can regard a tax applied to an object or transaction as by so much increasing the cost to the buyer, or second party to the transaction, while not increasing the return to the seller or the first party. In other words, instead of having the same axis as the curve of elasticity of demand, the curve of elasticity of supply has its axis shifted (if the tax is a specific one) or magnified (if the tax is *ad valorem*). How far away from the original point of intersection the new market price falls will obviously depend on the shape of the curves, that is to say on the comparative elasticities of supply and demand. If demand is completely inelastic, that is to say if it remains constant whatever the price, then the price and the volume of sales will remain exactly as before, and the buyer will pay the whole of the tax. If, on the other hand, the elasticity of demand is very high, so that a rise of price instantly brings about a big fall in sales, then under competitive conditions some producers, or

some of the less profitable units of plant, will have to go out of production, a lower net price being accepted by those who remain in the market. In the short run, the ability of producers to lower their prices to the level of prime costs, that is to say until their fixed capital becomes not merely unremunerative compared with the return obtainable on investment elsewhere, but actually worthless, may mean that competition will force down the net price to a point at which volume of sales and the gross price to the buyer are approximately the same as before, but in the long run, as unremunerative capital gets squeezed out, a little higher price and a lower volume of sales are to be expected. In either case, the seller pays the greater part of the tax.

In practice, the ultimate payment of indirect taxes generally falls partly on the sellers and partly on the buyers, though the immediate sellers, who are working on a basis of commission or at a competitive rate of profit, may suffer only through a reduction of their turnover without paying at all. (That is another distinction which must be carefully drawn: the diversion of trade through indirect taxation may injure people who nevertheless contribute nothing thereby to the exchequer, but with certain qualifications their losses should be compensated by the additional profits of the trades providing the things which the consumer buys instead.) Without specifying particular commodities, all that can be added is that if there is a producers' monopoly in the trade, or if the article taxed is an item of necessity in family budgets, then the buyer will tend to bear the lion's share of the payment.

It will be observed that except in peculiar conditions of supply (such as the existence of a monopoly whose

optimum rate of production happened to fall at a higher level with a lower net price, or the possibility of the concentration of production into a few efficient units for whom the elimination of less efficient brethren through taxation would bring the opportunities of large-scale production) the volume of sales or other transactions will fall with the imposition of the tax, so that the yield of the tax is less than the rate of the tax multiplied by the original turnover. After a certain point is reached, except perhaps with the first necessities of life, the revenue becomes inelastic, that is to say the higher the rate of tax the lower the total proceeds. It would seem, *prima facie*, ridiculous to increase taxation beyond that point, but quite apart from the possibility that the diminution of the sales of that particular commodity (strong liquors, for instance) might be held socially desirable, the reduction of turnover would imply the diversion of demand to some other commodity which might itself be taxed (for instance from beer to tea). This is a useful example to illustrate the necessity of considering all taxation together instead of passing final judgments upon each item separately.

So far we have assumed that there is no discrimination in the taxation between one class of sellers or buyers of the taxed commodity and another. The general case of discrimination presents interesting theoretical problems, but the only practical instance of premier importance is that of an import duty unaccompanied by an equivalent excise. We have already considered the effect of protective duties in general upon the balance of payments, and observed the limits within which they may be expected to cause a shift in the balance of commodity trade in an outward direction, and in that light we have

now to discuss the highly controversial issue—Who pays the tax? Of course if a government can make foreigners pay for the services that it renders to its own citizens, that is a gay feather in its cap, but is that actually the effect of an import duty? The elasticity of demand, of course, will operate much as if there were no discrimination between the sources, but the elasticity of supply is now a more complicated factor. In the graphical representation of price-forming, we must imagine the supply curve divided into two parts, added together to form the joint curve, and one of them magnified or shifted while the other remains as before. Since these two curves can obviously be of any shape whatever, it is futile to try to argue from the general case. The first particular hypothesis is that home production is, and still will be under the protective régime, small compared with total demand. Then the conditions are practically those of non-discrimination; that is to say, if demand is inelastic while supply is comparatively elastic the brunt of the burden will fall on the home consumer, and *vice versa.*

But there is another consideration in this case, namely, the barter terms of external trade. If the demand for imports in general is inelastic, while the demand for the country's exports by foreign countries is comparatively elastic, then whatever may happen to the *values* involved in foreign trade (and it is legitimate to assume for the purpose of this particular argument that there is no relevant change of non-commodity items in the balance of payments, so that exports are reduced in value to the same extent as imports) then the country will tend as a result of taxing its imports to get fewer imports for a given quantity of exports. In other words, although as far as the particular commodity is concerned the for-

eigner may pay part of the tax, under such conditions the real national income may be diminished by an equal or a greater amount. Generally speaking, those conditions are fulfilled for Great Britain, a great proportion of whose imports are staple foodstuffs and raw materials, while her exports have to compete with similar articles from other manufacturing countries, and therefore meet with a very elastic demand.

That consideration holds, indeed, whatever the conditions of supply and demand affecting the particular commodity taxed. The next hypothesis is that the tax is calculated so as to give complete protection to home producers, in the sense that they could profitably produce sufficient to supply the whole internal market at the existing price plus the duty. Now if foreign supply is highly elastic, then it will virtually be cut off altogether. In that case the consumer will be paying the amount of the tax on each article he buys, but the government will not be receiving it, since there will be no imports on which to levy the duty. The producers of that article will be taking it, which may or may not be a desirable thing, according to the effect of the change in the balance of payments upon monetary policy and the barter terms of trade, or the desirability for some reason of stimulating that particular industry. Usually, of course, imports are not completely excluded, but a certain quantity still come in and the price settles at some point between its original position and that position plus the tax. Let us suppose, as an example, that the new price is midway between those two points, and further that the trade is then equally divided between imports and home production. In that case, foreign suppliers are paying half the tax on half the supply, the consumer is

paying half the tax on the whole supply, the government is taking the whole tax on half the supply, while half the tax on half the supply goes to the home producers. The reaction on the various other items of the balance of payments, and on the barter terms of trade, has to be considered over and above the immediate question.

It is reasonably certain that under any ordinary conditions the real cost of an indirect tax is greater than its proceeds, before allowing for the real value of the uses to which those proceeds are put. The administrative costs of collection, which are often high in relation to the revenue, especially in the case of protective duties, are one reason for the difference. Another is the diversion of trade from its 'natural' course (that is to say the course into which the sum of the individual free-wills of all citizens, related to their incomes, would drive it) into some other less desired if not less desirable; and in the case of discriminatory duties, including import duties, a third is the diversion of trade from comparatively low-cost to comparatively high-cost producers, although in that case there may be compensation, from the selfish point of view of the country in question, in the fact that the foreigner pays at least part of the tax, under the conditions that the foreign supply of that particular commodity is elastic as compared with the demand for it, and that the demand for imports in general is elastic compared with the foreign demand for the country's exports.

The next type of tax, taxes upon income, also raises the question—Who ultimately pays it? Of course the person or corporation on whom the tax is levied has to produce the money, but that may mean no more than does the fact that the importer has to pay indirect taxes

on removing dutiable goods from bond. Can income taxes be passed on in any way, or, to put the question in its usual form, does income tax enter into cost of production? That question poses another, namely, what is cost of production? When we were discussing the general price-fixing mechanism we noted the idea of a marginal cost of production, which was the real indicator of price, from the producers' end; that is to say, so long as the addition to total cost caused by increasing production by a single unit was less than the price of a unit, it would pay the producers to add to their output, under competitive conditions, until the price equalled that marginal cost. Competitive profits, excepting those returns on capital which would have to be included in the cost of any addition to the scale of production, arose from the difference between average and marginal costs of production. Now income tax on profits in that sense clearly cannot enter into marginal cost of production, nor, therefore, into price; so the question is, does income tax on the return on the additional capital required to expand the scale of production have to be included in the cost of that expansion. The first point to be noted is that if it is a cost it is one which has to be met by all producers in the country, whether in the particular industry in question or in any other. It therefore does not effect them in competition with each other, except that if it is a cost then it will tend to tilt the price scale in the direction of cheapening those articles into whose production comparatively little capital enters. The second important point is that by intent, if not always in practice, the tax is levied on realised net earnings, and therefore only emerges if, and in proportion as, the production is profitable to the capitalists undertaking it. And the

third point is that, again ideally, the tax is a personal and not an objective one; that is to say, although it may be charged to the producing firm itself, the firm is to be regarded only as an instrument of payment on behalf of its stock- and bond-holders.

The question can therefore be still further refined into this form: Does industry as a whole have to bid higher for the use of capital by reason of the fact that the lenders have to pay a proportion of their return in taxation? Plainly the answer is yes only on one or both of two assumptions: that the redistribution of community income through that form of taxation and through whatever government expenditure the proceeds may allow shifts the factor of demand in favour of articles requiring a comparatively large ingredient of capital in their cost of production, and thus heightens the competition for the use of available capital; or that the imposition of income tax reduces saving and thus cuts down the supply of new capital. The first assumption is more likely to be reversed than fulfilled, but the second has an air of probability and demands further scrutiny.

Income tax, as levied in Great Britain, that is to say where there is no discrimination between the purposes of saving or consumption to which income is applied, does involve a duplication of taxation on saved incomes in a certain sense. Let us suppose that two brothers have each an income of £500 a year. The one spends his whole income currently and the other saves £100, investing it at 5 per cent and spending the interest. Each pays the same amount in income tax to begin with, but subsequently the second man also pays tax on his additional £5 per annum. It certainly looks as though there was here a certain discrimination against delayed and in

favour of immediate spending. But that is to forget that the second man, taxed first on £500 and thenceforward on £505 per annum, has in fact had that extra £5 of income which the first man has not had, and that assuming his capital to have been economically invested it represents £5 of additional national as well as personal income. The better way to approach the problem is to imagine what difference it would make if income were taxed only as it was spent, and for that purpose let us assume that the second man withdraws his capital in order to spend it at the end of ten years. Then he would pay income tax on £400 the first year, on £505 in the subsequent years until the tenth, when he would pay on £605. How does his position differ from the previous case? He has gained the interest for ten years on the income tax that he would previously have had to pay on his invested £100 when he earned it originally. In other words, the real discrimination of income tax against saving is measured by the interest otherwise obtainable on the tax paid on invested money. If the current rate of tax is 20 per cent per annum, and the current rate of interest is 5 per cent per annum, the 'discrimination against saving' is thus of the order of one per cent of the saved sum per annum. Apart from its effect on saving through the reduction of total incomes available to the individual for disposition between saving and consumption, income tax under those circumstances would reduce the effective rate of interest from 5 per cent to 4 per cent.

It does not, of course, necessarily follow that the rate of saving by the community is thereby diminished. A great deal of saving is automatic, having no relation, that is, to the particular inducements held out to the

investment of money. An expanding firm, or a man with expanding personal obligations, has to have expanding reserves, the motive being security of capital and only very secondarily the rate of return. Some people conscientiously save a certain proportion of their income and would continue to do so however low the rate of interest descended. Others again actually save more when the rate of interest is low, since their aim is the achievement of a certain income from investment, let us say as a dowry for their daughters, as an educational insurance for their children, or as an annuity for themselves on their retirement. It is impossible to assess these elements in the supply of capital with any accuracy, but one's personal experience and what statistical material is relevant alike prompt the conclusion that a reduction of the effective rate of interest even from 5 to 4 per cent, as in the example, would not have any great effect on the supply of capital, certainly not enough to increase the gross rate payable by borrowers in proportion to the rate of income tax. On the other hand, the reduction of net personal incomes by the payment of income tax might very well result in a considerable curtailment of saving, but that is to assume that the imposition of income tax is being considered as an alternative to no taxation at all, not to some other form of taxation, which is bound to reduce the spending power of the community as taxpayers while increasing it as receivers of government salaries and benefits. The conclusion of the argument therefore is, that income tax is not directly a cost, but that it may result in a reduction of saving which in turn effects a certain increase of the local rate of interest. How far such an increase of the rate of interest would reckon as a handicap in inter-

national trade depends, obviously, on the proportion of capital employed in the industries most subject to international competition—not capital already invested, but new capital. It also depends on the reaction of the reduction of saving upon the savings-investment ratio and therefore upon the monetary policy pursued by the government and central bank. As far as local purchasers are concerned, income tax is not handed on in costs by those on whom it is assessed, except in so far as it may violate its own proper principles in being chargeable upon appropriations for depreciation, but it may alter relative prices by altering relative demand, including the division of demand between consumption goods and capital goods.

The question of the best or most appropriate kind of income tax is partly a social and not an economic question. In so far as the aim is the maximisation of economic welfare through redistribution of national income a graduated tax rather than a proportionate one is indicated. As a man's income rises, he loses less economic satisfaction not only by being deprived of a given sum but also by being deprived of a given proportion of his income—or so, in the absence of direct measurement of hedonistic satisfactions, one is reasonably entitled to assume. For instance, one might guess that the loss of satisfactions would be no greater to a man who found an income of £1,000 a year reduced by taxation to £850 a year than to one whose annual income was cut from £500 to £450. How steeply the curve of incidence should rise is partly a matter of judgment about relative economic satisfactions, procurable to different individuals at different income levels, partly a matter of other motives, consequences and criteria of taxation. Of

course, if one accepted the position that in their capacity to enjoy economic values all men are equal—or might soon become so once inequalities of income were removed—and if redistribution so as to secure maximum total hedonistic welfare were the sole consideration, then one could logically infer that the best form of income tax was one which resulted in absolute equality of incomes all round, since if there were any inequality at all a comparison between any pair of people with different incomes would indicate the desirability of a transfer from the wealthier to the poorer.

But of course those other considerations are far from negligible. Too steep a graduation of the scale of taxation would kill the goose with the golden eggs, since it would *pro tanto* diminish the desirability to the individual of achieving a higher income. Even if the relaxation of individual efforts to get more money meant only the redistribution of real wealth and not its diminution (an assumption which is not *prima facie* justified, since there is no inherent reason for assuming that the additional income of the individual would not have been worth to the community what the community paid for it, in an economic and of course not in a moral sense) the yield of the income taxation would fall and its rate therefore have to be raised, which might mean an unending spiral of over-taxation. Further, large incomes are the principle source of new saving, and any diminution of the community's rate of saving would slow-up economic development, other things being equal, and perhaps leave the community behind in the race for industrial and commercial supremacy through technical efficiency. Finally, as the rate of taxation rises the inducement to evade it rises likewise, hence the government has either

to submit to evasion—possibly involving a reduction of the yield below its level at a lower rate of tax—or incur the expense of stricter inspection and prosecution. Balancing these considerations against the democratically attractive criterion of 'ability to pay' requires a practical rather than a purely economic judgment.

The problem of taxes on estates passing at death, which is the next class of taxation to be summarily reviewed here, is also largely sociological and political. Indeed the predominant motive responsible for the imposition of such taxes by modern democratic states has almost certainly been the dislike of the hereditary concentration of economic power. It has been several times urged in this book that the economist as such has no claim to pass judgment on the moral or sociological justification of incomes. Whether a man can or does earn in the sense of deserve an income of a million pounds a year from invested capital is not a question which the economist can answer; he can only describe how such phenomena come about, and how, if others tell him they are undesirable, they might be obviated. Likewise he is not, as an economist, in the least interested in the question whether the capital was invested by the recipient of the income or by his father or his great-great-grandfather, except in so far as the direction of the economic machine may, as it undoubtedly does, fall through the hereditary principle into the hands of those who could not have attained that governing position on their own merits, and thus keeps the wealth of the community below the maximum level that it might attain in view of the resources and personnel available and the other economic circumstances of the time. Hence on that aspect of the problem of inheritance taxes he

can only offer a tentative and unemphatic answer.

The aspect in which he is most keenly interested is the question, does a tax assessable on capital values, passing from hand to hand on a certain occasion, to wit the death of the former owner, result in a depletion of national as it results in a sacrifice of personal capital resources. Now the answer to that question requires a clear conception of what is the meaning of capital. The capital of a community, we observed at an earlier stage, was its total material wealth at any one moment, comprising fixed capital in the shape of mines, factories, machinery, transport equipment, houses, and so on, and mobile capital in the shape of goods in transit, in course of manufacture, in storage, or otherwise unconsumed while not being usable repeatedly in the production of other goods. Now the depletion of national capital, in so far as it is fixed, cannot be achieved just by assessing taxes upon it, since that can only be accomplished by its physical destruction; and in so far as it is mobile its depletion would imply a prior curtailment of the volume of trade rather than a direct consumption of capital.

But of course the total volume of national capital does vary from time to time. Normally, it increases, through the process of new investment over and above the maintenance of existing capital. But even while that creation of capital is going on, it is being offset by negative investment through the depreciation, dilapidation, deterioration, decay and eventual disappearance of existing material capital, and an event may be said to cause the depletion of national capital if it accelerates that depreciation by interrupting or hindering the maintenance of existing capital, or even if it diminishes the rate of positive new investment. Do estate and legacy duties,

granted that they cannot be paid out of capital in a direct sense, diminish national capital in that indirect sense?

To some extent such taxation will be met out of current savings, since in view thereof a man will either insure against the payment of estate duties by means of annuities during his lifetime, or will save the more in order that the net amount available for his heirs and assigns shall be as before. (It should be noted that the current saving and the payment of duties correspond to each other only as a continuous process and not item by item; the savings of this year, as concerns particular persons and estates, are to provide the duties of perhaps many years hence.) But not all capitalists will be so provident, and some of them cannot be. When the scale of death duties is as high as at present in Great Britain, for instance, there comes a point at which the annuity necessary to insure against estate duties on an estate which shall bring in a given income is greater than the income itself, so that a man of normal expectation of life would have to perform the impossible task of saving more than his whole income in order to keep his estate intact. Further, a great deal of capital, especially agricultural property at this particular time in Great Britain has a nominal market value, and *a fortiori* a value for tax purposes, greater than is indicated by its income-earning capacity, partly on account of its estimated potential value for other uses than commercial agriculture. Hence a great many heirs and legatees will have to dispose of, or mortgage, part of the capital in order to meet the tax, and this will absorb new saving, directly or indirectly, thus diminishing the rate of increase of national capital and possibly even encroaching

on the resources necessary to keep it up to its former level. The deficit will only be made good if the want of that extra capital stimulates the heirs or legatees to undertake saving which they would otherwise not have contemplated. That is not generally their attitude. Rather they accept the net amount accruing to them as the full total of their new wealth, and it does not occur to them to make it up to its untaxed amount by dint of their own saving. The net absorption of new saving through the disposal of estates in order to meet taxes may not equal the amount of the taxes involved, since the enhanced competition among potential borrowers will tend to drive up the rate of interest and thus to enlarge the gross volume of new saving, but it is safe enough to assert the round proposition that estate duties do cut down the rate of increase of national capital and, if they were sufficiently onerous, might conceivably accomplish its gradual depletion through inadequate maintenance and renewal.

Political controversialists have argued that there is some ethical impropriety in estate duties, still more in capital levies, which they brand alike as 'confiscatory'. Such moral question are not for the economist to decide, but it is open to him to point out that economically all taxation is confiscation, or none of it. The economic machine produces for a man a certain income or a certain capital; the political machine takes it away and gives it to someone else. Economic forces determine that the price of a certain article shall be so much; political forces, operating either directly or through restraint laid upon economic forces, determine that it shall be so much more or so much less. Just as the economist is not concerned with the morality of the economic forces, so he

can have no opinion, as an economist, about the morality of the political forces. These two systems work together to determine the conditions and background of all our lives, acting and reacting upon each other. Economic laws set limits to political power, but equally political action can shape the conditions under which those economic laws operate, even to the extent of setting up a system under which the familiar forces of competition and private enterprise were whittled away, by the organisation of society reinforced with penal legislation, till they were almost negligible. The laws of economics are iron indeed, but there is no iron so hard that it cannot be shaped if only we have the furnaces to heat it and the moulds into which it can be run. Capitalism, communism, taxation, these are scientific phenomena of otherwise neutral significance to the economist, who in his scientific capacity is morally colour-blind as well as politically impartial. The reader will have understood the import which the arguments of this chapter are intended to convey only if he has considered them in this light.

CHAPTER X

THE ECONOMIC FUTURE

The economists of this era would perhaps have achieved a surer reputation as men of science, though their names might have been for ever hid from the man in the street, had they never embarked upon the hazards of prophecy. But the temptation has been too great, the cross-examination too importunate; and indeed if the economist is not entitled to speculations concerning the economic future who then is? This last chapter, therefore, will treat of the working out of certain trends and possibilities already apparent in the economic system. But if the reader looks to it for clues as to the time and circumstances of industrial revival, or the course of prices and exchanges within the next few years he will be disappointed.

The world is growing richer in material wealth. It was one of the preoccupations of economists of a hundred years back that as the population pressed upon the means of subsistence the average wealth would decline. To-day, with our eyes on industry rather than agriculture, with food in our granaries so abundant that the economic world is as sick surfeiting with too much as if it starved with nothing, with outputs increasing and agricultural rents declining, we have learnt to scoff at the gloomy prognostications of the Malthusians. Why, over the intervening interval, have they been so forcibly

disproved? It has not been, and is not yet, that the population has declined. The rate of increase of population is at this pass diminishing in western industrial countries, and has sunk so low in some places that total population no longer increases, and in others that although the total population still advances it does so only because medical science is keeping alive more and more of the older, unproductive elements. But that is a comparatively recent phenomenon, and even in an emigrant country like England the population trebled in a century. What is more, the grim view of the Malthusians that the rate of increase of population would be kept down, if not by war and natural calamities, by the want of food and necessities as people pressed upon resources has been shown to be not merely false but the reverse of truth. It is not the poor among whom the birth rate declines but the rich. As likely as not it is not ability to maintain it that induces a man to have a large family, but, on the contrary, sheer improvidence. Of course, we have deliberately checked and diverted some of the Malthusian forces, by taxing the providence of the rich and absolving the poor from the consequences of their improvidence. A big share in estates and legacies is appropriated by the State, which uses the proceeds to provide free education and other liberal social services. These are changes which will not, apparently, be reversed for a long while, and they will continue to have important economic as well as social consequences. But as regards the growth of population the forces of voluntary restriction are spreading downwards with such certainty that he would be rash who forecast a continuance in the present disproportion between the rates of growth of rich and poor classes. In western industrial

countries, the curves of population growth indicate that after shorter or longer periods the population will become stationary and eventually decline.

Economically, will this be a desirable or a regrettable consummation? We have noted how the early Malthusian opinion that as population grew average wealth would fall through the necessity of cultivating poorer and poorer land and generally of resorting to more and more costly means of production has been disproved by facts, and for the moment we can assume that the nearer future will hold no flagrant reversal of the causes for that disproof. But circumstances have conspired to renew the plausibility of the general Malthusian argument, especially in Great Britain, where a large unemployed population has had to be maintained while the prospects of their ever being productively employed seemed very slight. Coal was failing; coal and cotton and steel were no longer required by the world on the same scale as before—was not the country over-populated? That argument conceals a double confusion which must be cleared away at once. At any given moment there may be over-population in a sense, because the labour factor of production is not fully employed. But, because the amount of production being carried on at any time is inadequate to afford work to all the available population, that does not preclude the possibility that if all the population could be employed not only would the average real wealth per unit of total population increase but also the average real wealth per unit of the employed population. During a depression, the whole world is over-populated in a sense, in that with its actual level of production it would be better off with fewer people to support, but that is not the sense in

which the phrase can scientifically be used. In so far as the under-employment of the British population was due to the failure of the economic machine, locally and throughout the world, to secure adjustment to changing circumstances, Great Britain was over-populated in that sense only. The second part of the distinction that has been concealed is that between relative and absolute over- (or under-) population. A country can be relatively over-populated when it is not absolutely over-populated, or absolutely over-populated when it is not relatively over-populated. Let us therefore define these terms very carefully. An economic community is absolutely over-populated when the average wealth per head producible under the conditions appropriate to its population is less than the average wealth producible by a smaller population under the conditions appropriate to that smaller population. The community has reached an optimum size of population when either an increase or a decrease of the population, accompanied by the changes in the organisation or direction of production required by that increase or decrease, would reduce its average wealth per head. A community, on the other hand, is relatively over-populated when the average wealth of the world, per head, would be increased by a transfer of some part of its population to another community, again assuming the appropriate changes in organisation to be made. It will be observed, first, that the existence of a relatively over-populated community necessarily implies the existence of a relatively under-populated community, and, second, that the definition does not rule out the chance that the transfer might actually reduce the average wealth of the relatively over-populated country, if it increased still more sub-

stantially the average wealth of the relatively under-populated communities.

Now let us apply these definitions to present circumstances, and particularly to the example of Great Britain. It is reasonable, *prima facie*, to presume that Great Britain, who was supporting a large volume of unemployment partly because the world demand for the products that she was specially equipped to produce, or upon which she had previously specialised, was no longer equal to the world's potential supply, was relatively over-populated. But doubts must arise when the possibility of her reorganisation to meet the new economic situation is considered, and when it is noted how reluctant other countries were to admit their own under-population by admitting emigrants. The apparent over-production of primary commodities gave no reason for believing that primary producing countries were among the under-populated communities, and it is not easily conceivable that among manufacturing countries Great Britain, with her resources, experience and abilities, was alone relatively under-populated had proper adaptation to changed circumstances taken place. The possibility of her being over-populated must, in that light, be associated with the chance of the over-population of the world as a whole. Would the world be better off if its population were smaller, granted the proper adjustment to that smaller population? We are back at the general question of the practical vindication or refutation of Malthusianism, and it will be as well to resume the discussion where it turned aside.

In the century that has elapsed since Malthus propounded his doctrine, the population did not decrease but the production of wealth enormously increased.

And so far from the production of food and other necessities becoming more and more costly as population increased, it became so much more economical that a progressively smaller proportion of the population was needed for that purpose, and a progressively greater proportion could devote their energies to elaborating the raw stuff into manufactured articles, and to rendering services instead of making things. This cheapening of primary products was caused by three main forces: the discovery of new resources to exploit, the better organisation of production, and inventions both scientific and mechanical. How long can this process continue? It may first be pointed out that it was definitely associated with the increase of population, and in some measure required an increase of population, since even in primary industries the economies of large-scale production can sometimes be secured, and since large-scale production demands concentrated consumption. The successful exploitation of the western prairies of North America depended on the existence of large centres of urban population in the east of that continent and in the Old World. But a great deal of the cheapening of primary production was admittedly fortuitous from this point of view, having no connection with the increase of the world's population, and the question therefore arises —Can its continuance be expected while that population goes on growing?

We certainly cannot hope for the discovery of virgin agricultural lands to match the western prairies, though we may still legitimately count on the opening-up of hitherto unexploited mineral resources every whit as prolific as those which now supply our needs. But we have no reason to doubt that human ingenuity will

produce, as it has done in the past, inventions designed to reduce the cost, in terms of human labour and manufactured capital, of exploiting whatever resources are available. The use of fertilisers and manures in the mass agriculture of the New World has scarcely begun, and the extent to which it could be forced is indicated by the fact that in Great Britain, reckoned by many a poorly equipped country for producing wheat, the average yield of wheat per acre is around double what it is in Canada. The application of machinery and mechanical power to agriculture is likewise in its infancy, though other forces, such as the precariousness of capital investment in a business so subject to violent price fluctuations, may continue to delay its growth. Even among the vast depressed millions of Asia there is more than a possibility of an increase of production exceeding the growth of population. The last decade has witnessed in India an increase of population at a greater rate than ever hitherto recorded; yet there is no evidence of a general decline of the standard of life because the opening of communications, the use of better seed and stock, the rudimentary application of science and capital to the land, have driven up the output per acre at least as fast as the number of acres per head of population has declined, quite apart from the increase of the available acres through irrigation of previously barren tracts. Even China, with her unprogressive philosophy and her antiquated methods and customs, is not beyond the range of such hopes. The problem of Japan is not so much part of that of world over-population as the problem of her own relative over-population, exacerbated by restraints on migration and still more by illiberal trade policies.

It is true that already there is a not far distant prospect of a shortage of certain commodities through the exhaustion of present resources and the unlikelihood of more being found. Petroleum is, of course, the most obvious instance; but even there the prospective shortage, in view of the undeveloped fields in Russia and elsewhere, is not imminent, and, what is more, just as the possible world shortage of coal over which some wiseacres were shaking their heads years ago has turned, for the moment, into an inability to dispose of what is hauled by a diminished mining population, so the shortage of petroleum may change into its reverse with a similar change to other fuels or sources of power. As far as industrial power is concerned, water-power enables us to use a resource which is unending and unimpaired so long as deforestation does not destroy its origins. Thus the prospect of a Malthusian pressure of the population upon the resources of the land is far away in the distance, and it is in this sense that we are steadily growing richer. As the production of primary goods becomes cheaper and cheaper, we can and do devote a greater and greater proportion of our energies, abilities and resources to other economic uses.

But the conclusion that the world is steadily growing richer and will continue to do so does not necessarily imply that over-population is out of the question. She would continue to get richer even if the population were declining. The question is, at what point of population would the average wealth be the greatest, and the answer obviously depends on how far the possibilities of creating wealth are improved by the mere increase of population. Nowadays mass production is a word on everybody's lips, and everybody understands how

economies can be effected by enlarging the scale of operations, whether it be in primary production, in manufacture, or even in the provision of services. The economies of mass production, however, cannot be indefinitely increased. There comes a point in any industry at which the average cost of production would be increased by further expansion of the size of the unit. We are familiar with firms too small to be able to work efficiently in comparison with their competitors, but we are also familiar with firms so great that their organisation has become expensive and topheavy, whose position is maintained only by the power and not by the efficiency associated with size. It may be that the optimum size of units in the great majority of industries could be achieved with the present scale of population, so that an increase of the population would merely enlarge the number of competing units or tempt them to overreach the optimum size. But that would be a hazardous guess, and it is certainly not true of services, including those of government. The expenses of providing such amenities as drainage and water and light and public transport are much less in large aggregates of population than where the people are few and scattered (though there again an optimum point is reached somewhere, at which the organisation of government becomes too expensive to outbalance the economies). For instance, there can be little doubt that in the sphere of services, both publicly and privately furnished, a country like Canada would gain much in efficiency by having a larger population. She has, and may be assumed to need, two great transcontinental railroads, as well as a progressive road network; many fine hotels; universities and schools on an ambitious scale; a great resource of

water-power; and many other potential or actual services available for her citizens, the cost of which is greatly enhanced by the fact that her population—in all approximately equal to that of Greater London—is scattered, in great rural areas and in a number of cities of moderate size, over many thousands of square miles. Throughout the world, in the field of privately furnished services, especially that of retail trade, and the manufacture of articles of fancy or luxury, catering to the masses has scarcely begun to achieve its potential economies of labour and capital.

Hence it is impossible to conclude with certainty either that the world is now over-populated or that it is still under-populated, in the strictly economic sense. Non-economic considerations—beauty and freedom, the pleasures of crowds or of solitudes—have yet to be brought into the balance, but the economist need not attempt their measurement, humbly admitting that his is not the last word. In any case this is a matter, for the present, of unpractical speculation, for however certain we were that a greater or less population was desirable for the world we should, in the present organisation and temper of society, have no means of deliberately bringing about the desired object. Governments, however paternal in their benevolence, cannot literally be the fathers of their people. So we must accept the course of the world's population as we find it, and what we find in western industrial countries (whose habits and circumstances tend to be diffused over other countries also) is a declining rate of growth of population, pointing to a stationary population in the nearer or further future; and meanwhile, because the birth rate and the death rate fall simultaneously, the age-distribution of the

population is changing in such a way that the weight of the population rests progressively higher up the scale of years. (This is a very generalised description, which is not meant accurately to describe the condition of any one country.) That change of age-distribution is important because it helps to solve the problem of increasing wealth. The greater and greater number of old men and women is a growing burden to the productive elements of the population, but it is a burden that they will become, if our forecast is correct, progressively better able to bear. Looked at from the other end, the growing wealth of the community enables it, since it soon is satisfied with material commodities, to slough off the curse of Adam and indulge in leisure, while the rising age-average provides the means of distributing the available community leisure. The workers of the morning shall rest in the afternoon. Already in Great Britain we pension off our aged population, and our widows too, and democratic pressure is constantly being brought to bear to extend these benefits. At the same time, of course, the relative cost of the expensive benefits provided for the young will decline, but that is readily compensated by an elaboration of their scope and character. Hence we may expect that our total income in goods and services will not increase on the full scale indicated by the combination of growing numbers and improved efficiency, because a smaller and (by age) more concentrated proportion of the population will be productively employed.

Let us turn now to the means whereby the increasing wealth of the world will be achieved and the changing character of that wealth. Every invention and discovery alters the character and the distribution of wealth.

Imagine an extreme instance, in which a new commodity was discovered of such inherent attractiveness that the world as consumers promptly turned a large portion of their demand towards it. If its production were a monopoly then not merely would a great deal of the world's resources of capital have to be changed over to producing the commodity itself but more would have to be shifted to provide what the monopolists demanded with their profits. The combination of these primary and secondary changes of demand (not excluding the changes in the demand of those engaged in the new industry as their wages and salaries increased) would entail a general readjustment of the price level, and in particular a readjustment of the relative prices of labour and the use of capital, according to the proportion of these ingredients necessary to produce the things demanded. Now it might be that the new commodity required a very high proportion of capital to produce it (as, for instance, water-power does) in which case the proportion of total wealth accruing to labour would fall. It does not follow, of course, that labour would be any the worse off absolutely, because the total wealth of the community would meanwhile have been increased. If the commodity really were new there would be no practical or statistical means of measuring the increase of total wealth, any more than a direct comparison would tell us how much better off we are now than we were a hundred years ago, when a great many of the things on which we now spend our money had never been heard of. The assumption of increase of wealth is not meant to beg any psychological or moral questions. From the economic point of view if the world's consumers prefer one assembly of goods and services to another

still open to them, because of some invention or discovery and not on account of a mere change of taste or fashion, then their wealth has increased.

What is more, the effect of secondary changes of demand upon the proportion in which community income is divided between the factors of production may be very important. In the given instance the capitalists who become better off as a class may distribute their incomes in such a way that the sharing is again readjusted, this time in favour of labour. Indeed this is the most probable sequence in the future as it has been the most usual in the past.

If we cast our mind over the range of inventions and discoveries with which we are familiar—we might pick at random electric light, mechanical transport, and the application of machinery to agriculture—we observe that on the whole they are labour-saving rather than capital-saving devices, though we could think of capital-saving inventions also. For this predominance there seem to be two main reasons. The first is that the force of trade unions tends, especially at times of falling prices, to hold up wages to a point at which a premium is put on the reduction of the labour factor; that is to say, it tends to hold them on the average a little above the equilibrium point, since rising industries will pay, through competition and their eagerness to exploit the market, the full equilibrium wage while declining industries will be made to pay rather more, their pay-roll falling much less swiftly and drastically than their profits. There is no such combination on the part of suppliers of capital, the market for which is still highly competitive. The second reason is that the immediate profits arising out of any industrial or technical advance

fall naturally to capital rather than to labour; hence capitalists will generally be more inclined than labour to subsidise and favour the progress of invention; and their bias will clearly be on the side of labour-saving changes. From that aspect, therefore, even when the temporary profits have been absorbed in the redistribution of wealth generally, it is reasonable to expect a decline in the proportion of community income accruing to labour.

But the story does not end there. At the present stage of the world's economic development, when the wealth of any class above the very poorest rises, the proportion of its income spent on services tends to rise simultaneously, and this is especially true of the upper income-classes who supply the greater part of a community's capital. Now of their nature services involve a high proportion of labour cost, some of them, like those of gardeners and domestic servants, being labour unadulterated with any capital save a few cheap and simple tools. The labour involved is, necessarily, semi-skilled or specialised, not just labour in the mass, but to some extent any increased demand wherever applied to the web of labour supply is transmitted to all other points of it. Hence the secondary reaction of a labour-economising invention applied to industry is commonly a compensating shift of consumer demand in favour of the labour factor of production.

The compensation is unlikely, however, to be complete. Have we then to look forward to a progressive decline of the proportion of total community income accruing to labour? The answer depends on the fact that the assumption that other things remained as before, which has been implicit in the argument, is not

justified. The supply of and demand for the factors of production may be expected constantly to be changing for other reasons than inventions and discoveries. As far as capital is concerned, there is a tendency for people privately to save less, through the multiplication of their wants and through redistribution by taxation, but there is equally a tendency for corporate saving to increase, and as a short-run factor the negative saving which resulted directly or indirectly from the Great War and which is epitomised in government borrowing to meet current deficits may be expected to come to an end. On the side of demand for the use of capital, the maintenance of actual capital equipment in a stable society is quite neutral (in other words, monetary provision for depreciation is not counted as saving nor are the maintenance and repair charges upon which it is expended counted as investment); hence if there were complete equilibrium through time the only net demand for capital would arise in connection with the enlargement of existing equipment to meet an expansion of population. It is the scope for new uses of capital that is critical in determining the price of its use; and it is in times of rapid change from one form of production to another on account of shifting public fancy or new inventions and discoveries, when the value of capital already invested is sinking, that the demand for new capital is strong and the price paid for its use high. Now it is futile to attempt to prophesy the future course of public demand or of scientific and mechanical progress, but if, as one might guess, the next economic era is one of less hectic change than the last, one in which previous gains are consolidated and steady, unspectacular progress made in the enlargement of popular wealth, then the chances would

be in favour of a decline in the rate of interest, that is to say in the average reward received by capital-providers. It does not follow, of course, that a decline in the proportion of the real income of the community accruing to such persons would simultaneously fall, but further guesswork would only lead further from the path of established fact.

The point about which some expression of certainty is justified is the redistribution of total real income between primary goods, advanced manufacture, and services as the wealth of the community increases. The reaction upon the distribution of population of the change-over from bare commodities to the higher stages of manufacture and to services is a vital part of the economic outlook. The southward drift of industry in Great Britain, which has spread the land within fifty miles of London with a carpet of new industries and new towns, is not the product alone of the self-aggravating increases of local taxation in the North and Midlands where the blight of industrial decline has set in, nor yet —though this is of permanent and grave import—only of the ability to obtain power almost as cheaply far from the original sources thereof as near-by, with the growth and improvement of electrical transmission. It is a natural by-product of the shift in public tastes, or rather in the proportion in which the community's income is spent, whether the change arises from a variation of taste or from more fundamental causes. The articles on which people spend their surplus incomes after their primary needs are satisfied are expensive in proportion to their weight, or, shall we rather say, light in proportion to their cost—motor-cars and accessories, fancy foodstuffs, radio apparatus, gramophones. Hence they

are themselves suitable for transport on roads, while their raw materials and the fuels necessary for the power used in their manufacture, forming as they do only a small proportion of the total cost, may be economically brought from the sources to the factory. The place of production, once the necessity for proximity to the sources of raw materials and fuels is gone, must be chosen on good roads, for the delivery of the final product, on good railways and/or canals for the transport thither of the raw materials, and where labour is not excessively scarce nor overheads too costly.

But there is another consideration still, namely, facility of distribution to the consumer. In some of the industries to which this review applies, distributing expenses are as high as one half of the total cost of the article as delivered to the consumer, and although proximity of manufacture to centres of distribution is not essential to the achievement of economies in this field it is of considerable advantage from the point of view of organisation. Hence everything tends to attract industries to centres of consumption, and the old picture of England in which the North manufactured for the South, while the latter area housed primarily the leisured and those engaged directly or indirectly in services to the world, is erased for ever. More and more we can expect the South to manufacture for the South, simply because the South has got the start in consuming power. This tendency is still further exaggerated by the change-over from goods altogether to services. Services have to be produced where they are consumed, whether they be transport or trade or financial services, or house-building or entertainment. Hence where the incomes are available for expenditure on services, there will more incomes

be created by the rendering of those services, and the population of the great urban centres be still further swelled. The absentee capitalist disappears not because he is reluctant to leave the area of factories and population but because the factories and population are drawn to his neighbourhood by irresistible economic forces. The only great offset to this tendency lies in the expenditure of incomes upon the services connected with personal transport. The motor-car, for instance, spreads out population along the main roads, in the first place to serve the traffic and secondarily to serve itself.

It is in the social sphere that this tendency arouses the most difficult problems. The economic problems created by the change in the proportions of demand as wealth increases arise in a different way. They have already been mentioned in connection with industrial fluctuations, and only a brief résumé is needed here. The forces of competition, aided by inventions and discoveries, tend to induce all primary industries to advance the scale of their production at least as fast as the real income of the world increases. Hence there is constant danger of a repetition of what seems to have happened in the first post-war decade, namely a relative overproduction of primary commodities. This tendency is given additional weight by the movement for the mechanisation of primary production (the harvesting combine and automatic coal-getting devices may be cited as examples), for they will displace men from the land and the mines, who should, if the means of economic adjustment worked smoothly, find employment in the cities making the machines to do the work that they used to do with their hands; but they will be reluctant to move, and will submit to lower wages or other econo-

mic hardships before they will desert their former industries, which will thus be tempted into over-production. This tendency towards relative over-production of primary commodities will mean a tendency for commodity prices to decline in relation to the average of all prices, and apart from the psychological effect of such a decline on business sentiment in other trades it must, unless corrective forces are applied, bring a grave dislocation of international trade and finance with resulting economic disorders whose like we are now experiencing. Furthermore, the demand for primary commodities will remain, as it is now, highly inelastic, so that wide variations of their prices will be possible without any appreciable effect on the superstructure of industry, except to exaggerate them through secondary reactions; and indeed this inelasticity is likely not to be mitigated but to be exaggerated as time goes on and raw materials become a smaller and smaller ingredient by value of what the final consumer spends his money on. Hence we may expect the economic system not merely to remain liable to industrial fluctuations but to become susceptible to progressively more violent disturbances.

That is a grim prospect, but one that should fire fresh efforts to provide means of avoiding or minimising those economic vibrations. It is certain that if the economic system in which we live does not cure such disastrous defects they will prove its undoing. A ship is none the less seaworthy for rolling in an ocean swell, but if each roll augments the amplitude of the next, the vessel will turn turtle, and not all its most powerful engines can right it again. At present our system is an anomalous confusion of economic unrestraint and public control. The international movement of goods and men is fet-

tered and checked at every turn, while the international movement of money goes unhindered. Those who would be horrified at the direct intervention of the State in banking, or any other form of enterprise still privately undertaken, clamour loudly for decisive action by central banks who in the last resort must act as the instrument of government policy, whatever their constitutional status, and whose powers are frequently exaggerated by the very elements who most sceptically doubt the ability of government to interfere with the 'laws of economics'. The country that loudest proclaims the principles of individualism has embarked on an experiment in socialised banking unprecedented save in wartime or in Soviet Russia itself. The public that believes in the blessings of competition is largely the same public that demands its limitation through 'rationalisation', while those radical elements who appeal for planning denounce the interference of government with international trade at the instance of the conservative elements for whom other forms of interference are anathema. We need not seek a principle in our politico-economic affairs, where expediency must always be the strongest motive, but nothing is more certain than that this anomaly must move towards resolution either in one direction or in the other, if the whole scheme of things is not to be overthrown. A possible immediate course, as far as international trade is concerned, is the development of larger units within which trade becomes progressively freer, while their external policies remain illiberal and perhaps grow still more restrictive.

What, then, is the economic world of the future? Perhaps the inherent contradictions and dangers of our present economic, political and social order will compel

the adoption of some entirely new system—economic planning or more frankly communism. But assuming the general shape of the present system to continue, in the world of the future either the self-righting economic forces must be allowed much freer play than at present, so that readjustment to changing circumstances may be achieved with far less waste and misery, or the congregation of individual wills must be still further controlled by the exercise of the public will, accelerating or smoothing the readjustment or preventing the circumstances themselves from changing so violently. It is a world, that is, in which either trade is freer or finance and production more subject to control.

Nevertheless, despite these efforts it is a world progressively more liable to sharp fluctuations of prices among primary commodities, involving the primary producers in serious difficulties on account of their apparently inescapable tendency to over-capitalisation while prices are high. The production of primary commodities, however, plays an ever smaller part in the distribution of economic effort and resources because the demand for them forms an ever smaller share of community expenditure. The vision is of a world which spends a growing proportion of its income on complicated manufactures and on services, and this involves other consequences than the precariousness of commodity prices. Production being highly capitalised, mechanised and rationalised, through the introduction of inventions and of industrial organisation designed to reduce costs principally by saving labour, it follows that redundant labour will appear first in the primary, then in the secondary industries. Since the absorption of that labour into the higher (and ever higher) stages of manu-

facture and into the provision of services, though theoretically possible, may be arduous and slow, the world of the future presents a scene either of organised or of unorganised unemployment. The organisation of unemployment—if for the sake of its own survival the world chooses that alternative—will take the form presumably both of increasing the number of unproductive elements of the population by dint of pensions at the one end of life (aided by the declining death rate) and protracted education at the other, and of limiting the hours of work of the productive elements. This organisation will itself increase the relative demand for services, which the leisured can enjoy more abundantly than the labouring. Economic progress, in fact, has enabled us to make things more cheaply and to work less; in the depths of a depression, as we are while this book is being written, it seems good to us to make things more dearly and to work harder, but doubtless the time will come when we shall be both able and content to be rich.

INDEX

Adjustment of trade balance, 62

Balance of payments, 68 *seq.*
Balance of payments, Germany, 74, 78, 80
Balance of trade, 57 *seq.*
Balance of trade, examples, 60 *seq.*
Bank assets, 110
Bank cash, 209, 212
Bank credit, 45, 111 *seq.*
Bank liabilities, 110
Bank rate, 115
Banking, 110, 203
Banking policy, 111 *seq.*
Barter terms of trade, 58
Bimetallism, 217
Business cycle, 113 *seq.*
  Harvard investigations, 135
  Prof. Wesley Mitchell's analysis, 136
  and saving, 146 *seq.*
  statistical analysis, 134
  theories relating to, 140 *seq.*

Capital, fixed, 42
  gradations of, 39
  and income tax, 252
  instrumental, 42
  international movements, 67
  price of, 48
  real, 42
  supply of, 42
Central Bank policy, 203, 206
Competition, 30 *seq.*
Consumer credit, 148
Cost of production, 195
  and income tax, 251
Currency issues, 207, 208
Currency regulation, 228 *seq.*

Dawes plan, 74, 79
Deflation, 172, 201, 220

Elasticity of demand, 27
Estate duties, 257 *seq.*
  and capital, 258 *seq.*
Exchanges, foreign, 62, 71
Expenditure, Government, 240

Factors of production, 53
Foreign exchanges, 62, 71

Foreign exchange control, 227
Foreign investments in Germany, 81 *seq.*
Frontiers, effects of, 55 *seq.*

Germany, foreign investments in, 81 *seq.*
German inflation, 73
Gold, 153 *seq.*
Gold, exchange standard, 213
  international pool, 213-216
  movements, 63
  reserves, 207, 209, 211
  reserves, Great Britain, 210
Government borrowing, 205
Government revenue and expenditure, 240

Hoarding, 108

Import duties, 247 *seq.*
Income, division of, 35
Income tax, 250 *seq.*
  capital and interest, 252
  and cost of production, 251
  and saving, 253
Index numbers, 90, 232
Indirect taxes, 245 *seq.*
Inflation, 201, 220
Instalment buying, 148
Interdependence of prices, 26
Interest and income tax, 252
International capital movements, 67
  investment, 81-88, 103
  — 1929 failure, 186, 187
  lending, 192
  trade, 101 *seq.*
  — statistics, 1928-30, 188
Investment, 98, 107 *seq.*

Keynes, J. M., price equations, 117-119

Labour, demand for, 28
Land, 51

Malthus, 262 *seq.*
Marginal cost of production, 24
Marginal utility, 25
Monetary policy, 220 *seq.*
  American, 115
  France, 174
  Great Britain, 64, 72
  German inflation, 73
Monetary system, 153 *seq.*
Money, 198 *seq.*
Monopoly, 30 *seq.*

Open market policy, 115
Output restriction, 178
Over-production, 124 *seq.*
  and prices, 192

Population, 265 *seq.*
Post Office, 238
Price fluctuations, neutralization of, 230
Price level, 90
Price stability, 221 *seq.*

INDEX

Prices, 19 *seq.*, 157 *seq.*
1921-31 collapse, 187
J. M. Keynes's equations, 117-119
and production, 122
post-War decline, 175 *seq.*
Production, post-War, 177
Profit, 49 *seq.*, 157 *seq.*
Public finance, object of, 236
Purchasing power parity, 65

Quantity theory, 93 *seq.*
J. M. Keynes's equations, 96

Rationalization, 168, 169
Rent, 50
Reparations, 74
Restriction of output, 178
Revenue and expenditure, Government, 240
Road maintenance, 239

Saving, 46, 106 *seq.*
and business cycle, 146 *seq.*
and income tax, 253
Silver, 217
Spending, 98 *seq.*

Tariffs, 59, 69
import duties, 247 *seq.*
Great Britain, 189
United States, 191
Taxation, 237 *seq.*
redistribution effects, 242
and wages, 241
Taxes, indirect, 245 *seq.*
Trade balance, adjustment of, 62.

Under-consumption, 130
Unemployment, 162, 164-170
Unemployment insurance, 193
United States, foreign investments, 180
1928-29 boom, 172, 173, 180, 182
1929 slump, 183, 184, 185

Velocity of circulation, 94

Wages, 160, 165
British rigidity, 193
and taxation, 241
War debts, 74