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Translated by
EDWARD FITZGERALD
from the revised German edition (*Einführung
in die Wirtschaftspolitik*) of the original Italian
entitled *Introduzione alla Politica Economica*

PRINTED IN GREAT BRITAIN BY
MORRISON AND GIBB LIMITED, LONDON AND EDINBURGH

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INTRODUCTION

THE author of this book has no need of any introduction to those, either at home or abroad, who occupy themselves with the investigation of economic and statistical questions. His work in the field of the distribution of income, the relation between present and future prices, the influence of operations in futures on the movement of prices, the relation between prices and the rate of discount over short and over long periods and throughout a whole trade cycle, his studies on economic prognosis, on the inductive results of the theory of international payments, his report on the relation between the cotton harvest and Egyptian cotton prices, and many other studies too numerous to mention here, rapidly earned for their author the reputation of a recognized economic authority and impelled a number of Italian Universities to invite him to join their academic bodies. The author's work on Germany's currency, first published in the *Annali di Economia*, and later issued in a revised version in an English translation entitled *The Economics of Inflation*, represented a turning-point in the literature of inflation.

In the present work the author systematically develops ideas he first broached in articles and shorter studies which appeared, for instance, in *Mittleuropa*, *Handelspolitik Italiens*, etc., even during the first world war. If I wanted to sum up briefly the particular significance of this book for the educated reader, then perhaps instead of using the phrase "the spread of knowledge" I should say that, above all, it bears the impress of personal worth. If we say of a book that it serves the spread of knowledge we are, in the last resort, saying no more than that it contains nothing new for the expert, whilst for the layman it merely sums up the scientific conclusions at which others have arrived as a result of their own systematic research work. But when I say that Bresciani's book bears the impress of personal worth I mean that it owes its origin to the intensely personal thought of the author himself and that it is not the outcome of other people's work. Although it embraces the results of a thorough scientific investigation, it is deliberately presented in a form which makes it available without difficulty to educated readers. It is not a very difficult matter to write a book for experts. But only very few people have the talent necessary to write a book which cannot be dismissed by the experts as making too many concessions to the layman, and which at the same time gives the educated reader a thorough grasp of economic ideas. In my opinion, with this book the author succeeds in doing just

that almost without effort. Many modern scientific economic treatises almost expect their readers to do violence to themselves before they can get more or less to the bottom of quite simple ideas, whereas Bresciani succeeds in making highly complicated problems easy by quite simple methods. Now that it has become usual to regard economic policy as an independent subject, the efforts of its representatives to elevate it to the status of a science side by side with theoretical classical economics have almost made the subject indigestible. Such efforts are quite senseless, for a science is not born because people endow chairs at universities, or because someone works out a theory to cover a certain complex of problems.

Bresciani does not bother about useless disputations over which both students and teachers waste their time. He does not attempt to make everyday problems fit into traditional theoretical structures ; nor does he attempt to handle burning questions of present-day economics with purely personal solutions. The author is not prepared to indulge in argument as to whether economic policy is a pure or an applied science, or whether its principles are political or economic, and he casts no anathema on anyone who holds views on the subject which differ from his own—why, he does not even insist that it is a science at all, and he displays none of that horror which seizes on traditional economists when attempts are made to present their theories in the form of normative concepts. He pushes all such ordinary text-book ballast to one side and plunges straight into the heart of his subject by taking concrete economic problems such as are dealt with at international conferences, in parliaments, at cabinet meetings, at the meetings of particular groups of interests and in the press. He then proceeds step by step from the discussion of general questions to the discussion of particular problems, always assuming that they are really topical, important and tangible ones. I should like to advise readers who are not expert economists to read the introductory chapter with particular care, and, should it prove necessary, to turn back to it from time to time during the reading of the book. The author engages in politics—and how could he do otherwise, for fundamentally he is discussing governmental intervention in the process of economic life. However, he does so with the objectivity of the scientist who accepts the situation created by the legislator as given fact, as the hypothesis from which to proceed. Without pedantry he then discusses what measures were adopted in the past, and what effects must follow this law, rule or regulation, this individual measure or, in the last resort, this whole economic system. When he praises he is merely expressing the fact that governmental measures adopted towards a certain end were, in fact, appropriate to that end. When he criticizes it means no more

than that the various ends simultaneously followed by the government are contradictory and mutually exclusive, or that the means adopted are not appropriate to the ends, or that they are more appropriate to some contradictory end. The author refrains from passing any judgment on the ends envisaged by the government—he examines only the possibility of their attainment in the given situation, and their results if attained.

For a long time I, too, was of the opinion that it was no business of the economist to say what ends a government should seek to attain, but that, as a patient servant, he should insist again and again that the measures adopted should be adequate and appropriate, no matter what the ends might be. To-day I am beginning to doubt that view, and perhaps one day I shall come to the conclusion that the economist should combine his role as critic of the means adopted with criticism of the end as well, and that the investigation of the individual ends belongs just as much to the sphere of economic science as the investigation of the means to attain them, to which investigation the economist now confines his operations. However, I must admit that the investigation of the appropriateness of means to ends, and of the logical harmony of the ends themselves is much more difficult than, and certainly of the same high moral value as, all considerations concerning the acceptability and worthiness of individual ends. The most important contributions to the laborious establishment of that branch of scientific investigation which examines means, available only in limited measure by comparison with the numerous and limitless aims, under the name of "economic science", are by no means the work of men who refrained from passing moral judgments. They are quite prepared to assist the politician to the best of their ability when with deceptive and prejudiced arguments he seeks to follow contradictory ends. Only he who is keenly conscious of the good or evil of an end can prove scientifically whether the means proposed to attain it are appropriate or not. Precisely because the observations of Bresciani concerning the logical harmony of ends and means are made with strict conscientiousness, and because his logical analysis of the various kinds of economic policy shows not the slightest traces of prejudice, and serves only the cause of truth, the present work is a good deed in the fullest sense of Count Camillo Cavour's words: "Economics is the science of patriotism."

LUIGI EINAUDI.

CHAPTER I

STATE INTERVENTION AND ECONOMIC SCIENCE

I

WHOEVER is acquainted with the work of the leading economists of our day will have realized that political economy has developed more and more into a science which is content to examine the means with which certain ends are obtained without bothering its head further about whether such ends are desirable or not, simply accepting them as facts. The attitude of economists towards State intervention in economic affairs is much the same. Unlike the philosopher, the economist does not construct an ideal State and then ask himself whether this abstract State, the product of his brain, shall exercise economic functions or not. The economist does not pass judgment on the intentions and objects of the State when it intervenes in economic affairs; he merely observes what the State actually does in this sphere. For him State intervention is just another fact; all in all it represents a branch of economic science whose importance has increased rapidly in recent years, namely the theory of economic policy.

However, the economist does not content himself with describing the economic measures taken by individual States and arranging them systematically according to a certain criterion. As useful as it is, this work of ordering and arranging cannot be an end in itself. However neatly the bricks are piled up on one side of the building site, the timber on the other and the necessary cement in the foreground, the house is still far from being built. Where economic policy is concerned scientific work must mean an analysis of the results of State intervention.¹

Generally speaking, we can say that apart from the direct consequences which are more easily observed and foreseen by public opinion as a whole, there are, thanks to the reciprocal effect of social factors, also other, indirect and more remote, consequences. It is thus the particular task of economic science to examine this second category of consequences, which are less visible and far more complicated in their manifold reactions and

¹ The State is the prime maker of economic policy, but our subsequent observations apply equally when the intervention is not the work of the State but of other bodies, for instance private associations such as a trade union whose intervention seeks to alter wage rates.

ramifications, and which, owing to the many and varied possible combinations, are less easily foreseen.

An analytical examination of these consequences will show whether the measures adopted are really calculated to attain the objects of State intervention. It may easily transpire that they are nothing of the sort. On the other hand it is possible that whilst they are, in fact, calculated to attain the desired object, it is only at the price of certain other consequences which are disadvantageous. Naturally, it is not enough to record or foresee certain disadvantageous consequences in order to show the unsuitable character of a particular measure. Generally speaking, any measure will have its advantages and disadvantages, and we shall always have to discover whether the one or the other is dominant—assuming that such an examination is at all possible.¹ Sometimes the object of a measure is temporarily attained, but then a little later its indirect effects cancel out the benefits and perhaps even worsen the very evil the measure was adopted to obviate (for instance, it can easily happen that an official reduction in the price of a particular commodity aggravates its shortage because those who produce it prefer in the circumstances to produce less of it, with the result that sooner or later its price again rises). The situation can also arise in which scientific investigation demonstrates that the aims of economic measures are mutually irreconcilable; for instance, it is logically impossible to stabilize domestic market-prices and foreign-exchange rates simultaneously in any one country when the international demand for commodities changes (cf. Chapter XIII, 3).

The State is at liberty to choose whatever objectives seem desirable to it, but once a certain objective has been chosen it must then decide what are the best means to attain it. There are necessary connections between aims and means, and their examination raises economic questions of the utmost importance. It is often possible to attain the same aim by various means, and then the task of the economist is to show which means is (economically speaking) the best. In this connection I should like to draw attention to the penetrating investigations which have been made to establish the advantages and disadvantages of taxes and loans to meet special State expenditure.

The consequences of State intervention arise chiefly from the reactions it calls forth amongst the various individuals who directly

¹ The following principle enunciated by Galiani applies to politics: "The thing is to obtain the greatest possible good with the least possible evil. That is, an approximation. In politics nothing should be pushed to extremes. There is a point, a limit, at which the good is greater than the evil, but once you pass it the evil becomes greater than the good." "Dialogues sur le commerce des blés" contained in the collection *Scrittori classici italiani dell'economia politica*, Milan 1803. I do not think I am far wrong in saying that as dissertations on economic policy Galiani's *Dialogues* are amongst the best of their kind.

or indirectly feel its effects. All economic facts, such as the system of production, distribution and exchange are nothing but the result of certain uniform individual actions, which, to a certain extent, State intervention sets out to change. Sometimes individual business men react in exactly the way the authorities desire. In this case a new equilibrium will result in accordance with the changed circumstances created by State intervention (cf. Chapter V, 2) once the process of adaptation, which will take a longer or shorter period according to circumstances, is at an end. State intervention thus becomes a new "fact" which the individual must take into account in his actions. State intervention often sets a highly complicated "mechanism" into operation in order to restore the economic equilibrium disturbed, let us say, by a new tax. The economist observes the way in which the general movement is carried forward from cog to cog, and also the resistances it sets up. In many cases, however, an economic investigation shows—and the obvious facts confirm its conclusion—that State intervention has not led to a new equilibrium, but has either produced no result or created disorder instead of harmony. New intervention then becomes necessary, or the first measure is withdrawn, either expressly or covertly. The opposition of individual business men towards certain government measures naturally influences their results, just as the shape of wrought metal depends not only on the hammer but also on the anvil.

The ways in which individuals react to one and the same economic measure vary greatly according to circumstances of time and place. This is true in particular of government measures affecting "the rights of the individual". The consciousness of such rights, in so far as it is the result of a long historical process, takes on different forms from country to country. For instance, the resistance aroused by certain measures restricting old-established individual liberties was invariably much greater in the United States than, say, in Germany. Professor Rappard, for instance, believes that certain measures which would in all probability have increased agricultural production in Switzerland could never have been introduced "because they would have assumed an authoritarian, anti-democratic form which the people of Switzerland would never have tolerated."¹ However, the exigencies of war or the pressure of an acute political situation often cause peoples to surrender rights which they have previously most vigorously defended. Generally speaking, the modern State possesses a much more efficient organization with which to carry its directions into effect than existed in the past. Experience has also led to the development of new and much more effective means of combating

¹ Professor W. Rappard, *L'Individu et l'État*, La Baconnière, Basel, 1936, p. 488.

evasion, so that the possibilities of such evasion are being progressively restricted, though it will never be possible to abolish it altogether. For instance, in most countries government price-control and the rationing of consumer goods were much more effective in the second world war than in the first.

The reactions of individuals towards State intervention vary also according to the duration and intensity of the particular measure. For instance, it has been observed that in the case of currency inflation the depreciation of paper money is initially slight because it is hoarded by many people, particularly in the rural areas, whose confidence in the value of money has not yet been shaken and who still hope that their paper money will once again appreciate in value. But as more and more paper money is issued public opinion becomes disturbed. As no one can refuse to accept paper money as legal tender, the general public react in another way, and they get rid of it as quickly as possible by purchasing goods: in other words, the "velocity of circulation", and with it commodity prices, increases. During the next phase of inflation the general public no longer uses money as a measure of value, but resorts to other and less fluctuating standards such as certain commodities or foreign currency. During the second world war many countries sought to counteract such effects, and others which experience had shown to be likely, by a strict control of prices and by rationing private purchases.

It is quite possible to make a scientific investigation of these various effects, some of which I have mentioned because they are all mass phenomena. The science of statistics teaches us that if we examine any numerically large group of individuals we shall observe a certain uniformity in their actions. For instance, there are certain facts which to-day are quite well known and accepted, but which created a tremendous amount of interest when they were first revealed: the number of crimes and suicides fluctuates very little from year to year (the numerical differences are greater over a longer period). Even the various kinds of crime and the numerous ways in which suicides carry out their dismal intentions show a surprising constancy. At one time the number of marriages contracted depended in many countries on the price of bread, and in others on the state of foreign trade. Similarly recurring phenomena can also be observed in the economic activities of mankind. To take a quite ordinary example: although some people may not bother when the prices of certain commodities fluctuate, and will always buy the same quantities whether prices rise or fall as a result, say, of taxation, customs duties, and so on, it is an established fact that when a great number of individual cases are taken together a rise in the price of any commodity results, other things being equal, in a more or less noticeable fall in sales. This

constant regularity in the economic activities of mankind made it possible to found and develop a science which made these activities its subject : political economy or the science of economics. Now if human nature were different from what it, in fact, is, and certain urges did not affect human activities so clearly in a specific direction, for instance, if purchasers were indifferent to both shortage and abundance, and if human beings were a sluggish disinterested mass with neither will nor desires, then no economic "mechanism" could develop, and the State could put its decrees into operation without opposition or friction.

From what has already been said it follows that an examination of the effects of State intervention necessarily leads to an examination of its proper limits. There are certain spontaneous economic forces impossible to suppress and any attempt to do so would be unwise.

To discover the effects of State intervention we must proceed systematically. Individual observations and impressions are far from adequate in the widely ramified and complicated economic circumstances of our day. For instance, a man living in a district where, thanks to a policy of government subsidies for certain industries, undertakings spring up like mushrooms, creating a lively demand for labour power and raising wages, is likely to praise industrial protectionism (protective tariffs, subsidies, etc.) to the skies without having the least idea that in other districts of a primarily agricultural character the same policy produces unfavourable effects. To discover all the effects of any given tariff policy our investigation must embrace the whole country.

In view of the complexity of social facts, the interference set up by various factors and the reciprocal influence of manifold causes, it is often difficult to ascribe observable facts with any certainty to the examples of State intervention under examination, though here the analytical methods of economic science will help us to some extent. Certain theoretical formulas describing the relations between economic phenomena are available and they assist us to foresee the consequences of certain facts. However, the principle *ceteris paribus* must not be left out of account, though in reality other things are rarely equal, and this makes it extremely difficult to investigate concrete questions. What will be the consequences of the fact A? If it combines with the other facts B, C and D then the result will be X. But if it combines with the facts F, G and H then the result will be Y. For instance, currency depreciation favours landowners who till their own land because on the one hand they profit from the rising prices of agricultural commodities, whilst on the other their outstanding debts diminish—but landowners who have leased off their lands are at a disadvantage. If we are to make an exact estimate of the

effects of State intervention it is not enough to know the laws of economics, we must also have a thorough knowledge of the given historical environment in which such intervention takes place.¹

The discovery that one and the same measure can produce very different results according to the circumstances of time and place leads us to the conclusion that a measure which is suitable in one country or at a certain time may well be quite unsuitable in another country or at a different time. The Physiocrats, those French economists who laid the basis for economic science in the second half of the eighteenth century, were mistaken when they believed themselves in a position to proclaim universally valid economic "principles".² But the great eighteenth-century Italian economist, Galiani, showed far greater historical understanding when he declared that every economic measure was subject to its given environmental conditions. Montesquieu was guided by similar considerations in his great work *Esprit des lois*.

2

There are men of practical affairs who show complete indifference, if not contempt, towards economic theories. They do not seem to realize that every decision they make is based on a theory, namely, on the expectation that certain facts will result in certain other facts. When a business man reduces the price of his commodity in the hope of obtaining a larger sale he is assuming the existence of a definite relation between the price of a commodity and the demand for it on the part of consumers. Similar observations apply to any and every example of State intervention. For instance, in France at the time of the "Front Populaire" Government, a general increase in wages rates was ordered on the assumption that an increase in the purchasing power of the masses would provide an economic stimulus. In other countries, however, in Italy, for instance, wages were reduced by government decree at a time of economic depression because those responsible proceeded from an opposite economic theory. Now which of these two theories was "correct"? Economic science puts forward its theories and examines the varying combination of effects in an effort to answer this question. No one will pretend that economic science is infallible, and the differences of opinion which frequently arise between individual economists indicate that so far it has not

¹ For instance, an increase in ground rent has a very different social significance according to whether the land is owned by a few large landowners or is divided up amongst many small and medium holdings (cf. Chapter XIV, 4).

² Their principles are set out in the collection of Dupont de Nemours: *Physiocratie ou constitution naturelle du gouvernement le plus avantageux au genre humain*, Yverdon 1768, p. 87.

been possible to establish clear and irrefutable relationships between certain facts. However, a knowledge of the various theories which can reveal the many possibilities of highly complicated actions and reactions, and the reciprocal influence of the consequences, cannot be disadvantageous even to the practical man of affairs because he is better able to decide which of the various theoretical dissertations comes nearest in his own experience to reality, for, after all, he knows the peculiarities of his own special environment better than economists, who are much taken up with their own theories. The practical man of affairs is therefore often in a position to give the economist valuable hints.

On his own special field the practical man certainly has a far greater expert knowledge than the theoretician can ever hope to attain. On the other hand, the latter is usually in a better position to gain a more general view, thanks to his own special standpoint and to the wide and varied experience he has gained during the course of extensive studies in the various branches of economic activity.

One of the reasons why the trained economist and the practical man of affairs are often at variance is that in consequence of the nature of his studies and of his own mental attitude the former tends to see the ultimate consequences of a measure whilst they are still far distant, rather than the immediate but transient ones. Above all, he is interested in observing "tendencies", and they make themselves felt only gradually, whilst the man of action usually ignores them in the more urgent necessities of the moment.

Both standpoints have their justification. The investigation of consequences which make themselves felt only at a later stage makes it possible to determine whether a given measure merely counteracts the accompanying features of an abuse without disposing of its fundamental causes; and whether a temporary advantage is being obtained at the price of grave disadvantages in the future. On the other hand, in certain cases it is necessary to obtain a speedy remedy, and then there would be no real point in relying on the *vis medicatrix* of such economic forces as would only gradually re-establish the disturbed equilibrium. For instance, when a crisis results in unemployment in a particular branch of industry it is probable that, thanks to the reactions thereby produced in the economic organism, the unemployed will sooner or later find employment in other industries. However, until the process has reached its completion the working class must suffer grave moral and material disadvantages. There is often a contradiction between the immediate and the remote consequences of an economic measure, and it is then no easy matter to resolve it. For instance, unemployment relief is an emergency measure justified by the necessity of assisting those who have become unemployed through

no fault of their own; but, at the same time, there is a danger that the return to normalcy will be delayed if unemployment rates are too high.

Whoever has followed recent economic discussions will probably have realized that the view-point of the trained economist and that of the practical man of affairs have come much closer to each other, and there is reason to hope that this represents the beginning of fruitful co-operation between science and practice. The increasingly thorough investigation of economic fluctuations, the so-called "Trade Cycles," has caused economists to pay far more attention to the "transitional periods" and to those factors which upset that economic equilibrium towards which the forces of the market spontaneously tend. In particular, the careful investigations of facts observed during periods of economic depression, i.e., periods in which a part of the productive factors lies idle, have made it possible to relax the rigidity of certain axioms of "classic economics", because they were propounded on the hypothesis that the totality of the production factors was in operation, an hypothesis which practical men of affairs found themselves unable to share. For instance, if during a period of depression measures are adopted in the monetary and credit sphere to create new purchasing power and the demand for commodities is therefore increased, and still other factors operate, it is possible that unemployment will decrease in apparent contradiction to the well-known classic economic principle that "a demand for goods is not equivalent to a demand for labour-power". The classic theory of credit (essentially a "static" theory), which declares that all credit merely shifts the utilization of the production factors and causes the development of certain industries without increasing production as a whole, has been supplemented by a "dynamic" theory which proceeds from the assumption that part of the production factors lies idle and thus arrives at conclusions which practical men of affairs find more in accordance with their own experience.

3

I said previously that the logical formulae and methods of economic science will assist us in the investigation of the effects of State intervention. By economics I mean that science of economic facts which is still valid despite all past and present attacks on it; i.e., that fund of knowledge which, thanks to the Physiocrats and to the classic English economists, was developed into a systematic science, and to which the Italians—it is sufficient to mention Galiani—have made considerable contributions. This science was then carried still further by many highly gifted men such as Cournot, Walras, Menger, Jevons, Marshall, Edgeworth, Clark, and the

Italians Ferrara, Pareto and Pantaleoni. Despite the differences between the various schools, which are more apparent than real, fundamental agreement exists as to ideas and methods. It is therefore not difficult to trace a certain continuity in the development of economic ideas; in reality there is only one science of economics and its basis is firmly established. Naturally, this does not mean that it is fixed for good and all; thanks to the tireless and critical investigations of its servants, it gradually moves forward like all other sciences. To-day no trained economist would dare to repeat John Stuart Mill's unfortunate statement that the last word had already been spoken on the theory of value.

Many people are astonished at the equanimity with which economists receive the violent criticism directed against their science from all sides to-day. The reason for this is simple enough: the criticism contains very little that is new, and most of it is merely a rehash of objections repeatedly put forward in the past.

Such criticism was directed simultaneously against the system of economic individualism, or capitalism, and against the science of economics, which was regarded as the descriptive summary and vindication of this system. As early as 1819, that is to say just over forty years after the publication of Adam Smith's *Wealth of Nations*, Sismondi's *Nouveaux Principes d'Économie Politique* was published. The title is sufficient to indicate the tendency of the book. Sismondi subjected free competition to severe criticism on the ground that it aggravated class antagonisms. It is interesting now to recall the most important reasons which caused Sismondi to turn his back on the theory of economic liberalism propounded by Adam Smith, whose convinced upholder he had previously been. The severe economic crisis which broke out towards the end of the second decade of the nineteenth century shook Sismondi's confident belief that the free play of economic forces would guarantee the stability of the economic system. In addition, a journey to London, where, in Hyde Park, he witnessed the striking contrast of ostentatious opulence on the one hand and the misery of pitiful beggars and unemployed workers on the other, made a deep impression on him, and he questioned whether it were possible to reconcile economic individualism with social justice.

The writings of Count Claude Henri Saint-Simon belong to the same period. He vigorously criticized the basic idea which runs through the whole work of Adam Smith, namely, that the spontaneous organization of production amidst the free play of economic forces was the best way to satisfy the needs of society. Saint-Simon favoured the system that we moderns know by the name of "economic planning" and he called on the State to organize production in the interests of society as a whole. A few years later, in 1846, Proudhon announced the defeat of economic liberalism,

whilst Louis Blanc, as the forerunner of what is now known as "State Socialism", demanded State intervention for the carrying out of a big programme of social reforms. He exposed the evils of free competition and recommended that private incentive should be replaced by a desire to serve the community as a whole.

In the second half of the nineteenth century Germany was the country in which criticism of economic liberalism and of classic economics in general was loudest. It came from various quarters : there was the economic nationalism of List, the socialism of Marx, the "historical school" of economics, and the so-called "organic theory of the State" propounded by the jurists. "State Socialism" occupied a position midway between economic liberalism and socialism. Its leading representative was Adolf Wagner, a professor at Berlin University. In his *Handbuch der politischen Oekonomie*, published in 1892, he declared that economic liberalism was suffering an acute crisis both as a theory and as a practical system of economics. A few years later another reputable German economist, Gustav von Schmoller,¹ declared : "the bankruptcy of classic political economy and of the socialist schools took place in the years from 1870 to 1890."

It is surely rather strange to find that just when these economists were filling in the death certificate of traditional economics it began unexpectedly to bloom again thanks to Jevons, the Austrian School, Walras and the school of economic equilibrium. Pareto's famous *Cours* was published in 1896.

4

The criticism directed against economic science to-day misses the point altogether, because it all proceeds from erroneous ideas concerning the nature of that science.

The most serious reproach is that the science of economics is *liberal* and *individualistic* : traditional economics, say its opponents, will be swept away by the great anti-liberalist movement which has arisen everywhere in recent times. Now it is certainly true that Quesnay and Adam Smith established economics, "free born in times of storm and stress", on the philosophic basis of "natural law" and individualism ; and the influence of Locke, a vigorous upholder of the "inalienable" fundamental rights of the individual, was particularly lasting. The philosophers were thinking of civil, political and religious liberty, of course, but the economists included economic liberty amongst the natural rights of man. In the system of the Physiocrats economic liberty, on which the "natural order" rested, took on the character of an eternal and unalterable "natural

¹ "Alte und neue Theorien" in *Schmollers Jahrbuch*, 1894.

law". "Nature" herself demanded economic liberty, and according to the ideas of the eighteenth century "Nature" was infallible: her creations were not only perfect but they had only one aim, namely, the well-being of mankind. From this it was easy to conclude that the duty of the State was to ensure the free enjoyment of that natural right of man: economic liberty.¹ But economists have long since freed their science from the philosophic trappings of those early authors. The science of economics has no use for metaphysical conceptions such as "nature" and "natural right" or for teleological ideas. To-day economists are not interested in discovering whether economic liberty is a natural right or not. Their attitude towards such questions is one of indifference. The two problems: (a) what are the effects on prices, the distribution of the production factors, the quantities of goods produced, the costs of production, and so on in a system based on economic liberty, and (b) is it desirable to institute such a system or not? are quite distinct. Question "a" is a "scientific" problem and, therefore, properly one for the attention of economists, but question "b" is "political", and therefore no business of theirs.² In other words, economic science is no longer a collection of rules and regulations for the guidance of public life, but merely a statement of principles which result from certain hypotheses and describe the relation between economic facts.

A practical economic problem is usually very complicated; apart from the purely economic factors involved there are often factors of a political, military, social or moral nature. From this it follows that the results of economic science cannot be translated *sic et simpliciter* into politico-economic rules. For instance, economic science tells us that in certain circumstances free trade between nations is a source of economic well-being. Nevertheless many countries have considered it desirable to protect their own iron industry against foreign competition even at the cost of heavy sacrifices, in order that they should be in a position to produce the things they need for their own defence.

This sharp distinction between pure economic science and practical economic problems is nothing new; it has existed for some considerable time. As early as the year 1836 the prominent economist Senior wrote: "The principles supplied by political economy are indeed necessary elements in their solution, but they

¹ For the philosophic basis of political economy cf. Hasbach's well-known paper: "Die philosophischen Grundlagen der von F. Quesnay and A. Smith begründeten Nationalökonomie" in *Schmollers Jahrbuch*, 1890.

² However, should the question be put as follows: assuming that we desire to secure the greatest possible product for the community as a whole, what kind of economic policy is best suited to attain it? Now that would be a question for economic science to investigate.

are not the only, or even the most important elements. . . . But his (the economist's) conclusions, whatever be their generality and truth, do not authorize him in adding a single syllable of advice. That privilege belongs to the writer or the statesman, who has considered all the causes which may promote or impede the general welfare of those whom he addresses, not to the theoretician, who has considered only one, though among the most important, of those causes. The business of a political economist is neither to recommend nor to dissuade, but to state general principles, which it is fatal to neglect, but neither advisable, nor perhaps practicable, to use as the sole, or even the principal, guides in the actual conduct of affairs."¹ Incidentally, the founder of modern economics, Adam Smith, knew this very well, and he wrote: "It is better for a country to know itself well defended than to increase its prosperity". The great Scot regarded the Navigation Act as one of the wisest measures of British policy despite the fact that it "was not favourable to the development of international trade and the increase of wealth which usually goes with it."

The authoritarian governments of Germany and Italy condemned the teachings of orthodox economics, and in Germany its place was to be taken by a National-Socialist economic order—a German Cabinet Minister (Rust) issued terms of reference to the German universities specially designed for this purpose—whilst in Italy the much-talked-of "corporative economic system" was set up. As a result, confusion and perplexity played havoc with the spirit of the youth; the development of economic thought was greatly hampered; and at the same time totally erroneous views concerning the significance of economic phenomena and the measures of the State became current.

The science of economics was condemned as "the doctrine of individual advantage," and nothing but "a science of egoistic and materialistic individualism." Orthodox economics was to be replaced by a "new economic teaching" based on the general interests.

This attack, too, is baseless. Certainly, economic science is "individualistic" in the sense that it begins with the individual before proceeding to formulate its "laws". The task of all science is to describe what actually is rather than what ought to be, and so there is no other practicable method. What is the individuals in society, and not "society" itself, who feel certain needs, who are impelled to act as they do by certain driving forces, and who, in the upshot, do the work, produce the commodities and consume them.

"Society", "the State", are nothing but abstractions; in

¹ Nassau W. Senior: *An Outline of the Science of Political Economy*, pp. 2-3. Allen & Unwin, London, 1936.

reality there are only individuals with their needs, their strivings, their passions and their ideals. As economic science takes this realistic view as its point of departure, many people assume that the economist is therefore not interested in the general welfare. They are very wrong. All they need do is to consult the works of the Physiocrats, the first founders of liberal economics, and they will discover that these Physiocrats were intent only on the general welfare and on discovering those conditions best calculated to guarantee the greatest possible volume of production for the nation. When they declared that the prime duty of the State was to guarantee the security of private property they were by no means defending sectional interests; on the contrary, they believed that the general interest was entitled to demand the subordination of any such sectional interests. But at the same time they believed that the security of private property was "the essential basis of the economic order of society." They jealously upheld the rights of private property because they were convinced that any violation of these rights, even apparently minor infringements, would have more and more serious consequences and finally upset the social order altogether.¹

In the middle of the eighteenth century the living conditions of the French lower classes were very precarious. "In the face of such misery," exclaimed Daire, "we must look to the economists to find the worthiest representatives of the general interests."² Because they vigorously condemned the selfishness of the upper classes, the "Quesnay School" was, in the opinion of contemporaries, the only one which seriously sought to better the lot of the masses.³ In the *Éloge de Gournay*—to which the famous phrase "Laisser aller, laisser passer" is ascribed—Turgot writes that he "loves and irradiates the general interest." For the greater part of his life Turgot himself strove to provide the people with "bread and work", not sparing his own fortune in his efforts. The following impressive words introducing his instructions to his subordinates at the time of his Ministry are his: "It is the duty and the task of all men to alleviate the privations of the suffering." The historians of economic teachings have stressed Turgot's hatred of "all

¹ The reserve with which liberal economists regard State measures of "distributive justice" is based on the fear that any violation of the principle of security—which is essential if the individual is to set up a plan of work—might seriously hamper the development of wealth. Cf. Bentham: *A Fragment on Government*, Clarendon Press, Oxford, 1891.

² Daire, in his preface to the works of Turgot, vol. I., p. 71.

³ Daire; *Ibid.*, p. 72. Wicksell rightly points out that in part it is due to the economists that the unfavourable attitude once adopted by upper classes towards the working class has gradually given way to feelings of sympathy and to the conviction that the improvement of their conditions is synonymous with the furtherance of the general interests of society.

privilege and monopoly, and of all attempts to distribute riches arbitrarily.” :

The Physiocrats declared that monopoly and privilege undermined the basis of society and the rights of property : it was, they insisted, the duty of the State to defend society against the encroachments of monopoly. “ The natural order,” wrote Quesnay, “ is endangered by sectional interests which, under the cloak of general welfare, insistently harp on their privileges.”

5

We must distinguish between economic “ science”, which merely describes the relations between economic phenomena and represents a collection of principles derived from certain premises, and liberal “ doctrine”, which is a collection of ideas concerning the motive force of human actions, the relations of the State and the individual, the sphere of influence of the State and the economic and political construction of society. Anti-liberal propaganda has presented a caricature of liberal doctrine in order more easily to hold it up to mockery and contempt. In consequence, the public to-day often has only the haziest idea of what economic liberalism really means (I do not propose to deal with the political aspect of liberal doctrine). It is certainly true that there was once a school of economists, whose best-known representatives were Bastiat in France, McCulloch in England and Carey in America, who developed the theories of Adam Smith to far-fetched and often senseless conclusions. They were known as the “ Optimists”, and they sought to turn economic science into an ultra-liberalist system. Misled by their unquestioning belief in the virtue of untrammelled economic liberty, they declared that “ every lack of harmony in the world is ultimately due to a lack of liberty.”

The supporters of the so-called “ Manchester School ” distorted the ideas of the classic economists, who, although they were liberal, always recognized the authority of the State and the importance of the role it was called upon to play in the economic life of society. Adam Smith himself wrote : “ All social groups depend on the State, to which they owe their security and their protection. Even the most partisan spirits recognize that these groups are subordinate to the State and have solely and simply to serve its well-being and its maintenance.”¹

J. B. Say, who did much to spread the liberal ideas of Adam Smith on the Continent, declares in his famous *Treatise on Political Economy* (Paris 1803), that State intervention is necessary “ when the State alone is in a position to take appropriate precautions, in

¹ Adam Smith : *The Theory of Moral Sentiments*, Rivington, Johnston, London, 1774.

that it foresees things from which it alone can draw advantage because they far exceed the capacity of the individual . . . or when the security of the State requires that certain indispensable commodities should be secured," and, finally, "when it is a question of encouraging a branch of industry which works in the first place at a loss, but which will in the course of time certainly show a profit." Say was well aware that there were certain circumstances "which could invalidate the normally true principle that each man is best in a position to judge how he should utilize his labour power and his capital." Say did not fail to realize that the interests of the individual might come into conflict with the general interests, defended and watched over by the State. "The most favourable investment for the capitalist," he wrote, "is that which promises him the greatest profit, but it can well be that this particular capital investment is not the most favourable in the interests of society."¹ And after discussing the question of State intervention Malthus comes to the following conclusion: ² "It is clear that it is not always and under all circumstances possible for a government to let things take their natural course. To recommend such a thing in all circumstances would be to bring general principles into disrepute by making it appear thereby that they were inapplicable in practice." And Malthus adds that it is sufficient to cite the example of taxes to show that it is impossible for a government to refrain from all forms of economic intervention.

Older liberal writers insist on the difference between "liberty" and "licence". In his polemic against Filmer, Locke declares that liberty can never mean the right of the individual to do as he pleases without regard to the law. Liberty means that the individual is subject only to a legislative power set up by general consensus. It means, further, that the individual lives under certain constant conditions equally applicable to all members of society, and that he is not subject to the arbitrary, uncertain and extraneous will of another individual.³ The aim and object of law is not to limit or abolish liberty, but rather to maintain and extend it on the principle that *where there is no law there can be no liberty*.

The State determines what liberty is. Economic liberty finds its limits within the framework of the law. In the view of liberal economists the main task of the State is to create the legal framework which provides the most favourable conditions for individual citizens to pursue their activities. The market, however, must be

¹ *Op. cit.*, pp. 250, 256 and 239.

² *Principles of Political Economy*, 1st edition, 1821.

³ J. Locke: *Two Treatises of Government*, pp. 178 and 192, London, 6th edition, 1764. National-Socialist ideas on German constitutional law took a diametrically opposite course. They disinterred ancient ideas by declaring that the will of the "Führer" was the source of all law, and they raised him to supreme judgeship over the people.

free. That is the cardinal point. Economic liberalism insists on the retention of a free market because it believes that this is the most effective way of regulating production in the general interests (cf. Chapter II, 7). Economic planning on the other hand, aims at abolishing the market. This difference in attitude to the question of the market is the decisive line of demarcation between the two trends of economic policy.¹

Opponents of the liberal doctrine have objected that a social community could not develop at all if each individual were to act as he pleased in his own personal interests. The liberal doctrine answers by declaring that individualism does lead to the spontaneous development of a social form,² so that a society in which economic liberty really prevailed would be an authentic socializing of individuals. In point of fact, the *division of labour* creates a form of social organization which rests on a solid and reliable basis. The division of labour demands the development of close co-operation between individuals, and from this relations of mutual dependence and solidarity inevitably develop. Individuals soon begin to notice that to consider the interests of others is often the best way to further their own. The widely ramified system of co-operation spontaneously developed by economic forces ensures that millions of people are regularly fed, clothed, transported from place to place, and so on, without any supreme economic authority first having to draw up an appropriate plan.

The great force in which the liberal school reposes its whole confidence is "free private enterprise", which, in the last resort, is nothing but the result of "the natural efforts of each individual to improve his own position" (Adam Smith). Liberal economists take their stand on the solid basis of reality, i.e., uninfluenced by moral considerations they take human beings for what they are—by regarding men, as Galiani has said, "as still unclesanded human beings completely taken up with their normal passions"—and they regard the selfishness of the individual as a tremendous social cohesive force—as long as its violence is held in check by the law—which economic science cannot ignore, and which, on the contrary, it must harness in the interests of general well-being.

Certainly, the older economists greatly exaggerated when, under the influence of eighteenth-century philosophical speculations, they believed in a preordained harmony between the special interests of

¹ Cf. also the observations of Einaudi in his article "Intorno al contenuto dei concetti di liberismo, comunismo, interventismo e simili" in *Argomenti*, No. 9, 1941.

² It is perhaps superfluous to point out that the "spontaneous" actions of individuals are in part the result of their education, and that in this respect the State is in a position to exercise some influence. In some countries people stand "of their own free will" in orderly queues at railway stations, bus stops, in shops, etc., whilst in others "spontaneous action" creates noisy and disorderly mobs.

the individual and the general interests of society, and regarded the individual as being "guided by an unseen hand" (according to the famous expression of Adam Smith) to the performance of such actions as would produce a social advantage as well as, and apart from, his own individual profit. But at the same time these economists also sharply criticized monopoly, privilege and other methods of robbery, thus indirectly admitting the possibility of a conflict between the interests of a few and the interests of society as a whole.¹ What is the explanation of this apparent contradiction? Bastiat himself resolves it when he declares that harmony exists only between *just* interests—the interest of a monopolist is not a just interest. Now, how can a liberal State best prevent unjust interests from getting the upper hand?

Liberal economic doctrine replies that provided the State guarantees free competition this will be the corrective force which brings particular interests into harmony with general interests. "Free competition" is not "a state of nature". Man, whether he is an employer, a farmer, a worker or a member of a free profession, has a natural tendency towards monopoly, for instance, he naturally strives to exclude others from the trade or occupation to which he has devoted himself. Free competition is a creation of the State and it belongs to the legal framework set up by the State. It is the State which determines what shall be regarded as free competition and what shall be prohibited as unfair competition. A system of free competition established by law is a sort of automatic control of sectional interests: it prevents individual enterprise from going too far and violating the general interests of society. At the same time this system clears the way for the spirit of free enterprise to operate to the benefit of society as a whole. Competition, in fact, does not allow anyone to enjoy a personal advantage for long: exceptional entrepreneur profits gradually disappear—after they

¹ "Robbery plays a great role in the life of society, and political economy cannot ignore it. It makes itself felt in monopolism and it is the latent cause of certain restrictive practices; it shifts the natural paths of commodity exchange and it causes capital to take artificial channels of investment, which naturally have a deleterious influence on production and on the population as a whole. It compels men to produce something under difficult conditions in the north which could be produced under more favourable conditions in the south. It creates precarious branches of industry and equally precarious existences. It sets the burden of labour in place of the free forces of nature. It is responsible for the founding of factories which cannot survive competition and whose owners, therefore, demand that they shall be protected by force against their competitors. It causes international jealousy, flatters national ambition and invents ingenious theories which present its own victims as its aides and helpers. It causes industrial crises and bankruptcies . . . and when science finally exposes all its crimes it stirs up even its victims against science by shouting 'utopias'." It goes still further: "not only does it deny a science which is an obstacle in its path, but it even denies the idea that science is possible." Bastiat: *Harmonies économiques*, p. 461. Paris, 1830.

have fulfilled their function of acting as a spur to private initiative—thanks to the competition which sets in from other entrepreneurs. The increase of wealth as the result of technical inventions spreads throughout the whole of society.

Liberal doctrine does not contend that if economic forces were just left to themselves they would, *sic et simpliciter*, operate exclusively to the benefit of society. They will do so only within a system of laws and regulations encouraging free competition and suppressing monopolies and privileges. In short, according to liberal doctrine, State institutions should be so organized as to encourage free enterprise urged on by the profit motive to operate in such a fashion as to further the general interests of society. No economic order is consonant with unrestricted individual liberty, but a very wide degree of individual liberty should certainly exist.

By studying the spontaneous forces of integration and equilibrium, which up to then had not been adequately recognized, liberal economists contributed a very great deal to our knowledge of the internal structure of society. Critics of liberalism, who concentrate their attention primarily on the negative aspects of this political system, and particularly on the destruction of the old economic order, tend to overlook its positive aspect: the creation of a new economic order, which liberal doctrine strives to bring into being with the very minimum of restraint.

In this connection I should like to point out that, contrary to what is generally believed, it was the economists, and with them the statisticians, who, far from concentrating their attention exclusively on the individual, first gave significance to the idea of the social group. The conception of social or national wealth was developed by them right at the beginning of their investigations. Social wealth, as Lauderdale has shown, is by no means merely synonymous with the sum of individual fortunes. It is rather, to use a happy phrase coined by Menger, an "organic whole".

6

Political economy has been accused of being "cosmopolitan", of being more concerned with humanity as a whole than with the "nation". It is alleged that it was the great service of List, the founder of "economic nationalism", that he first specifically pointed to the importance of the nation as an economic unit, as a link between the individual and humanity as a whole. This criticism is due to confusion between economic science, liberal economic doctrine and economic policy. The logical pattern of economic science as such formulates certain fundamental "laws" (in the scientific sense), and it is thus not its task to discuss what measures may be best suited to further the welfare of any particular

nation, any more than it is the task of mathematics as a science to study the best way to solve the problem, say, of building a bridge over the Nile.

It is certainly true that liberal doctrine has unreservedly accepted the Christian ideal of human solidarity and co-operation, but I hardly think that this offers ground for criticism. Thus economic liberalism regards all peoples as collaborators in the work of general economic progress, and at the same time it recognizes the right of all, whether big or little, to complete independence and to freedom to develop their own individuality. It believes that this ideal is consonant with economic theory on international trade, according to which there is an economic solidarity of the peoples.

This does not mean that liberal economists neglect the interests of their own country ; for instance, when they opposed mercantilism they did so not because they thought that the interests of mankind as a whole took unconditional precedence over the interests of their own country, but because they were absolutely convinced that the well-being of their own country would be furthered by international free trade and by the development of the economic resources of other countries. In his essay on "Trading Jealousies" Hume vigorously opposed the prevailing opinion and insisted that far from hampering the trade of other countries the prosperity of any one country actually furthered it : "As an Englishman I pray for the well-being of Germany, Spain, Italy and France."¹

"Nations have all the same interest in buying much from abroad," declared the Physiocrats, "because that is the only way to sell much." I should like to point out here that in the works of Adam Smith there are whole pages of elevated sentiments concerning "love of country". Smith thoroughly approved of all noble efforts to bring about general happiness, but, as a realistic observer, he immediately added : "It is God's task to bring about universal happiness, and not man's." And he also declared : "That man is not a good citizen who does not strive with all his forces to increase the well-being of his fellow citizens."²

7

Having arrived at this point in my observations I have a feeling that some readers are repeating an objection in their minds which has often been made to me in private discussion and in talks with students. It runs more or less like this : in your theorizing you are proceeding on the assumption of a free market, that is to say, a

¹ David Hume : *Essays Moral, Political and Literary*, vol. I, p. 378. Green & Gross, London, 1785.

² Adam Smith : *The Theory of Moral Sentiments*, Rivington, Johnston, London, 1774.

market in which free competition is unrestricted. According to your definition this is a state of affairs in which the supply and demand of any product or any service, whether on the part of an individual or a firm, are never so great that they materially influence the price of a commodity or a service. A century, or half a century, ago this assumption might, generally speaking, have been in accordance with existing circumstances, but since then economic conditions have greatly changed and they are now very different from what they were when the science of economics was first founded. Owing to increasing industrial concentration big monopolies, trusts and cartels have arisen to fix prices and production levels, so that to-day we can no longer speak of free competition. In addition, more and more frequent and more and more fundamental State intervention nullifies the effectiveness of free economic forces. In many cases it is not the market, but a government department, which fixes commodity prices and wages and takes the place of the blind and automatically operating power of supply and demand in order to attain certain social, political and moral objectives. Economic science should serve only to interpret existing reality; but how can it do that if it proceeds from unrealistic premises? The conclusion drawn by our critics from all this is that economic science must now adapt itself to the new social and economic environment, because every historical epoch has its own economic laws.

My answer to this objection is that the science of economics is not a theory of economic evolution. It investigates those fundamental relations between men and things which are not subject to historical change. The logical categories of economic science are, so to speak, outside time. It investigates definite general facts which derive from certain permanent essential characteristics of the nature of man and the "nature of things". It begins by making it perfectly clear that the origin of economic facts is to be found in the contradiction which exists between the needs of mankind, which in themselves are unlimited, and the inadequate volume of things supplied, so to speak, free of charge by nature, calculated to satisfy them. This contradiction has existed in every social and political system throughout history, and it will still exist in any system human imagination might devise. It was only in that fabulous golden age lauded by poets and philosophers, when the words ". . . omnibus omnia large tellus ipsa parit, natura que daedala rerum" still applied, that there was no such thing as economic facts.

For instance, the principles concerning the way men estimate the value of things, the costs of production, and the economic process concerning the accumulation and investment of capital, savings, etc., have a general validity. Is it not thoroughly reason-

able to suppose that a man who builds up a business, either on his own account or as a director of a public concern, will do everything he possibly can to keep his costs of production as low as possible? Now one of the most important chapters of economic science deals precisely with the conditions which must be satisfied if the costs of production are to be reduced to a minimum. Here, too, we are faced with a principle of general validity which is quite independent of the political and social organization of the country in question, whether liberal or socialist. This short example will serve us here, though the reader can find numerous other examples in any economic treatise if he wishes.

The economist is well aware that the effectiveness of spontaneously operating economic forces can be limited or destroyed altogether by State intervention. But that does not mean that such forces have ceased to exist. An artificial lock will prevent water finding its natural level, but that does not prevent the physicist from continuing to explain the law by which water does, in fact, find its own level. The fact that the resistance of the air to the fall of a feather slows down the speed of the fall does not make it necessary for physicists to alter the laws of gravitation. In the same way economic laws are still effective even when they are apparently violated. This is a fact which must be borne in mind in connection with all examples of State intervention. If the twin forces "supply" and "demand" did not tend to raise price-levels whenever a shortage of commodities arose, there would be no point in the intervention of the State to limit demand or increase supply. Thus, if there is no doubt that economic forces are at work—and the fact is too obvious to permit of doubt—then the existence of a science which sets itself the task of investigating how these forces operate when they are permitted to do so without restraint is thoroughly justified, even though we know quite well that in reality they operate together with other forces. The same method is used in all other natural sciences, and the effects of certain forces are isolated in theory although in reality they generally operate together with other forces.

In view of the tremendous importance which the automatically operating economic forces still retain even in a State-directed economy our own science is justified in its use of this method. Even the former Fascist Labour Charter (*Carta del Lavoro*) did not overlook the enormous economic strength of private enterprise and it pointed out that it was, in fact, "an effective and useful instrument in the service of the nation."

This description of economic facts would certainly not be complete if it did not also include an investigation of the consequences of the various forms of State intervention, or the intervention of bodies created by the State. On the other hand, as Wicksteed says,

we cannot hope to understand the direct or indirect results of governmental measures unless we have first carefully studied the naturally developed combination of individual efforts on which such measures exercise their influence and with which they combine, and also the automatically functioning economic relations which appear within each and every system of State intervention.

But why do economists insist on investigating just the theoretical effects of "free competition" when this system belongs to the past? Our particular answer to this objection is that—as we shall demonstrate in greater detail in Chapter IX—the system of free competition has not, in fact, been abolished for good and all. On the contrary; despite the development of monopolies, whose influence has on the whole been greatly exaggerated, the economic system up to the outbreak of the second world war was essentially based on free competition. Further, I should like to point out that economists have never neglected the rise of monopolies, and, in fact, the monopoly theory was first developed in its essentials as early as 1838 by the famous economist Cournot, whilst in recent years there has been a veritable flood of treatises on the phenomena of monopoly: the "pure" monopoly, the "partial" monopoly, the "duopoly" and the "oligopoly", and the various forms of "monopolist competition".

It is, of course, true that economists devote a great deal of their space to the description of an economic system which is based on the assumption of free competition. Apart from its economic interest this is not merely a logical exercise without any practical application, because even if free competition did not exist in reality—and certainly the ideal conditions the economist assumes do not *de facto* exist¹—it would still be necessary to investigate theoretically the whole "mechanism" of the perfect market, in order to have a standard of comparison in our study of the actual phenomena. Let me demonstrate this by an example. The economic theory of monopoly shows that the monopolist increases prices and reduces production to the disadvantage of the community. But what price and what volume of production are to be taken as a standard of comparison to determine the meaning of "increase" and "reduction"? The answer is: that price and that volume of production which would automatically have come about in the perfect market, that is to say, in a market based on free competition. If we want to judge the effects of State interven-

¹ In the same way, the actual phenomena which form the basis of physics or chemistry are not present in the ideal conditions assumed by the investigator, such as, for instance, a completely liquid, a completely solid or a completely pure substance. Whoever is unable to see the necessity for abstractions in order to demonstrate theoretical examples must inevitably regard scientific theories as figments of the imagination.

tion on commodity prices and production factors, on capital investment and on the distribution of the economic resources of a country within the individual branches of production, etc., then we must first know how the "mechanism" of the free market works.

It is very interesting to observe how many of the measures taken in a "planned economy" have no other aim than to bring about a situation which would have developed automatically under a system of free competition. When a government introduces measures of price-control to adjust selling prices to production costs—the latter, of course, including an appropriate return for the entrepreneur, the "managerial reward"—fundamentally their aim is nothing but to create one of the conditions of economic equilibrium on the free market. (Cf. Chapter II, 5.)

From all this we may conclude that the theoretical example, based on the assumption of a market in which unrestricted free competition prevails, is a scientific instrument suitable for the investigation of other economic systems apart from the liberal system. (Cf. Chapter VII.)

And, finally, it must be observed that from a moral standpoint free competition in the sense in which the economists understand it, i.e., without the abuses and symptoms of degeneration which sometimes accompany it in reality, still represents the ideal state of economic relations.¹ In this connection the excellent work of Einaudi, one of our most reputable economists, should be consulted. Einaudi has taken up the noble traditions of economic science once again and a great deal of his fruitful activity has been directed to the defence of the general interests against all forms of privilege and against the favouring of certain group interests by the State.

We can justly contend that the importance of economic science has been increased rather than diminished by the intervention of the State in economic affairs. In a world in which the spontaneous economic forces could operate without restriction—incidentally, such a world never existed in reality, not even in the so-called liberalistic era—the knowledge of "economic laws" would be primarily of scientific interest. But if present-day governments wish to intervene in the economic process they should first study all its details so that they may have some idea of the consequences of their intervention. For instance, when during the second world war the German Price-Control Commissar wished to take measures to adjust sales prices to production costs he first had to study these costs carefully, and in this respect the findings of economic science proved of great assistance to him. And when he then observed that the production costs of one and the same article

¹ Benedetto Croce and Luigi Einaudi: "Ancora su le premesse del ragionamento economico" (concerning the premises of economic judgment) in *Rivista di Storia Economica*, 1941, No. 1.

varied from producer to producer whilst the sales price was the same he found himself face to face with the problem of "differential profit", ie., with the fact that there is a difference between prices and costs as from undertaking to undertaking, a circumstance which up to then had been merely a subject for academic discussion amongst theoreticians. This is a very illuminating example, to which we shall return later (cf. Chapter VI, 6), of a bureaucratic institution copied from the automatically operating mechanism of the free market.

CHAPTER II

THE CONCEPT OF "ECONOMIC EQUILIBRIUM"

I

THE investigation of economic facts demanded appropriate methods for the purpose, and these methods were gradually worked out by economists during the course of a century and a half. Thanks to the constant improvement of its methods of investigation economic science is now the most progressive and the most exact of all the social sciences. It has two aspects : on the one hand, it is a collection of general " laws " which describe the relations between economic facts, and on the other it is a collection of the methods best adapted to the study of these facts. By developing these methods economists achieved something of great importance and lasting value, because no matter how much the economic and social organization of a people may change, and no matter how different may be the new facts to which the investigator must direct his attention, the instrument of logical analysis always remains the same.

The use of mathematical methods is also becoming more and more frequent in economics. Unfortunately this has helped to alienate public opinion from economics and increase its mistrust of this science. If economic facts are the result of human actions, and owe their existence to the free choice of men, then how is it possible to reduce this choice to a mathematical calculation ? The simple answer to this objection is that economic phenomena have an essentially quantitative aspect, for instance, commodity prices and production costs, production levels, the volume of imports and exports, the total volume of production in a particular country and the totals of its various parts, the number of undertakings operating, etc.

Economic science investigates the way in which certain economic magnitudes vary as a function of other varying magnitudes, for instance, how the costs of production of a particular commodity vary with the increase in the volume of production. Now as mathematics deal precisely with the relations between variable magnitudes it is not surprising that mathematical methods have been found useful in economics. Above all, methods worked out by mathematical statistics have made the inductive investigation of economic phenomena much more accurate by measuring inequalities, means,

the intensity of the mutual reaction of economic categories, or the intensity of the reaction of certain phenomena in their relation to other variable phenomena. For instance, in this way we can now approach a solution of the problem : is the distribution of the national income less uniform in country A than in country B, and does the inequality of distribution within the two tend to increase or decrease? The mathematical evaluation of the disparities in individual income is a problem of very considerable difficulty, as witness numerous treatises by statisticians and economists. (Cf. Chapter XIV, 5.)

Further, we must also call upon certain mathematical criteria if a number of the fundamental concepts of economic science are to be exactly defined. For instance, the concept of "marginal costs" is of great importance particularly from the practical point of view. It can be set out more or less as follows : if C represents the total cost of the production of N units of a commodity, and K represents the total cost of the production of N+I units, then marginal costs are the difference between K and C. The mathematician immediately recognizes that the concept can be much more accurately and comprehensively defined by saying that marginal costs are a differential of total costs in respect of the quantity produced (on the assumption that costs are a continuous function of commodity volume). This marginal concept arises frequently in economics, and expressions such as "marginal utility", "marginal productivity of the production factors", and "marginal profit of the entrepreneur" are in common use. In all these cases the methods of the differential calculus can be used with advantage. A further example : experience shows that the demand for a particular commodity is more or less materially influenced according to circumstances by fluctuations in the price of the commodity itself. This is the origin of the "concept of elasticity of demand", which Marshall calculates as a proportion between the percentage variation of demand at a definite price and the percentage variation of the price itself. With the assistance of the differential calculus a more exact definition is obtainable, from which interesting deductions result.¹

2

There is a way in which these methods can be used which appears thoroughly fruitful and one which is easily available to anyone with a little knowledge of mathematics. Every economic problem can be said to present itself in the following fashion—not merely theoretic-

¹ If x is the commodity volume in demand at a commodity price p then the elasticity of demand equals $\frac{dx}{x} : \frac{dp}{p}$ and thus equals $\frac{dx}{dp} \frac{p}{x}$.

cally, but also quite practically : on the one hand there are certain economic magnitudes, such as commodity prices, wages, interest, the volume of production, and import and export prices—which are sometimes fixed by the authorities, and sometimes left to the free play of market forces. On the other hand, there are certain conditions which must be satisfied. For instance, commodity prices are to be fixed in such a way that exceptional entrepreneur profits are eliminated, or trading relations between two countries are to be so arranged that export and import prices and quantities add up to an equal balance of trade, whilst at the same time satisfying the other conditions which create the international equilibrium. Those economic magnitudes which do not belong to the "given" magnitudes, which are thus not *a priori* given and are assumed to be unknown, can be regarded as the "unknown quantities" of the problem. Thus a logical condition arises which must be satisfied if the problem is to be solved : the number of "conditions" which are independent of each other and are not mutually contradictory must equal the number of "unknown quantities". If the former are fewer in number, then the problem is indeterminate ; that is to say, it will permit an infinite number of solutions. Whilst if they are more numerous, then the problem is insoluble, because there are too many conditions which cannot all be simultaneously satisfied. I will make the point clearer by a simple example. The problem of calculating the magnitudes x and y in the equation $x+y=100$ is obviously indeterminate because there are two unknown quantities and only one condition (expressed in the equation), with the result that there is an infinite number of x and y pairs which can satisfy the condition. But if we add a second condition, expressed for example in the equation $\frac{x}{y}=24$, then the problem becomes determinate, and we then have $x=96$ and $y=4$. Where an economic problem is concerned, one would say that a "state of equilibrium" had been established. However, if we were to give x or y an arbitrary value, let us say $x=80$, then the problem would become insoluble because we should then have two conditions and only one unknown. Thus if x is to equal 80 the two conditions cannot be simultaneously satisfied, a fact which is readily appreciable.

It is also self-evident without any further discussion that in addition the two conditions must be independent of each other. For instance, the two equations $x+y=100$, and $2x+2y=200$ are not independent of each other, because the one follows from the other : they express merely one and the same condition. Further, the conditions may not mutually contradict each other, as would be the case, for instance, in the equations $x=75-y$, and $x+y=100$ (which gives us $x=100-y$).

The principle set out above—fundamentally nothing but a principle of ordinary logic—is constantly being applied by economists. They enumerate a series of “unknowns”, and at the same time they set out the conditions which should be satisfied in order to arrive at a certain state of equilibrium. When the number of unknowns is compared with the number of conditions then it can be seen whether the problem is determinate, indeterminate or insoluble. Such an analysis often leads to important practical results, because sometimes it can be proved that the freely operating market forces are not in a position to satisfy the conditions necessary to establish an equilibrium, and then the question arises as to whether the State should intervene to supply the missing conditions. An example of this is quoted in Chapter II, 4. However, usually the contrary is the case: the authorities put forward too many conditions and they cannot be simultaneously satisfied. The result is a series of disturbances and an accumulation of measures most of which remain ineffective despite the threat of sanctions and the establishment of more and more rigid and oppressive controls. A characteristic example of this is the process of “bilateral clearing” whose logical impracticability we demonstrate in Chapter XIII, 5.

Having made these preliminary methodological observations I now propose to explain a concept which is of fundamental importance for the investigation of the effects of State intervention, namely the concept of “economic equilibrium”.

3

I have already pointed out that the science of economics begins its operations with the contradiction between human requirements, which are unlimited, and the limitation of earthly goods. The problem thus arises of how best to utilize the productive forces—human labour power and natural forces—in order to obtain the desired goods. No matter what the construction of the social and political organization, the problem remains essentially the same, though its practical solution can vary considerably. In the system of free competition described by economists there is no central authority to regulate the production, distribution and consumption of goods according to a definite plan. Everything is left to the free and untrammelled initiative of the individuals in society. Within the limits laid down by the legal framework of the State each individual is free to buy and to consume what he pleases (according to his income, of course), to choose the occupation which best suits his temperament and his capacities, and to invest his capital in the way that seems most favourable in the given market situation. Commodity prices, wages and, generally, the yield of the individual

production factors, are freely arranged by private agreement. Now what is the result of all these innumerable individual actions? Is it "anarchy in production", chaos, as the Socialists have been saying for so long, and as the supporters of "economic planning" now repeat in their desire to replace the market by a "plan" worked out by a central authority?

It is the merit of the science of economics to have proved that, under the ideal conditions it presupposes, the result of all these free individual actions is an order *sui generis*, an economic equilibrium, although these actions are widely independent of each other, apparently disconnected and unregulated, and not performed with any common aim in view, but impelled by the most varied motives and followed by the most varied effects and reactions.

It would be very interesting to investigate—though it would cause me to leave my subject—how the concept of "order" gradually developed in the minds of economists under the influence of religious and philosophic ideas and as the result of discoveries in other branches of science. One or two indications must suffice here. We find that the concept is familiar even to some of the forerunners of economics, those who, so to speak, announced the coming development of the science of economics, for instance, Galiani.¹ This concept of order forms the core of the Physiocratic system. According to Quesnay, the leader of the Physiocrats, the order of economic facts is a combination of relations which develop from "the nature of things." His famous *Tableau économique* was published in 1758. A few years later one of his pupils, Mercier de la Rivière, summed up the doctrine of the Physiocrats in his book *The Natural and Essential Order of Human Communities*. And in the works of the famous eighteenth-century French economist, Turgot, whom the historians of economic science have decided not to include simply with the Physiocrats because of the originality of his ideas, we find the following little-known but very illuminating observations: "The selling price of foodstuffs, incomes, wages, the population are all things which are connected with each other by reciprocal dependence and which themselves create a state of equilibrium on the basis of a natural proportion—this relation persists as long as really free trade and free competition exist." And Turgot adds: "This state of affairs is readily cognizable in theory—commodity

¹ In Galiani's *Della Moneta* (Concerning Money), published in 1751, we find repeated references to "order" and to the "equilibrium" of economic phenomena as a result of their "reciprocal influence". As he aptly remarks: "There was much talk of the principles according to which value was to be determined, and as it was recognized that these values were definite, constant and general, and in accordance with the order and nature of earthly things, so nothing was left to chance or accident, and everything was order, harmony and necessity." (Published by Nicolini, Bari, Laterza, 1915, p. 44.) And in another place Galiani writes: "Nature always strives to create an equilibrium." (*Ibid.*, p. 181.)

prices are not arbitrarily fixed. Prices are a necessary result of the relation which exists between the individual requirements of men amongst themselves, and between these and the means for their satisfaction.”¹

Statisticians developed the same line of thought. Almost at the same time as the Physiocrats, Süssmilch, continuing the work of some of his predecessors, developed in his book, *Die göttliche Ordnung* (1741), the idea of the regularity of demographic phenomena as soon as they appear in large numbers. No less than the Physiocrats, Süssmilch is full of admiration for the “grand, perfect and beautiful order” he has discovered. He, too, is convinced that the origin of this order is divine: the best the statesmen can do is to follow its rules.

When the teleological concept of an order or harmony designed by nature or God was abandoned, the idea of an equilibrium of economic facts within the framework of a libertarian system remained firmly founded on a scientific basis and was more and more perfected by economists and developed into a mathematical concept. As the passage we have quoted demonstrates, Turgot’s brilliant intuition led him to the concept of a general economic equilibrium, but the idea that “things attain a state of equilibrium on their own, and this state strives to maintain itself when free competition prevails” is by no means as readily acceptable as he thought. The idea remained to be proved, and it was no easy task. The classic economists confined themselves to investigating and solving particular examples of equilibrium, with the result that there was no general overall picture of economic phenomena. A great step forward, whose importance was not recognized by contemporaries, was made by Cournot (1838), but even he investigated only a special case. He took the system of foreign payments of a group of countries within the framework of a system of equations which, in a state of equilibrium, expressed the conditions under which the balance of payments of each country is equalized. He proved that the number of conditions (equations) was the same as the number of unknowns so that the problem was determinate. The practical conclusion is that the rate of exchange between the money of a country A and the money of a country B is not created purely on the basis of the trading relations existing between countries A and B, but is dependent on the totality of relations existing between the countries A, B, C, D. . . . The same is true of the rates of exchange of countries B, C and D. The equilibrium in the system of foreign payments is thus not “bilateral” but “multilateral”.

It is to another important French economist, Walras, that we owe the formulation of the general theory of economic equilibrium,

¹ “Lettres sur la liberté du commerce des grains”, *Oeuvres de Turgot*, vol. I, p. 234. Paris, 1844.

which was subsequently developed and greatly improved in important respects by the Italian economist Pareto. As I must unfortunately confine myself here to the simplest possible statement of the case, avoiding mathematical formulae, I shall be able to give the reader only a superficial idea of the highly important teachings of Walras and Pareto.

4

Above all, I should like to point out that generally speaking the science of economics describes the mechanism of the market. In reality the term "mechanism" is badly chosen, because market phenomena derive from certain human actions, and therefore have nothing automatic about them, but the expression has now become generally accepted and so it must be retained.

One of the most important results of economic science is the demonstration that economic "magnitudes", that is to say, commodity prices, the volume of production, the quantities of goods imported and exported, wages, the rate of interest, and so on, are not arbitrary and do not depend on chance, and that in a free market they have a tendency, under certain definite conditions, to represent those values which are in accordance with market relations. This concept may appear banal to-day, but it developed only gradually in the thought of economists. We meet it for the first time in the works of those old authors who laid the basis for the theory of interest. For a long time it was supposed that the rate of interest depended on the will of the authorities. As at that time there was no money market in the present-day sense of the term, we may assume that the regulations which fixed the rate of interest nevertheless exercised some influence. Only gradually did economists begin to notice that the rate of interest depended on definite economic forces. Petty, for instance, declared that it was useless to attempt to keep the rate of interest at a fixed level by law, if that level were not in accordance with "natural laws". A further fact which caused certain economists to recognize the operation of "economic laws" was that governmental measures to fix the value of money at a level which was not in accordance with its mint standard, and all attempts to establish relations between individual coins which were not in accordance with market relations, were doomed to failure. Galiani examined this circumstance in his book, *Della Moneta*, in some detail.¹

I will begin by giving a brief explanation of the idea of economic equilibrium. Let us assume (cf. Fig. 1) that OM equals the volume of commodities offered on the market under conditions of free com-

¹ Galiani vigorously opposed the theory that the State could fix the value of money just as it pleased. His observations are of topical interest again to-day.

petition by a particular group of sellers. The "curve of demand" can be represented by the line AB, which expresses the fact that the volume of demand becomes greater when the price along axis OY becomes smaller, and that within a group of purchasers sufficiently strong in numbers it can be regarded as continuous. The diagram shows beyond all question that the equilibrium price can only be OP because supply and demand equalize each other only at this price.

This simple example (Fig. 1) shows that we can distinguish three separate elements in the price problem (later on we shall be able to see the full significance of these distinctions for economic science),

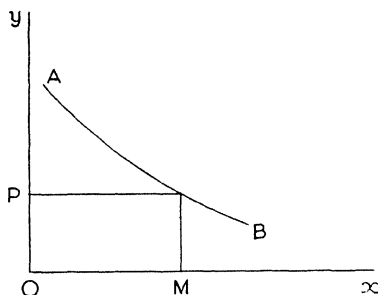


FIG. 1.

namely (a) the given magnitudes—in our example the volume of supply and the demand curve (these magnitudes are in their turn the result of various factors such as the taste of the consumers, their purchasing power, production costs, and so on); (b) the conditions (hypotheses) of the problem in question: in our example we have assumed conditions of free competition. If instead we were to assume the existence of monopoly conditions then the price would be higher than OP if it seemed more profitable and more convenient for the monopolist, or the associated group of sellers, to sell a smaller quantity of commodities than OM and obtain a higher total of return: (c) the unknown quantity, in our example the commodity price. There is a logically necessary relationship between the price on the one hand and the "given magnitudes" and the "conditions" which determine it on the other.

The theoretical pattern we have just developed is very imperfect, and it can therefore give us only a preliminary and general idea of the meaning of economic equilibrium. It would be wrong to assume from it that the equilibrium is separately created for each commodity, and that the general equilibrium is therefore the result of a whole series of individual equilibria. Everyday observation

shows us that the demand for a particular commodity is not, in fact, solely dependent on its price, as we have assumed in our diagram, but that it is also contributorily determined by the prices of many other commodities which could be used instead of the commodity in question or which are used together with it.

5

The chief task of economic science is to investigate the problem of whether "economic magnitudes", i.e., commodity prices, the cost of services, the volume of supply and demand, etc., are *determined*, or whether, so to speak, they represent a confused and irregular jumble. In the simple example we gave in our diagram the price is determined beyond all doubt. But is that also the case in more complicated circumstances when supply and demand are functions of divers variables? The theory of economic equilibrium gives a definite answer to this question. This theory, first developed by Walras, takes the given reciprocal dependence of economic magnitudes into account. It describes manifold reality with the assistance of a "pattern", a theoretical construction, much better than separate theories specially developed for each particular category of economic phenomena could do. However, when the world of economic phenomena is regarded as an indivisible whole the solution of the problem becomes extremely difficult, and in order to attain it the method of "successive approximation" is adopted, just as it is in other branches of scientific investigation: first of all a few hypotheses are set up and then gradually other and more complicated ones are added, and so on, until finally a theory is constructed which describes the given facts, though still in a summary and simplified form. Economic theory can be compared with those conventional sketches which reproduce the most important and characteristic lines of the object the artist wishes to represent, without paying attention to all the details.

Three phases are distinguished in the general theory of economic equilibrium, which embraces a great part of the facts investigated by the science of economics. In the first, theoretical, phase the problem of "commodity exchange" is dealt with and production is ignored. Thus it is assumed that a certain number of people are in possession of certain quantities of commodities. Now as these people are not in agreement with the original distribution of these commodities they exchange them amongst themselves in circumstances of free competition in order to satisfy their own needs as best they can. Commodity exchange is regarded as a problem in which there are a number of "unknowns" on the one hand, and certain "conditions" on the other. The "unknowns" are the commodity prices and the amount of commodities each individual

will possess after the exchange operations have been completed. If m represents the number of individual commodities and n the number of individuals involved, then the "unknowns" are $m-1$ prices (when, as we are assuming, one of the commodities is serving as a measure of value for all the others, then its price manifestly equals 1) and mn quantities of the individual commodities. Now are these "unknowns" determinate when the exchange operations are freely conducted by the individuals involved? Is an equilibrium conceivable or will prices and exchanged commodity quantities constantly vary in an unregulated fashion? Each individual strives to obtain the greatest possible satisfaction of his requirements that his income will permit; now is it possible for all individuals to satisfy this condition simultaneously?

If this question is to be answered we must compare the number of "conditions" of the problem with the number of "unknowns". The conditions which determine the creation of an equilibrium are:

(a) Each individual is perfectly satisfied after the completion of the exchange operations with the way in which he has spent his money to secure the various commodities. That is the same as saying that in a state of equilibrium the utility to each individual of the ultimate quantity of bread he is able, let us say, to buy for 1 monetary unit is equal to the utility of the ultimate quantity of meat that he can buy for the same monetary unit, and that the latter in its turn is equal to the utility of the ultimate quantity of vegetables which he can similarly buy with the same monetary unit, and so on. If that were not the case, that is to say, if the individual obtained greater utility from the purchase of meat than of bread, expending no more than one monetary unit for the one than for the other, he would then buy rather less bread and rather more meat until he had arrived at the point at which the two utilities were equal. Mathematically speaking, if the commodity quantities are m then for each individual we have $m-1$ conditions and for n individuals $(m-1)n$ conditions.

(b) In a state of equilibrium the total value of the commodities surrendered by each individual is the same as the total value of the commodities he receives in exchange: this means in other words that the purchasing power of each individual sets limits to what he is able to buy. Credit operations are not taken into consideration in this first phase of scientific analysis. As n represents the number of individuals involved we thus have n conditions.

(c) If a state of equilibrium prevails then the following applies to each individual commodity: the sum of the quantities in the hands of each individual after the completion of the exchange operations equals the total quantity present on the market: m conditions.

However, one must pay attention to the point that the conditions

b and c are not all independent. It is easy to adduce proof that any particular one of these conditions is a consequence of all the others. In fact, if the condition is assumed that all individual balances are in equilibrium except one (condition b), then it results from the conditions of group c that the balance for which condition b was not postulated must also be in equilibrium. Thus the two groups b and c produce $m+n-1$ conditions.

Amalgamating all three groups we have $mn+m-1$ conditions, that is to say, that the number of conditions which must be fulfilled in order to create a state of equilibrium is equal to the number of unknowns. *The problem of commodity exchange is therefore determinate.* From this we conclude :

(a) The result of the individual exchange operations is, under the assumed conditions, not a state of disorder or anarchy, but a state of equilibrium ;

(b) Each individual is completely satisfied (I repeat : within the limits of his purchasing power) ;¹

(c) All the "unknowns" of the commodity-exchange problem, i.e., commodity prices and quantities, *are simultaneously determined by all the conditions of the problem.* From this it follows that the prices of the various commodities represent a system. Thus one part of the system cannot be changed without more or less serious repercussions, according to the given situation, on all the other parts—clearly this is an unusually important conclusion for economic policy.

Walras points out that a free market tries to solve the equations of commodity exchange by stages. That is to say, at first operations take place at prices which are in all probability not consonant with a state of equilibrium ; the demand for certain commodities then exceeds the supply, whilst for other commodities the contrary is the case. Thus gradually the opening prices are rectified until finally a state of equilibrium is reached.

The equilibrium which results from a balance of supply and demand where individual commodities are concerned is not per-

¹ The expression "best possible satisfaction of each individual" has often been subject to an erroneous interpretation. The expression means simply and solely that provided prices are influenced by those conditions which determine the equilibrium of the market, each individual is in a position to attain what is for him a perfectly satisfactory position with regard to his purchases in the sense that he will experience no desire to distribute his income differently. It does not imply that it would be to no one's advantage if the authorities fixed prices which were not consonant with a state of equilibrium. However, the advantage of the one will be set off by the disadvantage of the other, because it is impossible that intervention which alters the conditions of free competition can improve the situation of all members of a community. The idea of "best possible satisfaction" raises knotty problems which can be solved only with the assistance of mathematical methods. Cf. G. C. Evans : *Mathematical Introduction to Economics*, p. 131. McGraw-Hill, New York, 1930.

manent, but only temporary, should a difference exist between the market price of the commodities and their costs of production.¹ It is quite obvious that in a system of free competition production is encouraged when the sales price of a commodity, whose production can be increased or diminished at will, exceeds its costs of production, and that this disturbs the previously prevailing equilibrium of commodity exchange and must lead to a new equilibrium. On the other hand, when the sales price is lower than production costs then the supply of the commodity in question will decline, because naturally no one has a mind to continue producing at a loss.

The analysis of the equilibrium of production (including commodity exchange) is the second phase of the procedure adopted by economic science to investigate the market. The quantities of the various commodities available, which were assumed as "given" within the framework of the first approach, are now regarded as the result of production and are thus included as unknowns of the problem. On the other hand, the various magnitudes of the *production factors*, such as capital, labour-power and land, are now taken as given. The entrepreneurs obtain the use of land, capital and labour-power from the owners of the individual production factors, then they produce and sell their commodities. The costs of production include everything the entrepreneur has to pay for the use of the various production factors involved. The price of a commodity derives in the last resort from wages and salaries, rent and interest which have to be paid out to the owners of land, buildings, etc., or technical capital goods (apart from taxes to be paid to the state and entrepreneur profit). On the other hand, wages, rents and interest represent the income of those who own the production factors. Even taxation revenues resolve themselves into individual incomes in the last resort, when such revenues are expended in the country of origin itself.

Thus there are two markets: a market for the production factors and a market for the commodities themselves. On one of them the prices for productive services are fixed, and on the other commodity prices. But each market is closely connected with the other, because the workers, landowners and investors of capital expend the money they receive from the entrepreneur in return for their services on the commodity market. In this way the money returns to the entrepreneur.

As we have already said, the problem of production presents

¹ Galiani already had a clear conception of ultimate equilibrium: "The first phases of movement in any operation should be disregarded; only the permanent constant conditions should be taken, and in these we shall always find order and uniformity—for instance, when a pail of water is jolted, there is some preliminary disturbance of the surface as the water is shaken up, but then a uniform even surface and the same level are again attained. *Della Moneta*, p. 40.

itself in the following fashion. The quantities of individual commodities are no longer taken as "given" as they were in the problem of commodity exchange, instead they are regarded as the result of the collaboration of all the various production factors. On the other hand, the quantities of the individual factors which turn themselves into consumer goods in the course of the process of production are taken as given.

If we regard exchange and production as one problem, then we shall see that to those unknowns which we enumerated when dealing with the problem of commodity exchange we must now add the prices of the various categories of production factors, such as the various forms of labour, land and various forms of technical capital.

The equilibrium is determined by the following conditions : (a-b) The previously mentioned conditions (a) and (b), which relate to the problem of commodity exchange. However, the conditions (b) now mean that the value of the services given by each individual is equal to the value of the commodities received in exchange for them ; (c) for each commodity the costs of production must be equal to the sales price ; (d) in a state of equilibrium the quantities of the various production factors demanded and consumed must in each individual case be equal to their supply. It can easily be proved that the number of conditions is equal to the number of unknowns, so that the problem of production is also "determinate".

Further, it is seen that the quantities produced, commodity prices and the prices paid for the use of the production factors, are simultaneously determined by all the conditions of economic equilibrium. In a system of free competition market forces have a tendency, after overcoming all oscillations, to arrive at a definite equilibrium. This would actually be achieved provided the "given magnitudes"—the population and their tastes, the quantities of capital involved, the prevailing technical level, etc.—were to remain constant throughout the entire period necessary for the establishment of a permanent equilibrium. In reality, however, these magnitudes change constantly and the equilibrium is constantly disturbed and a process of adaptation to the new factors begins again and again.

6

During the course of the third "approach phase"—the formation of capital—the supply of productive factors is no longer regarded as "given", but is also listed as one of the "unknowns" of the problem. However "land" and "labour-power" also have their specific qualities. New land cannot be obtained in the same way as new machinery is built. Further, it is impossible to

apply the concept of costs of production to "labour-power" as it is applied to commodities, because the "production" of new labour-power probably depends only to a minor degree—except in a slave State—on economic factors. The third "approach phase" deals above all with the formation of technical capital. This is brought about by saving. The individual workers, land-owners, capital owners, etc., consume only a part of their incomes, and the rest they put to one side. Fundamentally this means nothing more than that they purchase a part of the newly produced technical capital (practically speaking, the securities which represent such capital). We say expressly only "a part", because the other part is secured directly by the entrepreneur, with the assistance of sums which make up the amortization quotas of fixed capital which are included in the costs of production and therefore also in the sales prices of commodities.

Saving demands a renunciation of the immediate satisfaction of present needs in the interests of future advantages. From this balancing of present and future advantages the concept of "interest" is derived, and the main problem of this third phase of the theory of economic equilibrium is precisely the determination of the normal rate of interest in a free market.

The volume of savings, the quantities and prices of new technical capital and the net profit on capital, i.e., the interest, belong, together with those factors we have already mentioned, amongst the "unknowns" of the problem.

The general equilibrium of the market is determined by the following conditions (apart from the ones we have already mentioned above): (a) the sum of all money savings (plus the amortization quotas) within a certain period must be equal to the total costs of the technical capital which is produced within the same period; (b) the relation between the net yield of any particular technical capital and the production costs of the capital itself must be the same in all investments and be in accordance with the rate of interest (if this is not the case then more profitable investments will be preferred and others neglected, but then the rate of profit of the former will decline until equilibrium has been restored); and (c) the cost of production of technical capital must be equal to its selling price.

It would not be difficult to prove that in an amalgamation of the problems of commodity exchange, production and the accumulation of capital to one complex of problems the number of conditions equals the number of unknowns. The total problem complex is thus "determinate". For the sake of brevity I will omit the proof here and interested readers can look it up for themselves in the works of Walras and Pareto together with numerous other details which I have had to leave out because I have confined

myself to giving a general idea of the methods used and the results obtained.¹

Certain authors describe the theory of Walras as a combination of the equations of *free competition*. In my opinion this definition is not quite correct. It is, generally speaking, a combination of the equations of *economic (static) equilibrium*. They represent the conditions which must be satisfied if the existing production factors are to be best utilized, irrespective of the social system in which they are at work. The controllers of a socialist economy would have to take the same equations into their calculations provided they were guided by purely economic considerations.

7

What we have already said confirms the fact that the science of economics does not regard society, producing, distributing and consuming commodities, as a mere jumble of individuals, of "atoms". On the contrary, the theory of economic equilibrium proves the integral unity of economic life and the inner relation which exists between the separate parts of the economic system, something which one would look for in vain in the same clear and definite form in the writings of those who criticize economic science.

The following important conclusion follows from the theory of economic equilibrium: under a system of free competition (in the specific sense economic science gives to this term) no "organization" of the market is necessary; no authoritative centre need intervene to restore a state of equilibrium. Those quantities of commodities demanded by the consumers will be automatically produced and each consumer is completely satisfied (within the limits of his purchasing power). The prices which develop on the market are nothing but the prices which make for equilibrium, and in addition new technical capital is accumulated within the limits of savings.

The profound significance of the science of economics was expressed by Hegel in terms which should give certain modern critics pause and persuade them to try to understand economics better before they dismiss it as useless: "There are certain general needs such as eating, drinking, clothing, etc., and it depends entirely on accidental circumstances how these needs are satisfied. The soil is here more fertile, there less fertile; the seasons vary in their yield; one man is industrious, the other is lazy; but this

¹ The equilibrium described here is "static". The "dynamic" equilibrium has been investigated by contemporary economists, for instance both Evans and Amoroso have opened up new paths. L. Amoroso: *The Mathematical Theory of the Economic Programme*, "Cournot," Padua, 1939, and also *Meccanica economica*, Macri, 1942.

jumble of arbitrary circumstances produces general laws out of itself, and this apparently disjointed and irrational state of affairs is sustained by a necessity which arises on its own. The object of economics is to discover this necessity; it is a science which does honour to thought because it discovers the laws in a mass of accidental circumstances. It is a very interesting sight to observe how all relations are retrospective here, how the particular spheres group themselves and exercise influence on others, and are themselves furthered or hampered by others. This integration, which at first one is unwilling to accept because everything seems to be at the arbitrary mercy of the individual, is particularly striking and it bears a strong resemblance to the planetary system, whose movements also appear irregular to the eye but whose laws can nevertheless be recognized.”¹

8

The market plays an extremely important role in a system of free competition. Above all, the market equalizes supply and demand by means of price variations when a certain quantity of commodities is available. For instance, when at first the demand for commodities at a certain price is less than the supply, then the price falls with the result that demand increases. In the contrary case the price rises and then demand declines—though this process can be accompanied by certain disturbances in the social equilibrium which I will examine later on. In general, however, supply does not represent a static amount, and price variations, which mean a higher or lower rate of profit or loss for entrepreneurs, show the latter in what direction they should guide the productive forces of society.

Equilibrium is the result of opposing forces. When the demand

¹ Jannaccone has drawn attention to this passage in “La scienza economica e l’interesse nazionale”, *Archivio di studi corporativi*, Pisa, 1932. It is taken from Hegel’s *Grundlinien der Philosophie des Rechts*, Appendix to para. 189.

Scandinavian mythology contains an interesting intuition of the relation of all human activities—of which economics investigates only one facet—symbolized in the form of a tree which represents the whole of human life. Carlyle writes in his book *On Heroes and Hero-Worship and the Heroic in History*, pp. 32, *et seq.* (Fraser, London, 1841): “All Life is figured by them as a tree. . . . Igdrasil, the Asmtree of Existence, has its roots deep down in the kingdom of Hèla, or Death; its trunk reaches up heaven-high, spreads its boughs over the whole universe: it is the Tree of Existence. At the foot of it, in the Death Kingdom, sit three Nornas, Fates—the Past, Present, Future. . . . Its ‘boughs’ with their buddings and disleafings—events, things suffered, things done, catastrophes—stretch through all lands and times. Is not every leaf of it a biography, every fibre there an act or word? Its boughs are histories of nations. . . . It is Igdrasil, the Tree of Existence. It is the Past, the Present and the Future; what was done, what is doing, what will be done. . . . Considering how human things circulate, each inextricably in communion with all. . . . I find no similitude so true as this of a Tree.”

for any particular commodity increases then its price increases too. But at once another force comes into play: supply, in order to operate against the rising price. The elasticity of prices, that is to say, their ability to react quickly to a variation in demand and a difference in supply, is an absolutely necessary condition for the establishment of a state of equilibrium. In a free market there is a whole system of inhibiting and encouraging factors in operation striving to keep the market in a state of equilibrium. In other words, as soon as a change in the given magnitudes comes about to disturb the equilibrium, the latter immediately seeks to re-establish itself. When, for instance, one branch of industry threatens to develop excessively under the influence of a high rate of profit, the increased costs of production and the lower prices of the commodities produced immediately erect a barrier to any further extension. When the total amount of investment capital required exceeds the total amount of savings available then the increased rate of interest prevents an abnormal extension of investments. If prices fall within a currency system based on the gold standard (for instance, as a result of credit restriction) the production of gold receives an impetus thereby and this tends to stop the fall in prices.

Liberal doctrine believes that it is in the best interests of the community as a whole that this braking mechanism should proceed "automatically", i.e., completely independent of the arbitrary will of men.¹ For instance, with a gold currency the gold reserve is an automatically operating braking mechanism to prevent an increase in the amount of currency in circulation.

These inhibitions are in part preventive and in part repressive. When a branch of industry, encouraged by favourable prospects, begins to extend, thereby creating a greater demand for capital, raw materials and labour-power than previously existed, the standard costs of production of the commodity in question increase because the rate of interest, the price of raw materials and the level of wages have risen. The increase in costs is an effective brake to any exaggerated extension. Should the braking effect not prove sufficiently strong with the result that the quantity of commodities produced becomes too great then prices fall. With this the repressive braking mechanism comes into operation, and commodity production will then return to more favourable conditions. Of all the "repressive" inhibitions of a system based on free competition the most effective of all is the threat of bankruptcy.

The market mechanism also includes "buffers" which absorb excessive shock. For instance, increased demand can be satisfied to a certain extent by taking commodities from stock without any

¹ In the words of Galiani, it is better "établir la mesure sur les choses mêmes, et jamais dans la main des hommes, car ils ne savent pas la tenir". *Commerce des blés*, p. 151.

alteration in prices.' In the same way, the gold reserves of central banking institutes prevent international gold movements from causing disturbances on the home market.

When contemporary economists declare that every disturbance of the economic equilibrium in a free market tends to correct itself automatically, they no longer proceed from teleological premises as their predecessors did. This striving for a state of equilibrium results quite simply from the inner relations existing between the various economic magnitudes. If, for instance, the given magnitudes A, B, C result in a price X, then it follows that the price will always tend to return to the level X, just as a pendulum which has received a push will, thanks to the law of gravitation, tend, after a series of swings, to return to its original position. A variety of observations confirm the fact that a free market strives towards an equilibrium. However, this does not mean that the inhibiting and furthering factors always prove insufficiently strong and that more or less serious disturbances of the equilibrium never persist for long (cf. Chapter III).

On the other hand, the advocates of a controlled economic order (economic planning) generally overlook the importance of those forces which re-establish equilibrium in a free market and are completely paralysed if commodity prices, the price of the production factors, the rate of interest, the rate of exchange, etc., are fixed by a central authority. Such government intervention suppresses the symptomatic phenomena of the economic situation; the automatic control and braking mechanism no longer functions; the alarm bells can no longer sound their warning. The State therefore finds itself compelled to create artificial incentives (for instance, subsidies for industry), and to devise artificial braking mechanism (bureaucratic controls, prohibitions, etc.)¹ All this only goes to prove the correctness of my previous observation, namely, that when it intervenes the State often tries to copy the normal mechanism of the free market—just as the technical instruments invented by man very often reveal analogies with corresponding parts of the human organism.

9

Social production is rational and efficient when the value of the commodities produced equals their cost. When the production costs of any particular commodity are higher than its value this

¹ The following is a characteristic example: During the war years in Germany the government pursued a policy of "cheap money", and thus the encouraging effect of an increased rate of interest on savings was eliminated. When the German authorities noticed this consequence of their policy they attempted (1942) to encourage saving by, for instance, granting savers considerable tax alleviations.

means that it would have been more advantageous to invest the economic resources (or a part of them) in question in other branches of industry. But if, on the other hand, the value of a commodity exceeds its production costs then this means that it would be advantageous to take a certain quantity of production factors from other spheres and use them to produce the commodity in question.

Now this is, as everyone can see, a general principle whose validity is quite independent of any social, economic or political form of organization, because naturally no social order, whether its structure be liberal, socialist or what not, would be prepared to waste its economic substance in the production of goods whose value was less than their costs of production.

Within the framework of the brief representation of the theory of economic equilibrium which I have given above I omitted a group of unknowns, namely, the amount of the various production factors which each entrepreneur uses in his undertaking. If we take a, b, c to represent the factors which have been assumed as variable, and p, q, r to represent the price of the factors, then the total costs S are represented by the equation :

$$S = ap + bq + cr + \dots$$

If v represents the number of factors, then v quantities must be included for each undertaking, i.e., for z undertakings zv quantities. This would not be an economic problem if the quantity of the various factors which combined with each other to produce a definite quantity of goods in each undertaking were strictly determined by technical considerations and requirements. In that case $a, b, c \dots$ would not be unknowns. However, in the combination of production factors there is, in fact, no "law of definite proportions" such as exists for instance for chemical combinations. If an atom of oxygen is combined with two atoms of hydrogen then the result is a molecule of water. If another atom of hydrogen is added the result is not more water. But if a farmer increases the amount of labour and capital on a certain area of land he secures an increase of production until he reaches the limit consonant with the highest possible utilization of the constant factor. Or a peasant who desires to utilize his own labour-power and that of the members of his family will be able to increase his yield if he buys or leases land from a neighbour—in this case a larger area of land is tilled with the same amount of labour.

An important conclusion results from these considerations. When an increase of the factor a (whereby the other factors remain unchanged) or an increase of the factor b (as above) both result in an increase of the product x , then this means that a can be replaced

to a certain extent by b , and vice versa. In other words, within the limits of certain technical requirements it is quite possible to obtain a given quantity of products with the aid of *various* combinations of the individual production factors. It is quite clear that on the basis of his calculations and his experience an entrepreneur will choose the least expensive combination.

From this it follows that the quantities $A, B, C \dots$ of the individual production factors which are utilized in the individual undertakings and which are regarded as independent of each other, are not "given quantities", but "unknowns" which are determined within the limits of each individual undertaking by the "least-expensive costs" condition. What this condition involves can be seen clearly from the application of mathematical considerations (cf. the appendix to the present chapter).

We show there that for a certain quantity of commodities to be produced the combination of the various production factors involving the least cost must be the one in which the various factors are so combined with each other that the marginal products¹ of the production factors are proportionate to the corresponding prices of the factors themselves.

If, for example, the price for the use of factor a represents 100 per time unit and the price for the use of factor b represents 50, whilst the corresponding marginal products are 4 and 2, then this means that a and b are combined in a rational fashion. Now, if the marginal products were not proportionate with the prices of the production factors, then it would be in the interests of the entrepreneur to replace factor b in part by factor a , or vice versa, until the best possible combination were attained.

This principle is of general significance: it applies equally whether a given quantity of commodities is produced under monopoly conditions or under a system of free competition. In the latter case the quantity of commodities is not a "given quantity" of the problem but is determined by market conditions. Under a system of free competition the entrepreneur is inclined, because he is interested in obtaining the highest possible rate of profit, to increase the production of his commodity to the point at which the marginal cost of the commodity itself is equal to their sales price—this involves however that the entrepreneur increases the utilization of each production factor to the limit where the cost of the factor is equal to the value of the marginal product of the factor itself, i.e., is equal to the marginal product multiplied by

¹ If P is the quantity of any commodity which results from a combination of certain quantities of factors $A, B, C \dots$ and the quantity of factor A is now increased by the quantity dA (whereby the quantities of the other factors B, C , remain constant) then the product P will be increased by the quantity dP ; dP/dA is the "marginal product" of factor A .

the commodity price.¹ It is easy to show that this second principle, which applies in the case of free competition, includes also the condition previously mentioned, so that the commodity has been produced at the lowest total cost.²

The following is another important fact. No matter what the quantity of commodities produced, an entrepreneur will always seek to produce it at the lowest possible cost. However, it can come about that the average cost per commodity unit produced varies with the quantity produced. The costs of one and the same commodity can also be quite different as between one undertaking and another. Experience shows that the cost per commodity unit produced is generally speaking reduced with the increase of production and the extension of the undertaking until it reaches its "optimal" size, whereupon if this is exceeded costs per commodity unit usually increase. Thus there is a certain quantity x for which the costs per unit are at their lowest level. Now whilst the private entrepreneur certainly has every interest in producing any particular quantity of commodities at the lowest possible cost, he has not always an interest in producing just that quantity for which the costs per commodity unit are lowest compared with other possible quantities. On the contrary, perhaps an entrepreneur has a particular interest in extending the size of his undertaking beyond the "optimal" limit. Now it is the role of competition to obtain as far as possible that all undertakings produce at the lowest possible costs per commodity unit. On the one hand, competition encourages undertakings to increase their size when they lag behind their "optimum", whilst, on the other, sooner or later, it will compel those undertakings which have extended beyond their

¹ Let us assume that an entrepreneur calculates that by taking on another worker—whereby the quantities of the other productive factors remain constant—production will increase by 5 units a day (marginal product of labour), so that if the standard price of the product amounts, for example, to 10, the value of the marginal product is 50. If the daily wage amounts, for instance, to 30, then it will be to the advantage of the entrepreneur to increase the number of workers. However, with the increase in the number of workers employed and the other factors remaining constant the marginal product of labour declines. Equilibrium is reached as soon as the value of the production increase brought about by the employment of the extra worker is equal to the wage. The same considerations apply to any other production factor.

² Let $Q, R, S \dots$ be the marginal products of the various factors, and $q, r, s \dots$ their corresponding prices. The entrepreneur will increase the utilization of the various factors until the following equations result (where p represents the selling price of the commodity): $q = pQ$; $r = pR$; $s = pS \dots$ From these equations follows:

$$\frac{q}{Q} = \frac{r}{R} = \frac{s}{S} = \dots$$

that is to say, the production factors are so combined that the prices of the factors are proportional to the corresponding marginal products.

“ optimum ” to return to their proper limits. In fact, if one undertaking produces at too high a cost per commodity unit because its size has increased too much, other undertakings can form with more favourable proportions. Competition has also a tendency to eliminate differences in production costs between individual undertakings—apart from cases in which the differences are due to the presence of monopoly—so that a selective process goes on in which unsound or badly organized undertakings are squeezed out of the market. The social function of competition consists precisely in ensuring that only such undertakings shall survive which produce at the lowest possible cost per commodity unit. Competition strives to equalize the price of commodities with their lowest average cost of production. The sum of the separate demands of the various entrepreneurs represents the total demand for each individual production factor. When the total demand is not in accordance with the available quantities of factors then the prices of the latter will change ; entrepreneurs will make new calculations and alter their demands. This process of adjustment continues until total demand balances total supply.

10

The concept of “ marginal productivity ” appears at first sight to be something unreal and abstract, but a little consideration will show that it was observation of facts that created it. The entrepreneur constantly checks the marginal productivity of the individual factors : he increases the quantity of the one or reduces the quantity of the other until he has secured the most favourable combination. He makes constant attempts to test the productivity of the individual factors and to discover whether their costs are justified. For instance, the farmer knows perfectly well whether it is profitable to increase the use of artificial fertilizers without changing the other factors. If there were no possibility of calculating the marginal productivity of the individual factors it would be out of the question to obtain a rational organization of production.

The principle of marginal productivity in a free market also regulates the distribution of any particular factor amongst its manifold utilization possibilities and amongst the various undertakings. Let us assume that the unit price of a particular factor equals 100. Now, when a unit of this factor, whose price is uniform in a system of free competition, produces a marginal value of 120 in an undertaking Z, and a marginal value of only 90 in an undertaking X, then obviously there is no equilibrium. However, in a free market forces are at work to re-establish the equilibrium, that is to say, in this case the distribution of the production factor will

change, because the undertaking Z will seek to use a greater quantity of this production factor, whilst the undertaking X will reduce its use. In this way the value of its marginal product will sink in the undertaking Z and increase in the undertaking X until the two are finally the same, and in accordance with their cost, and then an equilibrium has been established. Thus we arrive at the conclusion that under the influence of market conditions each factor strives to distribute itself in such a fashion that the value of the marginal product is the same in all its manifold possibilities of utilization.

The great importance of this tendency of the market is obvious. In a free market every factor strives towards that particular form of utilization in which its efficiency is greatest. As a result of demand on the part of the consumer each factor is utilized in the best possible fashion, consistent with the actual distribution of individual incomes. In other words, free competition brings about the production of the greatest possible social product. In order that no misunderstanding shall arise, such as often does arise in this connection, I should like to point out at once that the expression "greatest possible social product" does not also mean that it is of the greatest social usefulness. Particularly when the total income is very unevenly distributed it is quite easily possible that a part of the production factors will be used in a fashion which is of very little use from the social standpoint.¹ However, this is a matter of the distribution of individual incomes and not a problem of the particular market sphere.

In a system of free competition the price of the production factors are "given quantities" for each individual entrepreneur; they do not depend on his will. It is certainly true that each entrepreneur exercises an influence on the price of these factors by his demand for them, but this influence is not great, almost negligible in fact, compared with the influence which the totality of market forces exercises. As we have seen, in a state of equilibrium each factor has the same marginal productivity in each undertaking, and its uniformity is connected with the price of the production factor. Now, the value of the marginal product of a factor is higher when there is a shortage of that factor in comparison with other factors. That should be quite clear. In practice every factor is chiefly used where its use is most advantageous, and if it is present in sufficient quantities it will also be used where its productivity

¹ If individual incomes were all equal the community would represent a homogeneous mass: the requirements of the individual and the utilization of the various commodities by each individual would be almost uniform. Obviously, however, even in such circumstances a part of the factors could be used in an unfavourable and even deleterious fashion from the social standpoint; for instance, some people might prefer to spend their money on strong drink rather than on the education of their children.

gradually begins to decline. From this the important conclusion follows that in a free market the marginal productivities of the individual factors, which, I repeat, are in accordance with their respective prices, provide a measure of the availability of the factors themselves. This makes it possible to achieve a rational utilization of the production factors. Those factors in short supply for which correspondingly more has to be paid will be used with economy, and factors which are more readily obtainable will be used in their stead as far as this is technically possible. In a country where land is scarce in comparison with labour so that a high price has to be paid for it, we shall find intensive cultivation: every parcel of arable land will be utilized to the full. When labour-power is more readily available than capital we shall find that machinery is not much used, and that all those industries which require large quantities of labour-power predominate. In the United States where there is an abundance of raw materials, and labour-power is expensive, raw materials will obviously be used lavishly—the contrary is the case in Germany. The types of commodities produced also vary according to which of the productive factors is in short supply or available in abundance. For instance, it is notorious that American cars have a high rate of petrol consumption, whilst in Italy the motor-car industry has concentrated on the production of motor-cars which consume as little petrol as possible per mile.

The market reacts immediately to a shortage of capital by a rise in the rate of interest. The consequence is then a corresponding sifting of investment possibilities in the sense that entrepreneurs deliberately avoid investments which yield a rate of profit lower than the rate of interest they must pay (or which they would receive if they lent out their capital *sub specie* instead of investing it as entrepreneur capital). At the same time, a high rate of interest tends sooner or later to alleviate the shortage of capital because it encourages savings. When the capital investments technically possible yield incomes with varied maturity dates, then the rate of interest offers a criterion for choosing the one or the other according to economic considerations, that is to say, the expected income, discounted at the prevailing rate of interest, is transformed into current values, and the capital is invested stage by stage where the current value of the future yield is higher. From this it follows that the current value of investments whose yield matures late (the building of a tunnel, for instance) is low when a relative shortage of capital prevails and the rate of interest is correspondingly high. Such investments are therefore not made, and instead capital is used to satisfy immediate and more urgent requirements (though considerations of a political and strategical nature can be more important than purely economic considerations (cf. Chapter V, 1).

When capital is abundant the rate of interest is low, and it is then possible to make investments whose yield matures at a later date.

In conclusion, we can say that a market on which free competition prevails is a "mechanism" which regulates the availability of various commodities and production factors by means of prices. Prices and rates of interest are the driving forces which guide economic activity. And, finally, it is the consumers who, by their demand and the way in which they divide their incomes into immediate expenditure and savings, show entrepreneurs what commodities they should produce (and in what quantities) and how they should invest the capital available. The liberal economic order is, so to speak, "democratic", whilst the "directed", "controlled" or "planned" economic order is authoritarian.

CHAPTER II—APPENDIX

THE CONDITIONS FOR MINIMUM PRODUCTION COSTS

IN order to determine the conditions which must be fulfilled if the costs of production are to be kept down to a minimum, two sets of circumstances must be distinguished :

(a) The entrepreneur decides in advance the quantity of the product and then strives to keep the total costs of production down to a minimum, or, what is fundamentally the same, he decides the amount of money to be invested in the undertaking and then strives to obtain a maximal product ;

(b) Neither the quantity of the product nor the amount of money to be invested in the undertaking is decided in advance, but the quantity of the product (that is to say, the extent of the undertaking) is determined together with the other unknowns of the problem by the condition that the average costs of production shall be kept down to a minimum.

Let us investigate the first case. Let p_a, p_b, p_c be the prices of the various production factors. We assume in our deduction that these prices are constant, because in a free market the individual entrepreneur cannot influence the prices of those factors much by his demand for them. Further there are A, B, C , the quantities of the various production factors used by the entrepreneur, concerning which we further assume that they are independent of each other and variable. These quantities are the "unknowns" of our calculation.

Let $S = Ap_a + Bp_b + Cp_c + \dots$ be the total costs of production of the quantity P , and let $P = \varphi(A, B, C \dots)$ be the "equation of the

undertaking" which expresses the technical process of production. By differentiation of the two functions we get

$$dS = (p_a dA + p_b dB + p_c dC + \dots) \\ \frac{\delta \varphi}{\delta A} dA + \frac{\delta \varphi}{\delta B} dB + \frac{\delta \varphi}{\delta C} dC + \dots = 0 \quad (1)$$

If the costs of production are to be kept down to a minimum then the condition is $dS=0$. When we eliminate dA we get :

$$dS = dB \left(p_b \frac{\delta \varphi}{\delta B} - p_b \right) + dC \left(p_c \frac{\delta \varphi}{\delta C} - p_c \right) + \dots = 0 \quad (2)$$

In order that $dS=0$, the expressions in brackets must equal zero. We get therefore :

$$\left(\frac{p_a}{\frac{\delta \varphi}{\delta A}} \right) = \left(\frac{p_b}{\frac{\delta \varphi}{\delta B}} \right) = \left(\frac{p_c}{\frac{\delta \varphi}{\delta C}} \right) \dots \quad (3)$$

The partial differential co-efficients $\frac{\delta \varphi}{\delta A}$, $\frac{\delta \varphi}{\delta B}$, $\frac{\delta \varphi}{\delta C}$... express the marginal productivity of the various factors. (From this we can see that we necessarily arrive at the concept of marginal productivity when we investigate the conditions for minimum production costs.)

Equation (3) indicates that the entrepreneur must push the utilization of the various production factors to the level at which the ratios between marginal productivities and the corresponding prices are equal to one another. This is the so-called *principle of the equalization of marginal productivities*. When the number of factors utilized and thus the number of unknowns A, B, C , amounts to n , then the condition mentioned gives $n-1$ equations. With the "equation of the undertaking" it makes a total of n equations, i.e., the number of condition equations is equal to the number of unknowns. Thus the magnitudes A, B, C , are determinate.

The minimum of production costs is determined by the "sufficient" condition $d^2S > 0$, as well as by the "necessary" condition $dS=0$. The investigation of the circumstances under which $d^2S > 0$ leads to rather complicated formulas. The use of mathematics allows us to distinguish the "necessary" from the "sufficient" conditions and to define them exactly (which many economists fail to do). In the case of two production factors only is it "sufficient" that the "curve of the constant product" should

be convex towards the axes along which the quantities of the two factors are measured.

Let us now investigate the second case. Let

$$\pi = \frac{Ap_a + Bp_b + \dots}{P} \quad (4)$$

represent the average cost of production of the quantity P . Experience shows us that with the growth of P the average cost of production diminishes to a certain value of P and then begins to rise again. In other words, if the undertaking extends too much then this reacts disadvantageously on the costs of production for reasons whose investigation would lead us too far. Our task is to find the conditions under which π becomes a minimum. Take note that with the differentiation of (4) P , too, must be regarded as variable as distinct from before.

From the condition $d\pi = 0$ it follows that all partial differential co-efficients $\frac{\delta\pi}{\delta A}$, $\frac{\delta\pi}{\delta B}$, ... must equal zero.

We then get :

$$\begin{aligned} \frac{\delta\pi}{\delta A} &= \frac{1}{P} \left(p_a - \pi \frac{\delta\varphi}{\delta A} \right) = 0, \text{ i. e. } p_a = \pi \frac{\delta\varphi}{\delta B} \\ \frac{\delta\pi}{\delta B} &= \frac{1}{P} \left(p_b - \pi \frac{\delta\varphi}{\delta B} \right) = 0, \text{ i. e. } p_b = \pi \frac{\delta\varphi}{\delta B} \end{aligned} \quad (5)$$

This means that the average costs of production will be a minimum when the value of the marginal productivity of the various factors equals the price of these factors (because on a free market and in a state of equilibrium π equals the selling price per unit). There are n equations (5) and their number is thus the same as the number of unknowns A, B, C, \dots (This proof has been given by Professor Hicks, in his *Theory of Wages*, Appendix.)

If we replace in (4) the magnitudes $p_a, p_b, p_c \dots$ by the values which result from (5) we get the following :

$$P = A \frac{\delta P}{\delta A} + B \frac{\delta P}{\delta B} + C \frac{\delta P}{\delta C} + \dots$$

That is to say, when each unit of each production factor is compensated for by a sum which is equal to its marginal productivity then the product is properly distributed over the factors which contribute to its production. (A more detailed treatment of the problems raised here can be found in the author's article, "Alcune lezioni sulla teoria della produttività marginale", in *Giornale degli Economisti e Annali di Economia*, 1941.)

The managerial activity of the entrepreneur is also included in

the production factors, and in a state of static equilibrium he receives only a return in accordance with the marginal productivity of his activity as an entrepreneur. This return is included in the costs of production. When market conditions are such that the price of the commodity is higher than the minimum of the average costs of production, then the entrepreneur strives to raise the production of this commodity to the point at which the marginal cost is equal to the commodity price. At this point the quantity produced is higher than the "optimal" quantity and the average production costs exceed the minimum costs. After compensating all variable factors according to the principle of marginal productivity, and after meeting all fixed costs, the entrepreneur pockets a *surplus profit*.

However, the condition in which the price equals the marginal costs and is higher than the minimum of average production costs is not one of permanent equilibrium, because as soon as possible new undertakings of "optimal" extent arise which are in a position to produce at the minimum average costs of production. Thus production rises and the price falls and shows a tendency to approximate to the minimum average production costs. The undertakings which have grown beyond their "optimal" limits must now retrench—and the surplus profit disappears.

It is clear that when legal regulations prevent the founding of new undertakings, the pressure exercised by actual or possible competition to prevent undertakings extending beyond their "optimal" limits and to compel them to produce at the minimum production costs is absent.

At that point of the curve where average cost is a minimum, average cost is equal to marginal cost. Thus, if x represents the quantity produced, $f(x)$ the total costs and $\frac{f(x)}{x}$ the average costs, then it can readily be seen that at the point where the function $\frac{f(x)}{x}$ becomes a minimum (or a maximum) the average cost equals the marginal cost. The "sufficient" condition in order that the value of $\frac{f(x)}{x}$ shall become minimum consists in the fact that marginal cost *rises* at that point where it is equal to average cost.

CHAPTER III

THE DEFECTS OF A MARKET ECONOMY

I

ECONOMIC science formulates certain theoretical conclusions, summarized in part in the preceding chapter, and proceeds from certain abstract and ideal conditions which do not always exist in reality. The "mechanism" of the free market does not always proceed in the fashion described by economic theory on the basis of the previously mentioned hypothetical conditions; there are disturbing factors, friction, delays and obstacles of many kinds. An economic theory which failed to take these "disturbances" into account would be incomplete.

In this connection it is illuminating to follow the developments in Galiani's ideas as they become clear from a comparison between his work *Dialogues sur le commerce des blés* and his book *Della Moneta*. In his youthful work he expresses his belief in "nature", but during the course of the years his experiences brought him to the following passages in the *Dialogues* (pp. 68-71): "That nature left to herself tends to a state of equilibrium is a transparent truth . . . but little account is taken of the years of recovery; inequalities are cancelled out by compensations, and average terms are adopted which have no existence except in the mind. Nature? Don't rely on her. . . . No doubt she will restore everything to a state of equilibrium, but we cannot afford to wait. . . . We are too unimportant. Time, space, movement are nothing to her, but we cannot wait."

To-day a great deal is being talked about the unreliability of an economic order based on individualism and free competition. We are told that modern capitalism is cursed with a lack of stability which is a natural consequence of its inner structure and of the forces which it has set in operation. This idea, too, is far from new: Sismondi, Saint-Simon, Proudhon, Rodbertus, Marx, Lassalle and Achille Loria all investigated the disturbances of the equilibrium and the actual or imagined contradictions of modern capitalism. To-day there is very little to be added to their criticisms.

Modern capitalism was faced with a tremendous problem: how could the requirements of a rapidly expanding population be met? Previous institutions were quite unequal to the task because they tended to restrict production. Generally speaking, we can

say that economic liberalism, which revolutionized the then prevailing systems of production, created modern means of transport and developed great tracts of land in areas which had not previously been opened up, did its work well despite the alleged waste involved in free competition and the losses caused by economic crises and depressions. In the nineteenth century the possibilities offered to private enterprise to develop the economic forces of each country in the most advantageous fashion led to a tremendous increase of production. Certainly, we must not let this blind us to the fact that it was also a century of exceptional technical progress, but even so, this technical progress was not entirely due to the genius of inventors; it was also due in part to the enterprising spirit of private initiative. International free trade, which, although it was never quite complete, was very widespread compared, for instance, with the situation before the second world war, encouraged rapid economic progress because it greatly facilitated the growth of the product of human labour-power. Economic liberalism must be given the credit for the fact that thanks to the extension of production, which must be ascribed to it at least in part, it was possible not only to feed and clothe a population which had increased to an unparalleled degree, but also to improve its living standards very considerably. At the beginning of the nineteenth century the population of Europe amounted to approximately 185 million souls, by 1910 it had risen to 450 millions. At the same time the population of the United States—which had welcomed a great stream of European immigrants—had risen from five to over 100 millions. Further, there was a considerable improvement in the material situation of the working class, who, before the development of the modern economic system, lived in great poverty.

I think it is desirable to make certain distinctions when we are investigating disturbances ascribed to the liberal economic system. For instance, a situation can arise in which the "mechanism" of the market functions completely in accordance with economic theory so that the total yield reaches the maximum consonant with the available economic resources, but that this result is obtained at the price of more or less deleterious moral, social and political consequences. The question can then arise whether it is not better for a country to abandon attempts to attain the maximum possible total yield in order to obviate, or at least alleviate, such indirect deleterious consequences. Secondly, a situation can arise in which the market mechanism itself operates imperfectly so that the maximum yield proves unobtainable.

Critics of economic liberalism like to stress disturbances of the former variety, which, in their opinion, represent the most striking proof for the unreliability of the capitalist system. I will confine myself here to a brief indication of some of their objections.

(a) *Disturbances of the equilibrium in the distribution of individual income* : economic liberty has not solved the problem of distributing individual income according to the principles of social justice. On the contrary, it has encouraged the rise of an industrial and financial plutocracy, as a phenomenon of capitalist degeneration, which ceaselessly extends the limits of its economic and political power. Forces operating in the system itself cause an ever-increasing inequality in the distribution of individual income and wealth. One of these forces is the constantly increasing industrial concentration which excludes free competition and captures the market for a few big undertakings. Naturally, the working class did not remain idle spectators of this development, but themselves formed powerful associations. And thus a fierce struggle developed between labour and capital with all its fateful social and political consequences, a struggle in which the liberal State was compelled to be a passive spectator.

Modern industrialism, the criticism proceeds, has destroyed the middle class, which was a stable element in society, and formed, so to speak, a connecting link between the proletariat produced by capitalism and the higher social strata. Large-scale capital is bringing more and more numerous social classes under its control, and, in fact, the statistics of a number of countries show that the number of "independent individuals", which means in this case individuals who are in business on their own account or who exercise one of the free professions, is steadily declining in relation to the population as a whole. In addition, "the industrial proletariat" is always in a state of flux, because periods of expansion constantly alternate with periods of crisis and depression, which is, in fact, the hall-mark of "the capitalist economic order".

(b) *Disturbances of the political equilibrium* : Free trade from country to country can involve serious political dangers for certain countries which can thereby become too dependent on other countries because they are compelled to import foodstuffs, raw materials and industrial commodities of vital importance in the event of war.

•(c) *Disturbances of the equilibrium between certain parts of the same country* : A characteristic consequence of the abolition of all economic barriers which once separated one part of a country from another was that the differences in the economic states of the individual parts became more and more prominent. Modern large-scale industry has a tendency to concentrate in those districts where there are favourable conditions for its development ; i.e., the presence of coal and iron, good transport facilities, the neighbourhood of sources of supply and big consumption centres, etc. Such districts constantly attracted men and capital with the result that other districts often found themselves in a more or less serious

condition of economic depression ; for instance, the “ problem of the south ” in Italy, the crisis of the Prussian eastern provinces, the depopulation of certain districts in the centre of France, the “ depressed areas ” in Great Britain, and so on.

Parallel with these shifts there are other no less important phenomena, which are generally summed up in the phrase “ the migration to the towns ”. There is a constant process of concentration relating to both wealth and population in the towns at the expense of the country districts, and the development of urban monsters whose widespread tentacles suck the vitality from the countryside. Demographic, moral and domestic political problems arise. As a result of industrial development the rural population in modern States has a tendency to diminish relatively to the total population of the country (and in some countries even absolutely) so that the number of those who are subjected to the unfavourable social and moral influences of industrialism is constantly increasing.

(d) *Other social and political disturbances of the equilibrium* : Capitalism has also raised another important problem, one which has often been dealt with by poets and novelists, who have described how modern industrialism, based on the division of labour and the use of machinery, has fundamentally changed the essential character of human labour. Even Goethe observed in his *Wilhelm Meister* the approach of the “ terrible machine age ” with anxiety, and he compared it with the serene and happy environment of the artisan performing his daily work. For Proudhon the division of labour was one of the “ contradictions ” of an economic nature involved in the modern social order. But the liberal economists had gone ahead of him.

J. B. Say, for instance, had already written that although the division of labour increased the total production of society to a fantastic degree, the worker who did only the one monotonous task all his life became more and more “ incapable of turning to any other work. His other capacities gradually diminish, and from the standpoint of the individual that results in a degeneration of mankind.” Far-seeing social institutions were introduced in order to remedy this defect.

In the following chapters we shall return to some of the questions raised here and also to the remedial measures adopted by the State. In particular we shall deal with the question of monopoly (Chapter IX), economic crises (Chapter X) and the distribution of individual income (Chapter XIV).

Let us now investigate in greater detail some of the defects in the “ market mechanism ”, and those obstacles which often make it

impossible for it to function in the way laid down by economic theory. It is impossible to deal in any detail with all the disturbing phenomena which result from this inadequate functioning of the market and we must therefore confine our observations to a few typical examples.

Proudhon contends that the contradiction between utility value and market value represents one of the fundamental contradictions of an economic order based on a free market.¹ "The greater the production of the various commodities," he writes, "the better suited are our requirements." But the inevitable consequence of an increase of goods is the reduction of their value: "the greater quantities of a commodity there are in existence the more its exchange value and its market value decrease." A rich harvest reduces prices and can thus spell ruin for the farmer.

Above all, it should be noted that Proudhon's conclusion is not valid when the demand for a commodity is "elastic", that is to say when the price of a commodity does not decrease in proportion to the increase in the quantity sold, but decreases to a lesser extent. In this case the total value of a quantity of commodities increases with the increase in the quantity itself. However, where a non-elastic demand is concerned it is certainly true that the total market value of a commodity decreases with the increase of the quantity sold.² In this case the interests of the producer come into conflict with those of the consumer, because it would be more advantageous for the former to limit supply even at the cost of a partial destruction of the harvest. However, in order for it to be possible to do this in practice the production of the commodity must be monopolized or controlled by a producer's trust (cf. Chapter IX), because in a system of free competition no producer would destroy a part of his harvest, since he would have no guarantee that his competitors would do the same. Thus in this case, too, free competition is the protector of the general interests.

3

Wieser insisted in his book, *Der natürliche Wert* (1881), that a contradiction existed between "natural value" and "the price of things." Everyone valued things according to the (marginal) utility³ he ascribed to them. In this way, according to Wieser, the "natural value" of things is formed. For everyone the price

¹ Joseph Proudhon: *Système des contradictions économiques*, Picard, Paris, vol. I.

² The "coefficient of elasticity" is the relation between the percentage change in demand and the percentage change in price. See footnote on p. 26.

³ If n units of a commodity have a utility for a man which is equal to U , and if n plus 1 units have a utility which equals S , then the difference $S-U$ is the "marginal" utility of the commodity quantity the individual possesses.

which he pays for the individual commodity is equal to the value that he attaches to it. If social income were equally distributed in a community so that the marginal utility of money was more or less the same for all members of the community, then prices would express the relative importance—measured through marginal utility—which society as a whole attached to the individual commodities. In a society so built up prices and “natural value” would coincide. In a society like the present, however, in which there are great differences in income and wealth as between individual and individual, the marginal utility of money varies considerably from individual to individual: it is low for the rich, but high for the poor. From this it follows that though in a state of equilibrium the price of any particular commodity is the same for all, the marginal utility of the same commodity varies quite considerably as between individual and individual. But that is not all. For a quite considerable number of commodities there is no general estimate of value for the simple reason that the various social classes buy different commodities (where it is apparently the same commodity there is a difference in quality). The paradoxical case can arise that for a certain commodity whose marginal utility is estimated relatively low by the purchaser, a high price is paid. A rich woman who already possesses five diamond bracelets will not derive very much satisfaction from the possession of a sixth—nevertheless she buys it and pays a very high price for it.

In a society in which individual incomes are very unequal there is thus a contradiction between “natural value” and price. The price, Wieser concludes, is a social fact, but it is by no means a social measure of value: the system of prices is closely connected with the way in which the total income is distributed amongst the individuals.¹

Wieser's observations are perfectly valid, but they are concerned with the problem of the distribution of individual income and not with the problem of market relations. The market is nothing but an instrument which records the assessments of individuals.

4

Sometimes the actions carried out by individuals independent of each other do not create a state of equilibrium in the absence of an exterior regulating force. Let us suppose that in order to sell their goods cheaper some entrepreneurs employ young people with

¹ Wieser has made extremely valuable contributions to the development of modern economic theories. His views, which we have given above, show that the “pure” economists do not at all overlook the importance of the unequal distribution of individual income, as some critics contend.

the result that the latter's health is seriously endangered. Other employers of labour will then see themselves compelled to do the same thing in order not to lose their market. There is only one effective way of preventing, or limiting, the employment of young people, and that is by State intervention. It might be objected that it is in the interests of employers not to employ young people in such circumstances in order not to cut off the supply of labour power at the source, as they ought to be aware not only of the immediate but also the ultimate result of their actions. However, as John Stuart Mill has correctly observed: "Even a unanimous opinion that a certain line of conduct is for the general interest, does not always make it people's individual interest to adhere to that line of conduct".¹

Another example of the necessity of State intervention to complete the conditions for economic equilibrium is offered by a paper-money currency.

Whilst we were discussing the theory of commodity exchange we had occasion to observe that the number of conditions ($nm+m-1$) was equal to the number of unknowns—in the event of a commodity's representing money—so that an equilibrium prevailed. The unknowns are then the mn quantities of commodities and the $m-1$ (as the price of the commodity which represents money is equal to 1). In the case of paper money, however, m prices (and not $m-1$) must be determinate. The number of conditions is one less than the number of unknowns, in other words, the problem remains indeterminate, which, economically speaking, means that the state of equilibrium is not stable. In order to correct this the government or the Central Bank must intervene to provide the lacking condition (something which, of course, cannot be done privately). This lacking condition can be formulated in various ways. The quantity of paper money in circulation can be fixed. For instance, the quantity of "Rentenmarks" which were allowed to be issued in Germany after the currency reform of November 1923 was limited to 2400 millions. Or the condition may consist in an obligation on the part of the Central Bank to regulate the issue of paper money in such a fashion that the stability of the rate of exchange is not affected. That was the currency policy followed by the Austro-Hungarian Bank up to the year 1914. Those responsible for the currency policy of several countries (including Germany, for instance), committed a grave error after the first world war when they more or less overlooked the fact that in the case of a paper currency the situation cannot be stable unless the quantity of paper money in circulation is limited in one way or the other. It was believed that the market itself could be left

¹ John Stuart Mill: *Principles of Political Economy*, vol. II, p. 592. Longmans, Green & Co., London, 1886.

to fix the amount of paper money necessary for commodity exchange. That was a very grave error which inevitably resulted in the undermining of the currency. The supreme financial authority of a country must determine the quantity and thereby provide the missing condition for economic equilibrium.

In countries with a gold currency there are not only gold coins in circulation, but also banknotes and, in the form of cheques, the bank deposits. In reality there was never any such thing as a "pure" gold currency, and currencies were always mixed. As experience shows, such a system always results in an inadequate equilibrium. From the beginning of the nineteenth century on a more or less vague idea became current in banking and credit circles that wherever money substitutes were in circulation in addition to "commodity money", the intervention of the State or of some other central authority was necessary in order to complete the system of conditions making for a certain stability. In a well-known book published at the beginning of the nineteenth century, Thornton denied that there was "a natural tendency" to keep the circulation of Bank of England money within such limits as would prevent a dangerous depreciation.

In order to guarantee the stability of a paper currency the condition that it should be readily exchangeable into gold did not seem to be sufficient. It seemed desirable to entrust a single big bank with the difficult task of issuing paper money—though this measure was also impelled by political considerations. This was one of the first breaches in the system of free competition. In liberal England the Peel Act in 1844 contained strict provisions for limiting the amount of currency in circulation. However, this law regulated only the issue of banknotes, and in subsequent years the role played by what is called "deposit currency" visibly increased in importance, that is to say, those payments made with the assistance of bank deposits created by the granting of credit. The volume of this deposit currency exceeded the volume of paper currency. Experience taught that between the amount of gold available, i.e., piled up in the reserves of the central banking institution, and the volume of bank credit, thus also between prices and gold, there was no permanent and automatic relation. Past generations concentrated their attention on the problem of how best to alter the volume of paper money in connection with an alteration in the gold quantity, but the present generation must deal with the problem of controlling "deposit currency". However, in the course of the years before the second world war, the policy of "controlled money" often expressed itself in arbitrary intervention either to depress the rate of exchange (in order to encourage exports, if only temporarily) or, as was the case in Germany after 1933, to set the rate of exchange much too high

by comparison with the other elements of the money market. The currency confusion which accompanied the "control" of money from 1931 onwards justified the opinion of those people who desired, if political circumstances permitted, to return to partially automatically functioning gold currency with suitable adjustments (cf. Chapter XIII). Thus, a few years ago, one of the most reputable bankers in the United States wrote: "Up to the present currency control has not resulted in increased economic stability. It was precisely in the years that control was intensified that we experienced the greatest vacillations in the business world."¹

5

Sometimes the price of a commodity is "indeterminate". This problem has recently produced some illuminating theoretical discussions. However, it also has a practical significance, because in view of the fact that prices guide the productive factors to their most effective utilization, price uncertainty results in these factors not being utilized to their best advantage, so that the total income is not reaching the maximum which the available resources would allow. This case arises when the situation described in Chapter II does not exist, where it was assumed that there was a great number of buyers and sellers and none of them was in a position to exercise any material influence on the formation of prices by his supply or demand. The market is sometimes "imperfect". Let us assume that a commodity is produced (or a service offered) by only two entrepreneurs (that is to say, a "Duopol"), or by a few only ("Oligopol"), who are in competition with each other. *A* reduces his price in order to defeat his competitor, whereupon *B* reduces his price for the same commodity. *A* answers this by reducing his price still further. In this way cut-throat competition develops between the two concerns which is probably deleterious for the economic system as a whole. Prices are constantly fluctuating. In this case there is no point of equilibrium to which prices tend as there is in the case of competition amongst a large number of entrepreneurs or in the case of one single entrepreneur's possessing a monopoly (cf. Chapter IX, 1). In practice, however, the entrepreneurs in question would probably very soon realize that it would be much better for them to come to an agreement and fix their prices in concert rather than fight each other "to the bitter end". But in such circumstances a situation can arise in which the interests of the general public are not sufficiently considered. Even so the agreed prices cannot be arbitrarily fixed; they must take the state of the market into account (cf. Chapter IX, 3).

¹ Burgess: "The Statistical Equivalent of Gold" in the *Journal of the American Statistical Association*, New York, vol. XXXIII, p. 3, 1938.

We find another interesting case of indeterminate prices in the so-called "bilateral monopoly" which arises when neither the supply nor the demand for a commodity or a service takes place within the framework of free competition between buyers on the one hand and sellers on the other, but each is controlled and fixed by an association of buyers and sellers. Generally speaking, buyers and sellers come to an agreement on prices, sometimes after a more or less violent struggle—for instance, agreements between spinners and weavers concerning the price of yarn. The liberal State often opposed these private agreements because they violated the principle of free competition. Now, some governments encourage them, though they exercise a control in order to prevent abuses.

Another case of such a bilateral monopoly, and one of considerable importance in practice, arises on the labour market when an association of employers and a trade union come together to negotiate an agreement on wages. As theory shows the level of wages is then indeterminate within certain more or less narrow limits. Without a doubt it is the business of the State to make its influence felt to prevent a fatal duel between capital and labour. Even before the first world war many States had already accepted this principle.

6

When there is a demand for a particular commodity undertakings are founded which, thanks to their permanency, are in a position to satisfy not only the present but also future demand. When, against all expectations, demand subsequently declines, the industrial complex will have to carry the full burden of plant which can be utilized only in part. It is quite clear that the capital invested here cannot be used for other industries, but this is by no means a special characteristic of the individualist economic system. Even in an economic system controlled by the State, losses which arise as a result of a change in demand are unavoidable, unless, of course, the intention is to prevent any change in the tastes of the consumers and to suppress all technical inventions, in which case the economic system is condemned to stagnation. The difficulty of foreseeing future demand also means that the assessment of amortization can be carried out only approximately, and that the production costs of a commodity thus remain uncertain.

Demand often varies according to the season, sometimes even according to the hour of the day, for instance, the consumption of electricity. Now the productive capacity of an undertaking is often calculated for a maximum rather than an average demand, so that when demand is not at its maximum it will work only to a part of its capacity. This represents a grave problem for some

industries and some thought has been given to the possibility of preventing the fluctuation of demand by means of a scale of prices, or in some other way, so that production can proceed more regularly.¹

7

The automatically operating forces of the market often meet with numerous hindrances which prevent their exercising the influence described in theory provided the hypothetical ideal conditions are present. Very often the State intervenes in order to remove these hindrances or, at least, to lessen their effects. Sometimes it is the market itself which creates a defensive system or sets into motion the mechanism which re-establishes the equilibrium. Unless State intervention in such a case is confined to giving economic phenomena the required legal form it may be not only superfluous but positively harmful, because it causes an unnecessary disturbance of the market.

A certain degree of intelligence and education is necessary for the formation of a correct judgment and the making of a correct choice between various possibilities. Anyone called upon to do this must be able to envisage the indirect and future results of his actions. Ignorance of market conditions, a false estimation of one's own capacities, the expenses of a change from one occupation to another, the favouring of certain occupations or certain investments for non-economic reasons, the influence of custom and tradition, or perhaps simply carelessness and neglect, can often make it impossible for the spontaneously operating distribution of the production factors to be those which actually guarantee the maximum yield. Before the war Germany's labour exchanges learnt some interesting lessons in this respect : young people almost without exception wanted to be mechanics in a motor-car or aeroplane factory, and were unwilling to accept employment in the mines or on the land. Almost all girls sought employment with commercial firms and showed little inclination to become hospital or children's nurses, or to take employment in agriculture or the foodstuffs' industry.

8

In Chapter II we left an essential characteristic of production out of account, namely, that it takes time. That may sound banal, but it is of supreme importance. From the beginning of the production of a certain commodity until the moment when it is

¹ J. M. Clark has examined this problem in detail in his book, *Studies in the Economics of Overhead Costs*, University of Chicago Press, Chicago, 1923.

sold to a purchaser there is a more or less lengthy period according to circumstances. The entrepreneur pays his workers and the prices of his raw materials and other requirements and he buys his machinery—but he gets his return only much later, after he has disposed of his commodities. In a system of free competition the costs and the value of the commodity have, as we know, a tendency to equalize themselves. In a stationary order of society the equalization would be complete, despite the fact that production takes time. But in the society which actually exists a permanent process of change is going on (changes in the population, changes in consumer taste and thus in demand, capital increases, the improvement of production methods owing to technical inventions, changes in the organizational structure of the factories, etc.). The entrepreneur had reckoned, let us say, with a selling price of 100, but instead when he finally sells his commodity he receives only 90, though he might, let us say, receive 110, also as a result of the changes indicated above. If it were possible to calculate these price changes in advance then production could be adapted to the changed circumstances of the future, but, generally speaking, it is very difficult to foresee the future with any degree of accuracy. Thus every form of economic production (in the widest sense of the term) is accompanied by a larger or smaller degree of uncertainty and is both profit and loss. From the standpoint of society as a whole this means that the productive resources of society are not being used in the best possible fashion.

It can happen that the risk involved is more or less accurately calculated, and in such a case the uncertainty factor ceases to operate. Risk can be calculated with sufficient accuracy when future probabilities can be estimated on the basis of a large number of relatively similar cases; life insurance, for instance, is based on such calculations. Such accuracy, however, is impossible where economic phenomena are concerned, but even here the risk can often be insured against, for instance, fire insurance, hail insurance for farmers, etc. Other very significant forms of insurance have also gradually developed. Thanks to them, commercial risks are, if not abolished, at least diminished. Business in futures is an interesting example of this, and generally speaking its economic importance has not been understood. Briefly, this is what happens. Let us assume that the owner of a spinning mill has sold a quantity of yarn on invoice at a certain price even before he is in possession of the raw materials. Now, in order to reduce the risk of loss which a subsequent increase in the price of raw materials would involve, he buys an appropriate quantity of cotton on option when he signs his contract for the supply of yarn. Let us now assume that the price of the raw-cotton of the quality he requires rises. In this event he will suffer a loss when he sells his yarn, but as the

price of the "spot" commodity and that which is dealt with on options move in the same direction, he will sell the raw cotton he bought on the option market at a higher price than he paid for it, with the result that his loss on the sale of his yarn is more or less compensated for by his profit on the option transaction. Thus devices to reduce risk have led to the creation of a special sort of division of labour. Speculators take the risk of price fluctuations and thus make it possible for entrepreneurs, merchants, exporters and importers to devote all their attention to their business without having to bother their heads about price movements—unless they want to go in for speculation on their own account. From this we can see what a grave error those governments committed which hampered, or even suppressed, the option market in commodities in normal times. They destroyed a piece of mechanism which had developed spontaneously precisely in order to protect the entrepreneur class against the effects of violent price movements. Provided that the development of prices as calculated by the speculator turns out to be correct, and provided that no unfair stock-exchange manoeuvres are carried out, the activities of the speculator are useful to society because their effect is to establish an equilibrium between prices and consumption *in point of time*. If the speculator foresees that the price of a commodity will rise in the future as a result of a decrease in supply he buys and thus causes an increase in current prices, but later on when he disposes of the commodities again the price is thereby depressed to a level which is lower than the level the price would have reached had there been no speculative activity. The bull speculator compels the consumer to reduce his current consumption, but in return the latter will be able to consume more in the future. Thus one can see that from this point of view, too, the interference of the State in market operations is a very knotty problem. For instance, if a maximum price is imposed which is too low, then there is a danger that consumption will be given too long a rope, and the inevitable result will be that in certain circumstances a great shortage will develop in the future, accompanied by a big rise in prices.

However, these considerations apply only if the estimate of the speculator concerning future price movements proves correct. If he makes a mistake and future supply is greater than he expected, then a dangerous fall in prices will be the result, and this will cause an unnecessary disturbance of price movements and consumption. Further, experience shows that both bull and bear movements often get out of hand even when the price movement brought about under the influence of the speculator proves correct. This is due to the suggestive effect of successful operations by individual speculators on the wider public of so-called "outsiders". For this reason some countries have taken measures to prevent these out-

siders from taking part in stock-exchange operations, so that they take place only between certain groups of professional speculators and other persons such as importers, exporters and producers, who can show that they have a direct and "justifiable" interest involved.

It is obvious that it is very difficult to make accurate economic prognostications. The price of a commodity depends on a hundred and one different circumstances which influence supply and demand. However, during recent years great progress has been made in the collection of information and statistics which are now made readily available so that changes in the general economic situation or even in certain particular branches of the economic system can be foreseen, at least approximately. Both private and public institutions (particularly in the United States and Great Britain) have devoted their attention to the statistical recording of market relations and to the study of so-called "Trade Cycles". Some of these institutions also publish "business barometers", but their practical value is still doubtful. Various economic "index figures" have been worked out in order to check their so-called "seismological" value. It was hoped that certain relations between these index figures would give an indication of the probable changes in the economic situation. Thus a low rate of interest together with a clearance of commodity stocks and a bullish tendency on the stock exchange would indicate the approach of economic prosperity. But such forecasts are extremely unreliable. It is not practicable to build up a forecast on mechanical principles; each individual case must be examined and interpreted separately.

It is interesting to note how sometimes erroneous forecasts tend to move the overwhelming majority of business men in the same direction. Some favourable event, a fillip in the demand for certain commodities, technical inventions which open up a profitable field for a certain branch of industry, a good harvest or a political happening, can arouse a feeling of confidence in some entrepreneurs. This feeling of confidence then spreads rapidly from one branch of industry to the other until finally the whole business world is raised on a wave of optimism which persuades entrepreneurs to fill up their stocks, demand large bank credits, extend their operations excessively and ignore even the most elementary precautions. But after a while other happenings begin to undermine confidence: a big undertaking proves insolvent; there is a bank smash. Thereupon there is a rapid change of scene: confidence fades and a spirit of pessimism dominates the business scene. Economic depression sets in: entrepreneurs reduce their production; they lack the confidence for new investments and workers are dismissed. This is the psychological background of the so-called "Trade Cycles", which represent one of the principal problems at present engaging the attention of economic policy (cf. Chapter X).

9

A particular form of erroneous judgment is the overestimation of current values in comparison with future advantages. Very often people let themselves be all too influenced in their economic actions by certain current advantages, and in this way they overlook the greater advantages they could secure in the future if they were willing to give up a part of their current advantages. Sometimes the farmer will exploit his land excessively thus damaging the prospects of future harvests. A rise in the price of timber can cause reckless deforestation. The result is that governments begin to take measures to protect land and forest resources. The greed for profits can cause a merchant to trick his customers, although to do so is really against his own interests. Where workers are concerned there is often a tendency to prefer those forms of employment which require only a short period of apprenticeship and therefore offer speedier opportunities for earning, but this makes it impossible for the worker to develop his capacities and thus earn higher wages in the future.

Very often the disadvantage of certain risky industries are underestimated. There are branches of industry whose chances of making a profit are very uncertain, but those few entrepreneurs who are lucky in them pocket considerable profits. The possibility of a high rate of profit has a powerful attraction for many people with the result that too much capital flows into these industries and too much energy is expended on them, both of which would be better used elsewhere. As Pigou rightly observes, workers tend to prefer work which is dangerous or unhealthy if the wages paid are even only very little higher than can be obtained elsewhere. They completely overlook the fact that the wage difference does not compensate for the risk, and that in reality therefore they are earning less than they could elsewhere.

The following is an interesting result of the overestimation of present advantages : many people reduce their saving to such an extent that insufficient savings are available for certain social purposes. With this the moment has arrived for State intervention in one form or the other, whether in the shape of propaganda to encourage saving or more direct measures.

10

The present organization of the capital market is not altogether in accordance with the ideal conditions described by economic science. The latter assumes the existence of a "perfect" market in which numerous owners of capital offer their savings for the most profitable investments so that a rate of interest is established which

expresses the relation between the supply of and the demand for savings. Thanks to free competition the marginal productivity of capital is the same in all investment possibilities and in accordance with the rate of interest. This guarantees the best utilization of savings in the interests of society (once a certain distribution of individual income is given). In practice, however, a part of these savings becomes bank deposits, and there is thus a danger—and experience goes to show that it is a very real danger in some countries—that this money will be used in the interests of those powerful industrial groups which control the banks. And finally, joint-stock companies are accustomed to distribute only a part of their profit in dividends, and to reinvest the remainder as new capital, thus evading the control of the capital market. This self-financing can result in a false distribution of the economic assets of the country because the regulating influence of the rate of interest is put out of action. It is an extremely difficult problem to find a suitable remedy. It has even been suggested that undertakings should be forbidden to finance themselves with the assistance of undistributed dividends, but this proposal seems altogether too radical.

II

Economic theory demonstrates clearly how the “mechanism” of the market normally functions: a rise in price diminishes the demand and encourages an increase in supply, whilst a fall in price has the opposite effect. In this way supply “automatically” adjusts itself to demand.

However, the market often shows *abnormal reactions*. This happens very often where agricultural production is concerned when it is not organized according to capitalist principles, but is divided amongst numerous small and middle-sized agricultural holdings with farmers using the labour power of their families. When prices fall they try to produce more by working longer and harder in the hope of compensating for the fall in prices by an increase of production. But, in fact, the disproportion then becomes still greater: the fierce competition amongst the farmers causes prices to fall still further. This sort of thing happened in the United States after 1930 and the government was compelled to intervene drastically in order to get rid of the enormous surplus of grain. Here is another example: a reduction in wages often results in an increase in the supply of labour-power, either because the individuals who are already employed now work more (by seeking supplementary work in their spare time), or because women and young people begin to seek work in order to supplement the meagre wages of the head of the family. In this case the preliminary

reduction in wages tends to produce still further reductions, and instead of recovering its lost equilibrium, the labour market drifts further and further away from it.

According to the law of supply and demand an increase in prices results in a decrease in demand. However, if buyers think they see in the increase an indication of still further increases in the future, then the demand is likely to rise rather than fall. The result of this is a still further rise in prices, with the result that both buyers and merchants become more convinced than ever that prices will continue to rise and then demand increases still further, and no state of equilibrium is attained. On the other hand it has often been observed that the market has not reacted to a fall in prices by an increase in demand; on the contrary, demand has diminished still further, because consumers, merchants and entrepreneurs withhold their purchases in the hope that prices will fall still further, and thus the decline becomes ever steeper. In times of general optimism high prices cause an unhealthy and unregulated increase in production, whilst in periods of pessimism low prices cause an excessive reduction of production. Certainly, the moment inevitably arrives when, in the first case, the increase of production begins to exercise its depressing effect on prices so that the preliminary optimism is undermined and the extension which has begun comes to an end, and in the second case the limitation of production creates a too obvious disproportion with demand, the fall in prices then slows down and finally ceases altogether. In the meantime, however, the economic system will have suffered more or less serious disturbances.

The main cause of the above-mentioned imperfections of the market is probably to be found in an excessive extension of bank credits because it is this which finances commodity demand in times of general optimism. A judicious regulation of credit is therefore the most effective remedy for exaggerated speculative manoeuvres (cf. Chapter X, 2).

12

Sometimes it is the rigidity of demand which causes market disturbances. Let us take a country whose currency is based on paper money. In normal circumstances the rate of exchange will tend to attain a state of equilibrium resulting from the relation between domestic and world price-levels. If for some temporary reason the money of this country has a lower "foreign value" than the normal domestic value, then exports will be encouraged and imports discouraged, and the equilibrium will be restored. However, in exceptional circumstances the mechanism may not work according to expectations. Perhaps a fall in the rate of exchange

arouses fears that there may be still worse depreciation in the future. Merchants then import still more commodities, which they purchase in advance, instead of reducing their imports. At the same time other people try to send their capital abroad, and whoever already has capital abroad leaves it there. Further, it is also conceivable that the foreign demand for the commodities of the country in question is not elastic, which is often the case with countries which export only one type of commodity or only a few types. What happens then? Certainly it is true that the depreciation encourages exports so that the volume of exports increases, but as we have no elastic demand the total value of exports expressed in terms of foreign currency will decline.

For the reasons given a deterioration of the rate of exchange, which under normal circumstances would be only temporary, releases forces which postpone the establishment of a state of equilibrium to the more and more distant future. The first depreciation causes the second, and this becomes the cause of a third, and so on. Such phenomena were frequently observed during the currency troubles which persisted during the years after the first world war.

Generally speaking, we can say that a lack of elasticity on the part of demand (for instance, for labour-power, and for loans during an economic depression) is one of the reasons for the delays and difficulties of a restoration of the economic equilibrium.

13

Sometimes the spontaneous reactions of the market to disturbances of the equilibrium are not adequate, or they set in too late, with the result that the disturbances continue for a long time. Delayed reactions, which theory often overlooks, can have important results in practice. When, for instance, the amount of currency in circulation is increased its effect on the prices of various commodities and services is not simultaneous. Some prices are immediately affected, for instance, the prices of important commodities which are purchased wholesale, whilst others are affected only later. And money wages take their turn still later. Thus labour-power is rewarded at a lower rate than is consonant with the value of its marginal product. When deflation takes place prices usually fall more quickly than wages. This causes a decline in production which is followed by an increase in unemployment.

A further example: the experience of the years after the first world war showed that, generally speaking, an increase in the amount of paper money in circulation affected foreign-exchange rates first and domestic prices for commodities and services only later. Let us assume that the difference is three months. If the

amount of paper money in circulation is increased only once, then it will take three months for the balance between foreign-exchange rates and domestic prices to be restored. But if still further quantities of paper money are issued, then the difference between the "foreign" and the "domestic" value of paper money will take on a more and more permanent character. This was actually the case in a number of countries after the first world war. The above-mentioned difference in value was the cause of grave economic, social and financial disturbances. Experience has also shown that with the progress of inflation the period in which domestic prices and wages are affected by the deterioration in foreign-exchange rates becomes shorter and shorter, and finally disappears altogether. In some countries it was also observed that at an already far-advanced stage of inflation domestic prices showed a tendency to rise even more rapidly than the rates of exchange. Naturally this created export difficulties.

14

If the market does not react immediately and adequately to a disturbance then its effects tend to increase progressively with the result that market conditions recede more and more from the state of equilibrium. One of the most important instances of this is the rapid increase in unemployment in periods of economic depression. Let us assume that for some reason or the other (a crisis in a certain branch of industry or the conclusion of big railway building) 100,000 workers become unemployed. According to economic theory the presence of these men on the labour market should exercise a depressive effect on the rate of wages, and this would cause some employers to increase their demand for labour-power, so that, sooner or later, the unemployed workers would find work again in other industries. But what happens when wage rates are excessively rigid owing to trade-union pressure or official regulations? The 100,000 unemployed workmen will remain permanently unemployed (unless new prospects open up in some other industry). This, however, is only the direct effect. As the unemployed workers—even if they receive unemployment support—must necessarily reduce their consumption, the production of the commodities normally consumed by them is reduced, and a further number of workers joins them on the labour market. This second group of unemployed workers will have to reduce their consumption, so that thereby a third group of workers becomes unemployed, and so on. The effects of the original disturbance factor which directly resulted in the unemployment of a certain number of workers, are visibly multiplied (*Theory of the Multiplier*, cf. Chapter XI, 3).

When the disturbance of the equilibrium can be traced to a lack of automatic market reactions, or to their inadequacy, so that the effects of the original disturbance are cumulative, an investigation will often show that the root of the trouble lies in a wrong policy on the part of private organizations or governments. If the market mechanism is to operate effectively then it is particularly necessary that all hindrances should be cleared out of the way. If the automatic reactions of the market still prove inadequate, then the State will have to encourage them, and if the situation proves particularly complicated or difficult, the State will have to intervene directly, for instance, by the organization of public works. The incentives offered by the government can be of a general or a particular nature : some of them will aim at restoring the "rhythm" of economic life (for instance, credit facilities will be improved), whilst other measures refer only to particular industries (cf. Chapter V, 2).

15

The case can arise in which an apparently minor change in phenomenon A causes considerable disturbances to phenomenon B. The effects of the original disturbance of equilibrium are increased. A characteristic example is afforded by the relations between the demand for consumer goods and the demand for capital goods (machinery). The production of consumer goods requires machinery, plant, railways, etc. Let us assume that for the annual production of a certain commodity to a total value of 20, plant and equipment to a total value of 100 are necessary, and that normally speaking new capital goods to a value of 10 are produced in order to compensate for the normal deterioration of plant and equipment. Now, when the demand for that commodity rises 20 per cent in a certain year, then the production of the supplementary quantity will require a proportionate extension of plant. From this it follows that in that particular year capital goods to the value of 30 are produced, which represents an increase of 200 per cent above normal. But when in the following year the demand remains constant at 24 the production of capital goods will be suddenly throttled down. The latter form of production is thus subject to much greater vacillations than the production of consumer goods.

In the opinion of a number of writers on economics this is the main cause for the alternate appearance of periods of prosperity and periods of economic depression.

But what is the real cause which makes this extension of original effects possible? Many economists have overlooked the fact that in the event of an increased demand for consumer goods or for

services, or in the event of a new demand arising, the capital goods suitable for the production of the consumer goods or services in demand can be very varied, that is to say, they can require a larger or smaller investment of capital. For instance, a railway line can be laid down at great expense or at little expense. The effects on demand and on the production of capital goods are different according to which way is chosen. Now, according to what principles is the choice made in the first place? The volume of savings available—measured by the rate of interest—will determine the choice in favour of the more or less expensive method of building. But when bank credit exceeds the limits of the savings available, the rate-of-interest mechanism is put out of action, and the effects of an increased demand for consumer goods on the production of capital goods can be quite considerable. The vacillations in the production of capital goods would certainly be much less if the abuses of credit extension could be obviated.

16

Generally speaking, we can say that the automatically operating reactions of the market to changed circumstances will prove less effective in re-establishing the equilibrium the more sudden and the more considerable are the changes themselves in the first place. If the changes are not considerable and if they come into operation only gradually then the market will be able to deal with them without difficulty.

The stronger is the preliminary disturbance the more important it is that there should be no artificial hindrances if the equilibrium is to be restored. If the equilibrium of the market has been badly shaken and if, further, the spontaneous reactions of the market are prevented or hampered by measures taken by the State or by private clashes of interest, then the market mechanism may be completely paralysed, for example: the collapse of the gold standard. The smaller the market the more persistent can be the consequences of a disturbance in the market equilibrium, if it is a closed market. If the market is an open one then the effects of the disturbance can make themselves felt on other markets, whilst at the same time they will be dissipated to a certain extent (cf. Chapter XIII, 2).

Amongst the many "mechanical" arrangements of the market one of the most interesting is the phenomenon that the payment of gold or foreign currency from one country to another develops into a stream of commodities which pours from the debtor country into the creditor country. Let us assume that country *A* has paid reparations to country *B* throughout the course of a number of years and that in both countries the currency is based on the gold

standard. The payment of these reparations involves a whole chain of consequences which, on the assumption that the balance of payments of the two countries was in equilibrium in the first place, can be enumerated briefly as follows : (a) the government of *A* increases the tax burden and buys foreign exchange with the funds it obtains in this way, which then flows to *B* ; the rate of exchange alters to the disadvantage of *A* ; (b) when the foreign rates of exchange of *A* have reached the point at which gold begins to leave a country, gold begins to flow out of *A* ; (c) the gold reserves of *A* are reduced, and this causes the Central Bank to increase the rate of discount ; (d) the banknote circulation and the volume of credit of the private banks in *A* diminish ; (e) this circumstance, accompanied by a decline in the purchasing power of the inhabitants of *A* on account of the increased tax burden, causes a fall in prices, that is to say, prices in *A* fall below world-market levels ; (f) the trade balance of *A* is affected by this change in prices : exports rise and imports decrease, caused in part by the diminished purchasing power of its inhabitants ; these contradictory movements persist until the export surplus equals the sum which *A* had to pay to *B*. The flow of gold then ceases and the rates of exchange are once again at par, but during the whole period in which the payments are being made price levels in *A* remain below world-price levels.

This is in brief the theoretical scheme, and numerous inductive experiments have shown that it accurately describes the actual facts. However, it would be erroneous to conclude from all this that with the assistance of the mechanical process we have described any particular country could " automatically " transfer any sum it wished. The discussions on the " reparations problem " which followed the first world war, and wide experience since, have shown very clearly that the mechanics of this process, can prove defective and that outside influences of various kinds as well as deleterious effects on the debtor country, can bring it to a stop.

Above all, the reparations to be paid must not exceed that sum which can be raised in the debtor country itself without the imposition of a tax burden so onerous that the whole economic system is upset. And this condition alone is not all. The problem of " transfer " still remains, and its solution presumes an adequate elasticity in foreign demand for the commodities of the debtor country. If it is not elastic enough then prices in the debtor country will have to drop very considerably in order to permit supplementary exports, and then there is a danger that too big a fall in prices and a considerable rise in the rate of interest may have unfavourable effects on production so that the debtor country's capacity to pay decreases instead of increasing.

There is another point to be considered : when the reduction

of imports, which, together with the increase of exports, makes the balance of trade of the debtor country "active", does not represent only goods for immediate consumption which are more or less superfluous, but also includes raw materials which industry requires, and if, in addition, the import of foodstuffs required by the workers as consumers is also reduced, then serious disturbances of the nation's economy can come about—even although for the time being the requisite "foreign exchange" is obtained—so that in the last resort the debtor country's capacity to pay is weakened.

In the past some countries have taken up quite considerable foreign loans over long periods. Generally speaking, these financial transactions proceeded normally, but when the loans were at an end the debtor country often found it extremely difficult to adapt itself suddenly to the new situation. The two most instructive examples of this are the crisis in the United States in 1873 (described by Cairnes) and the German financial crisis in 1931. From 1924 onwards Germany had borrowed large sums in a variety of long- and short-term loans. In 1931 the foreign banks involved gave notice to end the short-term loans so that within a very short space of time Germany had to pay back several milliard marks. The "transfer mechanism" immediately began to work: Germany's balance of trade, which had been "passive" for a number of years, became "active" from one day to the next (to the extent of three milliard marks in the course of 1931). In the end, however, Germany's economic, banking and financial system was unable to stand the excessive strain and the German Government was compelled to suspend payments.¹

17

Economic theory shows that production is regulated by a comparison of "costs" and "value" of goods and services. However, in an "individualistic" economy this means "costs" and "value" from the standpoint of the private entrepreneur: "costs" are then the total expenses of the entrepreneur, whilst "value" is the price he can obtain from the sale of his goods. In practice there are numerous difficulties in the way of discovering the exact costs of a commodity unit and errors are made as a result of which the production factors are wrongly distributed as between the various branches of industry. However, I propose to deal here with a different problem: are costs and value estimated from an individual point of view the same thing as costs and value from the standpoint of society? Observation of the facts teaches us

¹ The facts described here have been dealt with in greater detail in my treatise, *Inductive Verification of the Theory of International Payments*, published by the Egyptian University in Cairo in 1932.

that this is not always the case. It often happens that the costs of a commodity are higher or lower from the social standpoint than from the individual standpoint. And if the costs are the same then the "social" value can differ more or less from the value as seen from an individual standpoint. When this is the case then the resources of the country are not being most suitably distributed from the social standpoint amongst the various possibilities of utilization so that the social product is not the greatest possible. Let us assume that the capital invested in undertaking *A* and in other undertakings yield a return of 8 per cent. From the standpoint of entrepreneurs a state of equilibrium exists. But now let us further assume that undertaking *A* gives off a great deal of smoke which causes damage in the neighbourhood, and that its waste pollutes the waters of a neighbouring stream so that the local community is put to great expense to make its drinking water pure. In this case the costs of the undertaking *A* are considerably higher for the community than they are for the entrepreneur. If he had to shoulder the total costs of his undertaking it might easily prove impossible for him to found it in the first place, to run it profitably afterwards or to extend its operations, and in such circumstances his capital would have been invested elsewhere in a more useful fashion. The authorities can then intervene: by compelling the undertaking in question to pay suitable damages, the difference between "private" and "social" costs can be eliminated or at least reduced so that a better distribution of the country's resources is obtained. A still better example is offered by the institution of accident insurance. From the social standpoint the more dangerous the industrial work involved, the heavier such costs are, but for a long time employers were accustomed to leave it to their workers or to the community at large to bear the costs of industrial accidents. In common law the worker or his family could claim against the employer only if it could be shown that the responsibility for the accident was his. In such circumstances "private" costs are lower than social costs. In our day, however, and in all civilized countries, accident costs represent a charge on industry, and, in particular, dangerous industries have to shoulder an appropriate share of the costs themselves. The same applies to sickness, to incapacity to work as a result of increasing age, and to unemployment. The last-mentioned factor is of especial importance. Employers increase their demand for labour-power in times of good trade and decrease it when a depression sets in. Not so long ago workers had to fend for themselves or turn to the community for assistance when they became unemployed, but gradually the idea was accepted that such costs are in reality part and parcel of production costs and that, to some extent at least, they should be borne by industry. This idea is at the basis of the various forms of social insurance. The

contributions paid by the employers should be distributed amongst the various industries according to the principle that each industry should meet the charges for which it is responsible,¹ otherwise the economic resources of the country will not be distributed amongst the various undertakings to the best advantage and the total product of the country will not be as big as it might be.

Another example of the necessity of State intervention to equalize the costs of various undertakings and so prevent a maldistribution of the production factors is the competition between railway and road transport. An undertaking which uses vehicles for passenger and goods traffic is unfairly privileged as against the railways when road building and maintenance costs are borne by the community. The "private" costs of the undertaking are thus lower than those of the community; therefore in order to eliminate this maldistribution the authorities impose certain charges on the owners of road vehicles.

In this way the State undertakes an important *task of co-ordination* and strives to equalize the "private" costs with "social" costs, thus contributing to the best possible utilization of the national resources.

18

From the social standpoint the product of a capital investment can be larger or smaller than it is from the standpoint of private interest. For instance a leaseholder of land is not to be persuaded to invest capital in it unless he is given an undertaking that he will receive appropriate compensation at the end of his lease.² For this reason it is very probable that many investments which would have been in the interests of the community are not, in fact, made. Suitable provisions protecting the interests of the leaseholder would encourage capital investment in the interests of the community. Another example: let us assume that a farmer reckoned that to drain his land would involve the investment of a capital sum on which interest to the amount of £1000 annually would have to be paid. If the probable annual profit amounts to only £800, then obviously he will not proceed with the work. However, the carrying out of this drainage would also improve soil conditions on the surrounding land so that the total improvement would amount, let us say, to £1500 annually. In this case the social value of the capital investment is greater than its private utility. The

¹ This point is very well put by J. M. Clark in his book, *The Social Control of Business*, University of Chicago Press, Chicago, 1926.

² A more detailed treatment of this example and of others mentioned in this chapter can be found in Pigou's *Economics of Welfare*, Chapter VIII., Macmillan, London, 1920.

same thing is true of the building of a railway, which enhances the value of the land through which it passes. In these cases certain measures can be adopted—for instance, improvement charges—in order to facilitate the carrying out of investments which are advantageous from the social standpoint but which would otherwise not be carried out because the entrepreneur profit would not justify them.

For instance, no one would dream of building a lighthouse with his own capital, because he would not be able to charge passing vessels for its use. Lighthouses have, therefore, to be built with public funds. Scientific investigation to advance technical progress costs a lot of money, and, in addition, there is a danger that the undertaking which puts up the money may not, after all, benefit, or sufficiently benefit, from the results because other undertakings rapidly take advantage of the improvement in working methods. The law, therefore, protects the inventor by granting him patent rights, and special measures are taken to protect his trade-mark. Money spent in training workers is, generally speaking, money well spent from the standpoint of society, but the employer himself will hesitate to spend it, because he has no guarantee that the workers thus trained will remain in his employ. On the other hand, the workers themselves are not in a position to pay for the costs of their training, and so they must be borne by the community. And, finally, there are capital investments which are very useful from the social standpoint, but which yield a return only after a very long time, so that no entrepreneur feels inclined to make them. But the State also represents the interests of coming generations and therefore it is prepared to make such investments—for instance, afforestation schemes—by imposing the necessary burden on the present generation.

The following is a particularly important case : it very often happens that the “social” product of a particular capital investment includes not only material things whose value can be reckoned in cash, but also imponderable advantages of a political or moral nature. From the standpoint of private interest, capital is invested in agriculture only to the extent to which it gives a return approximating to that which can be obtained elsewhere. When the yield of agricultural capital sinks then capital turns elsewhere for opportunities of investment. However, agriculture offers the community numerous advantages of a different kind, for instance, a high rate of agricultural production can make a country independent of food imports, and in the event of war, this is a factor of very great importance ; agriculture also creates favourable conditions for the development of a strong and healthy generation of citizens ; it is also an element of social stability, particularly when it includes numerous small and medium farms ; and further it helps to

create healthy demographic conditions. It is therefore quite understandable that many governments adopt various measures—tariffs, import prohibitions, subsidies, guaranteed prices, etc.—to encourage capital investment in agriculture to a greater extent than would be possible if the matter were left to the free play of economic forces.

19

And now I should like to mention a number of cases in which “social” value is less than “private” value. For instance, the value of alcoholic drinks is very little from the social standpoint, and their excessive consumption produces notoriously evil consequences. Everyday experience shows that many crimes and road accidents can be traced back to the excessive consumption of alcohol. For this reason the production of alcoholic drinks is usually very heavily taxed, and in some countries it is prohibited altogether. In this connection, it should be noted that the market itself provides no corrective against a morally deleterious, excessive consumption of alcohol or against the consequent damage to society. The market is indifferent to moral considerations. Moral judgments are not its concern, and it mechanically satisfies any kind of demand. If working men should prefer to waste their wages in drink to the detriment of their families, the market will offer them the possibility of exercising their preference. The State, on the other hand, judges individual actions from a moral standpoint, and it therefore seeks to exercise an influence calculated to guide the activity of its citizens into socially useful channels.

Wieser rightly observes, in this connection, that it is very easy to solve an economic problem when only calculable quantities are involved! “Everything which promises to yield a profit is economically possible—everything else is out of the question.” Now the problems of economic policy are much more complex because many indirect consequences must be taken into account which cannot be exactly calculated, though they are none the less important to society on that account.

The decisions of the statesman embrace a wider sphere, and it is quite understandable that he should feel no obligation to confine his actions to the sphere of the economically calculable. On the other hand, although economic concepts such as value, price, costs, etc., are very definite, unfortunately people who deal with economic questions in the public interest often show a certain vagueness of approach towards them. The general interests of a country can never be so clearly defined as to exclude all possibility of differences of opinion.

The importance of the examples we have given here should not be overestimated, and they do not alter the fact, as proved by the very considerable increase in general well-being which came about in the course of the nineteenth century, that private enterprise has contributed quite considerably to the general well-being even though primarily it had its own personal profit in view. The task of the State is to eliminate the imperfections of the market as soon as they become evident, but without, at the same time, suppressing the free play of economic forces.

CHAPTER IV

AIMS AND FORMS OF STATE INTERVENTION

I

As I pointed out in Chapter I, it is not the task of economic science to determine the aims of State intervention. They are decided by the political authorities themselves, which is the meaning of the phrase we so often hear now: "the primacy of politics over economics". All the economist does is to discover what aims the economic policies of States pursue, or what they have been in the course of history. They are many and varied. In the last chapter we have already seen that purely economic aims can be combined with other quite different aims.

The aims of economic policy can be divided briefly into three groups: (a) political aims, with particular reference to the safety of the State in the foreign-political sphere; (b) economic prosperity; and (c) social equilibrium.

Economic policy is, above all, one of the means whereby the State seeks to realize its political aims.¹ We can say that economic policy has always been regarded as a part of the general policy of the State, and, therefore, the interests of the State have always been its guiding principle, though, in the past, these interests were often identical with the interests of the king or of a small minority exercising a decisive influence. The primary interest of the State is *the preservation of its political independence*, and its effects can be traced in numerous historical events. In order to attain this end, the State had to increase and consolidate its power, and economic policy was a means to this end. A clear example of this is the Mercantile Policy, so severely criticized by liberal economists. However, the efforts of the "mercantilists" to provide their country with "gold and silver in abundance"—a senseless aim from the economic point of view—can be explained by the fact that gold was regarded (whether rightly or wrongly it is not our business to discuss here) as one of the most effective means for the victorious prosecution of war. The development of economic policy also proves the validity of the axiom formulated by modern historians that international policy governs domestic policy, so

¹ One of the many services rendered by Galiani is that he revealed the political aspect of concrete economic questions. In a town which may well be subject to a siege, he wrote, grain becomes a "munition of war" and the grain trade is a matter for the authorities.

that, in fact, the principles of economic policy come within the sphere of the former.

During the heyday of economic liberalism it looked as though economic considerations were superior to political considerations, and this is the gravest accusation the nationalists of various countries have to make against a liberal economic policy. For instance, prior to the war of 1914-18 German governments allowed Germany to become more and more dependent on other countries for her raw materials and foodstuffs. At that time a semi-liberal policy was pursued, because the authorities did not regard the possibility of war as a very great danger. Nineteenth-century wars were, generally speaking, of short duration and without any very serious economic consequences; they usually involved only two belligerents, and it was considered highly unlikely that a Central-European country would ever be at war simultaneously with so many other countries that it would find itself cut off from its sources of supply. In any case, sufficient stocks of raw materials and food could be accumulated to satisfy both military and civilian needs—on the assumption that the war would be of short duration. But the experiences of the first world war demonstrated the error of such a view, and subsequently the safety of the country became the main aim of State interests. And when, in the years which followed the conclusion of the first world war, the danger of a second conflict became more and more obvious, numerous States turned to a more or less definite policy of economic self-sufficiency.

However, the mere fact that a certain policy is adopted does not mean that it is the rational and inevitable result of given circumstances. The so-called "historical school" of economic science made the mistake of trying to justify everything by applying its favoured concept of "relativity". Those people who think that any system of economic policy must be of some benefit to humanity even when it obviously fails to achieve its ends, are over-optimistic. Economic policy is not only the result of objective conditions: it is also the result of voluntary decisions, because in the last resort human beings examine these conditions in the light of State interests (or at least what they consider to be State interests), and act accordingly. Certainly, statesmen of genius can arrive at a correct interpretation of these objective conditions, but others can just as easily go wrong, either in the aims they adopt or in the means they adopt to achieve them. For instance, at a time when the inter-relations of economic phenomena were still only very vaguely understood, the Mercantile Policy committed more than one error, brilliantly exposed by Adam Smith in his famous work.

The course of history has been affected throughout by the conflict between "public policy" and the moral law. Economic policy, perforce an instrument of policy in general, has been unable

to evade this conflict. Its measures have often taken on the character of predatory raids. Consider, for instance, the shameful exploitation of the colonies under the Mercantile Policy.

2

The prosperity of the country, as a whole, was also at all times the final aim of economic policy, irrespective of the particular political structure of the State. Certainly, one or two pioneers of the liberal idea, for instance, B. W. von Humboldt, have denied that the State is under any obligation to exercise any economic function whatever. However, such views have been of little practical influence, and, in fact, the liberal State also took measures to further the economic welfare of the country.

The third aim of economic policy, namely, the preservation of the "social equilibrium", has come to the fore particularly during the present century. For instance, Article 151 of the Weimar Constitution, an ill-starred but extraordinarily interesting experiment in "social liberalism", provided: "The economic order shall be in accordance with the principles of justice and the aim of a worthy and dignified existence for all. The economic liberty of the individual shall be guaranteed within these limits." And, according to a pronouncement of the Swiss Federal Council: "Political power had the task of securing the unity and harmony of social life. . . . The Federal Republic of Switzerland sees its primary task in the re-establishment of the social equilibrium."¹

After the second world war the economic policy of a number of countries adopted "Social Security" and "Full Employment" as their objectives, and "Social Services" were developed, particularly in Great Britain. Discussion has set in generally concerning "The Welfare State", its tasks and the limits of its social activity.²

The equilibrium of life is also subject to disturbances. Certain cells will occasionally upset the well-ordered whole of which they form part, and with which, normally, they work harmoniously. They increase excessively perhaps, and develop destructive forces. Something similar often happens in economic life. The modern State directs its attention primarily to those disturbing factors which accompany an excessive inequality in the distribution of individual income. With this it does nothing more than take the path laid down by all great religions. It is a well-known historical fact that in the Middle Ages the Catholic Church organized an admirable system of measures for the relief of the poor and the

¹ Rappard: *L'individu et l'État*, p. 42, 1936.

² In his standard work, *Lezioni di Politica Sociale*, Turin, 1949, Luigi Einaudi has dealt with the problems of social economics from both the scientific and the "human" standpoint.

needy. The Koran also calls upon the faithful to alleviate the lot of the poor by regular annual contributions (Zekkat) according to individual means.

3

The three purposes we have listed are not independent of each other. The relations between the security of a State, its economic well-being and its social equilibrium are of an extremely complicated nature. The increase of well-being is also an element of political security, because a country is thereby better able to raise the sums necessary for its defence, and to stand a long and costly war should the need arise. The higher the living standards of a people before a war the easier it is to lower them during a war, and in this way to release production factors for use in the prosecution of the war. Further, an increase in the national wealth—as the experience of the past century has proved—contributes to raising the living standards of the working class with the result that social disparities are diminished.

However, a contradiction often arises between the aim of State security and the maximal product, and between the latter and the social equilibrium. It can easily happen that politico-economic measures introduced to consolidate the safety of the State unfavourably affect its economic well-being. This can be seen very clearly in the phenomenon known as autarchy, or the policy of economic self-sufficiency, as a result of which goods are often manufactured at home when they could be imported under much more favourable conditions. Further, social measures to the benefit of the working class can prevent an increase in the total national income. Expenses for social services may overstep the limit beyond which they become positively harmful.

The acceptance of the axiom of the primacy of politics over economics does not exclude the factor of economic calculations. On the contrary, any measure taken with a view to increasing national security which at the same time involves an unfavourable effect on the increase of the national income includes an economic problem. With the assistance of protective tariffs, import prohibitions or direct subsidies, “economic planning”—which pursues primarily political aims—seeks to turn a certain part of the production factors towards those industries it wishes to encourage, whereas such production factors—from the purely economic standpoint—would be much better utilized elsewhere. In such a case the total product which is obtained in this fashion is less than the *absolute* maximum obtainable provided the distribution of the production factors amongst the various industries is left to the free play of economic forces. However, the question still remains as to what

conditions must be satisfied to secure the maximum product consonant with the limitations the State has decided to impose. These conditions are formulated by economic theory. A war economy cannot evade the economic question of how the resources intended for the production of war materials can be utilized in the best possible fashion.

Within the framework of politico-economic measures with a political aim there is still a limit which must not be crossed, otherwise decline in economic prosperity will be followed by a decline in the political and military resources of the country. It is quite clear that there is a limit to self-sufficiency measures: the favourable effect of the first measures taken in the interests of national defence, and designed above all to eliminate the worst difficulties, will certainly be considerable, whilst the accompanying circumstances unfavourable to economic prosperity will, all in all, prove insignificant. But when the policy of economic self-sufficiency is pursued more and more intensively and applied to more and more branches of production, then the number of cases where capital and labour are both transferred from more to less productive purposes increases and economic tension grows. In the end, a point is reached at which the advantage of further self-sufficiency for the safety of the country would be more than offset by the economic and social disadvantages involved, for instance, an excessive decline in the living standards of the masses which would result in dissatisfaction, a decline in public health and a reduction of labour productivity.

4

As I have already pointed out in Chapter I, the "theory of economic policy" investigates and classifies the various forms of State intervention according to their nature and the measures which the State uses to attain particular ends.

Above all, we must distinguish two fundamentally different forms of State intervention: (1) the State contents itself with influencing the actions of the individual in a certain direction; (2) the State takes over the exercise of certain economic functions on its own account.

The actions of individuals can be influenced and changed in a great variety of ways: (a) the State intends by means of various incentives, such as the granting of premiums, subsidies, tax relief and so on (cf. Chapter V, 2) to encourage people to adopt certain occupations, or, by means of taxes, levies on production and so on, to keep people out of certain occupations. In such cases the State does not compel the individual to do this or omit that, but confines itself to introducing a whole system of encouraging or dis-

couraging measures ; (b) the State seeks to convince the individual that it is in the interests of the community that he should act, or desist from acting, in a certain fashion. This particular type of State intervention has come to the fore in recent years, thanks to the powerful means of propaganda which modern technique places in the hands of governments. Behind this propaganda is the idea that to convince is a better way of attaining ends than controls and prohibitions. The authorities hope that in this fashion moral control factors will develop in the community, and the importance of this is rightly prized since voluntary co-operation is worth more than co-operation which is enforced by authoritative measures. In this way the State seeks to awaken a feeling of responsibility in the employing classes towards the workers and towards the community as a whole, and, quite generally, to persuade the individual to put the interests of the community before his own personal interests and to surrender his own wishes and tastes. For instance, before the last war widespread propaganda was conducted in Germany to persuade the population to change its consumption habits and to purchase agricultural and industrial goods produced at home in preference to imported goods.

(c) The State issues regulations forbidding the individual to do certain things, for instance, to import certain commodities, to produce certain kinds of goods, or to send money abroad ; or compelling him to do certain things, for instance, to inform the State concerning his gold holdings, foreign deposits, stocks of copper, rubber tyres, and so on, and to deliver them up to the authorities. Experience has shown that such regulations are ineffective in the long run, even when severe sanctions are attached to their violation, if they do not meet with the approval of the general public.

Control exercised by a public authority is not the only kind of control over the activity of the individual. Several forms of control develop from the spontaneous co-operation of individuals within a particular branch of industry. For instance, entrepreneurs in industry have often come together and agreed to tone down certain abuses of free competition, such as excessive expenditure on advertising, or in order to fix a uniform price and carry out a uniform supply policy. Unfortunately such agreements were often the first step to the formation of monopolies. Some social classes have set up a special "code" for the behaviour of their members, and such codes are often very effective in determining individual actions. However, such forms of regimentation often pay too little attention to the general interests because they originate too exclusively in class egoism and are motivated by a desire to establish a false solidarity amongst the members of one and the same class. And finally a sort of indirect control has developed in society based on certain religious and moral forces. Public opinion and the press

are the organs of a highly efficient control by the community over the individual.

Even in countries in which the principles of private property and private enterprise are recognized, the State often undertakes economic functions on its own account, i.e., the direction of industrial undertakings. The motives which lead the State to adopt such practices are many and varied : (a) the necessity of effectively representing an important political interest, for instance, the production of arms and ammunition, the building of warships, etc. ; (b) to prevent the formation of a private monopoly which undoubtedly would arise if certain branches of industry were allowed to remain in private hands, for instance, the railways, electricity, water- and gas-works, in short, all undertakings summed up in the expression " public utilities " ; (c) to create a monopoly in the interests of the Treasury (tobacco, salt, etc.) ; (d) to come forward where private enterprise is absent with public works, etc., but in this case it is not absolutely necessary that the State should undertake the works on its own account ; it can contract them out to others.

There is already a voluminous literature on the industrial activity of the State, which has come to represent an important chapter in economic policy, and, therefore, we propose to confine ourselves to these few brief indications.¹

5

Finally, the various forms of State intervention can be classified according to another method indicated by economic analysis. In the beginning I pointed out the eminent importance of the results achieved by economic science : economic quantities are not arbitrary magnitudes, but the logical result of a number of " given magnitudes ". When the State intends to change certain economic magnitudes, for instance, prices, then it can proceed as follows : (a) by influencing the " given magnitudes " in a definite fashion in order to change them whilst leaving it to the operations of the market to determine automatically the new values of the economic quantities in question (for instance, the new prices) in accordance with the new " given magnitudes " ; or (b) by exercising a direct influence on the economic magnitudes themselves and determining them authoritatively, for instance, by fixing official prices.

In the following chapters we shall investigate these two cases.

¹ So-called " mixed " undertakings are also frequently to be met with, that is to say, undertakings which are private in their form but in which the State is more or less a partner. Concerning the functions of the State in economic affairs consult the detailed treatment given by Alberto Giovannini in his *Corso di Politica Economica e Finanziaria*, Padua, 1939, and also G. del Vecchio's *Politica Economica*, Padua, 1933.

CHAPTER V

STATE INTERFERENCE WITH GIVEN ECONOMIC MAGNITUDES

I

“ GIVEN magnitudes ” in economic questions can be the following :

(a) The generally given conditions of the environment in which the economic life of a people proceeds, such as climate, the fertility of the soil, ore deposits, the geographical situation, the population figures, the mental and moral characteristics of the people, the system of law, social institutions and so on.

(b) Particular data, that is to say such data as directly affect a certain problem, for instance, the production of ores, which depends, apart from a whole series of general conditions, on special conditions such as the presence of coal and iron, the possibility of importing ore, and foreign competition.

By its intervention the State can alter not only the general, but also the particular, conditions. With regard to the former, I have already pointed out that in the opinion of liberal economists it is the main task of the State to create the most favourable general conditions for the free development of individual enterprise. There is no doubt that if it pursues a wise policy the State can increase the well-being of the country. Means to this end are : the spread of technical education ; the encouragement of scientific investigation ; the development of the hidden resources of the country ; measures to preserve the soil ; agricultural ameliorative works ; river catchment works ; public works in the general interest ; suitable currency measures, and so on. With the assistance of such measures the “ given magnitudes ” can be altered quite considerably. Consider, for instance, the effect of the building of canals or the boring of tunnels on the costs of production and on inland and foreign communications. Further, by changing the laws the State can often create a necessary condition for economic progress, and to this end far-reaching legislative reforms are often introduced. Consider the Stein-Hardenberg reforms in Prussia, which made rapid progress possible by abolishing a system which grievously hampered agricultural production.

Certain fundamental facts which represent characteristics of whatever environment is in question, such as climatic conditions, geographical situation, the presence of ore deposits, the relation

between the size of the population and the area of arable land, can sometimes be changed by the State, but sometimes they can be affected only to a minor extent. Some authors conclude from this that the economic policy of a State is fundamentally nothing but the necessary consequence of the influence exercised by certain natural factors.

This opinion is only partially correct. Certainly, economic policy, like any other policy, is only "the art of the possible". It must be based upon the given facts, and in some cases these determine the direction of the government's policy so that only minor deviations from the basic trend are possible. In the apt words of Pantaleoni, the wisdom of the statesmen consists in recognizing which of the factors of economic development can be altered by State intervention (and to what extent), and recognizing at the same time which factors militate against the change. On the other hand, economic policy does not merely adapt itself to the given environment, but reacts to it and seeks to change it. Economic policy is also the result of a choice and of a deliberate act. Where certain environmental conditions are particularly unfavourable, it often happens that economic policy does not passively adapt itself to them—although, of course, they must always be taken into account as objective facts—but adopts measures with a definite end in view (usually of a political nature) despite the unfavourable conditions. Incidentally, the progress of science and the increasing possibilities of its technical application seek to make economic production less dependent on natural conditions.

The efforts of the State to alter the "given magnitudes" of the economic situation in the interests of the community find their limits where the advantages created by State expenditure, which must be drawn in one way or the other from private sources, thus involving a diversion of economic resources from other tasks—are less than those which the same expenditure would produce if it were carried out by private individuals in the fashion chosen by them. Public works are certainly useful on the whole, but they swallow up both capital and labour-power which, from a certain point on, could be better utilized in the interests of the community by private undertakings. For this reason the visible results of public works can often be deceptive because it is often quite possible that from the purely economic standpoint (i.e., without taking any other factor into consideration) they may be a very bad bargain for the community.

If the measures adopted by the State to create the most favourable general conditions possible for the economic activity of its individual citizens are to bear the greatest possible fruit then expenditure on individual measures must be carried out within the framework of a carefully calculated integrated whole. For

instance, it is certainly desirable that every population centre should be connected by excellent roads with every other, but it is clear that further extension of the road network must stop where the expenditure involved could be used elsewhere to greater advantage, for instance, for the building of schools. Further, a correct proportion must be maintained between expenditure which produces results within a comparatively short space of time, and expenditure which will produce results only for the benefit of future generations and correspondingly reduce the benefits enjoyed by the present generation. We have already seen (cf. Chapter II, 8) that, thanks to the rate-of-interest mechanism, a rational distribution of present and future investments is quite possible where private capital is concerned. However, where State investments are concerned, this mechanism is often not applicable—or if it is applicable, then other considerations make themselves felt, for instance, of a political, social and strategic nature.

2

Examples of State intervention which bring about changes in the special conditions in which certain industries operate are taxes on production or premiums granted to certain types of production, subsidies, tax reliefs, customs duties, export premiums, and so on. The purpose of a subsidy is obvious ; without it the selling price would be under the costs of production and production would be made impossible. Thanks to the subsidy the disproportion between prices and production costs is eliminated. This can come about in various ways : either the costs are reduced by a direct subsidy, or the State undertakes to purchase the commodity in question at a price which will cover the costs of production. Sometimes the authorities prefer the indirect method of increasing demand for the commodity in question by compelling entrepreneurs or other consumers to purchase it in preference to other commodities. Concealed encouragement is given to an industry when the State enables it to buy its raw materials at preferential prices. Now and again the State contents itself with guaranteeing a definite rate of interest on invested capital, and if profits do not reach that special rate then the State pays the difference. To-day what is called "price policy" is a measure frequently adopted by the State to achieve certain ends : the prices of certain commodities are deliberately raised or lowered by the authorities in order to encourage or discourage certain branches of production. In 1936, for instance, the German Government raised the price of grain by six marks a ton and announced that the price would remain stable until the end of the harvest, so that any delay on the part of producers in delivering up their grain would involve increased storage costs.

This was done in order to persuade the peasants to deliver their grain as quickly as possible to the collection centres.

The question of the influence exercised by taxation, subsidies and customs duties on prices in a free market is one which economists have thoroughly investigated, and it represents one of the most interesting chapters of economic policy. Let us assume that the State decided to place an impost on each commodity unit. To what extent would prices rise? Would they rise to the extent of the impost, or more, or less? That depends on whether the commodity was produced at fixed costs, or rising or falling costs.

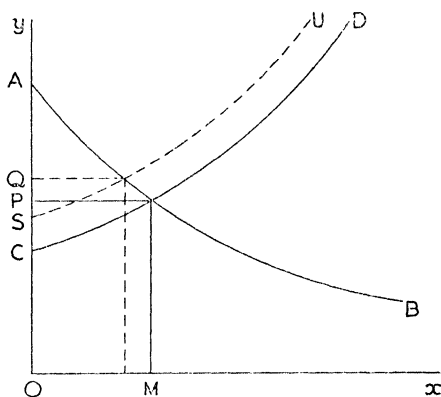


FIG. 2.

Or the State, let us say, places an import duty on a certain commodity. To what extent will its price increase in consequence? A careful analysis is necessary if such questions are to be answered satisfactorily.

Here I propose to confine myself to a simple example in order to illustrate the essence of the questions which arise. Let us suppose that a particular commodity is produced at rising costs, indicated by the curve CD in Figure 2, in which AB represents the demand curve, whilst the quantity produced is measured along the line OX. In this case OP is the price in a state of equilibrium. The quantity produced is then OM. The State intervenes by placing a uniform production impost to the extent of CS per ton. The cost line then rises uniformly and takes the position indicated by SU. After a transitional period a new balanced price develops: OQ. The diagram shows that in this case the increase in price is less than the impost which has to be paid (actually $QP < CS$). This can be easily explained when we take into consideration the fact that the

influence of the impost on the price is compensated in part by the decrease of "marginal costs" of production as a consequence of the reduced volume of production. If the assumption is changed then different conclusions will result.

In such investigations the concept of the elasticity of demand proves very useful. Let us assume that the Finance Minister increases a tax in order to raise tax revenue; it can easily happen that exactly the opposite result is obtained if the demand for the commodity in question is particularly elastic and in consequence a considerable fall in demand takes place. A few years back the Egyptian Government placed an export duty on cotton in the hope that it would be paid by foreign purchasers. It was disappointed. As the demand for Egyptian cotton was very elastic, the increase in price brought about by the duty resulted in a considerable fall in demand so that exporters were not in a position to pass on the duty to importers. In the end the Egyptian Government was compelled to abolish the duty altogether.

3

Figure 2 shows us that a new equilibrium seeks to establish itself in connection with the new factors as soon as the State changes the production conditions of the commodity, but at the same time permits the market mechanism to continue to operate without hindrance. However, an investigation of the effects of State intervention cannot satisfy itself merely with this discovery. A subsidy granted to a particular industry, or the imposition of a protective tariff, naturally shifts the whole distribution of the production factors amongst the various kinds of undertaking. Capital and labour stream towards the favoured industries (despite the fact that the social marginal product there is considerably lower than in the other industries) because the private marginal product is artificially raised in the interests of the entrepreneur thanks to the protective tariff or the subsidy. Production factors are no longer distributed in a fashion calculated to yield the maximum total product and the community suffers a loss (except in certain cases, of which more later).

In consequence of the inter-relation of all economic magnitudes, the imposition of a tariff, the granting of a subsidy, or the introduction of a new tax which affects commodity *A*, produces a series of disturbances affecting commodities *B*, *C*, *D*, and so on. For instance, by imposing an import duty on iron and steel a government can encourage the development of an iron and steel industry at home. However, as a result, the price of steel plates, iron girders, and so on rises, and in consequence the costs of the engineering industry increase, and it is placed at a disadvantage

towards its foreign competitors, whereupon the export of engineering products begins to decline. The State must then adopt measures to prevent the development of an engineering crisis, perhaps by introducing export premiums or by allowing the engineering industry to import iron and steel products duty free. In Germany the big steel syndicate, which, thanks to a protective tariff, was able to sell its products at a much higher price at home than that prevailing on the world market, developed a complex system of compensations for the benefit of the German engineering industry.

It would be an easy matter to quote innumerable examples of economic and social disturbances caused by tariffs. Import duties on agricultural produce result in a rise in the cost of living which is followed by a rise in wages, thereby increasing production costs and making it difficult for entrepreneurs to maintain their position on the world market. That is why English entrepreneurs fought so vigorously against the corn tax, which was finally abolished by Peel in 1847. On the other hand, a country whose economy is based mainly on agriculture risks serious damage to its agricultural exports if it imposes import duties on foreign industrial goods. However, in such cases purely economic considerations often have to give way to political considerations.

4

The aim of a protective tariff is to eliminate the difference between the production costs of the protected commodity at home and production costs abroad. Things become more complicated when the commodity in question is produced at home at various costs according to the production site. This is, for instance, the case with grain. Given favourable soil conditions grain can be produced, let us say, at a cost of 100 per cwt., whereas in inferior conditions it will cost 105, 110 or 120. Assuming that the world market price for grain is 105 (including transport costs), then grain cannot be produced on soil where the costs of production are more than 105, but when, thanks to a protective tariff, the domestic price is raised to 120 production can be extended to the less-favourable soils. At the same time, the profits of landowners who are in a position to produce grain at lower costs increase, in other words, there is a redistribution of the national income to the benefit of the owners of better-situated farms, and to the disadvantage of the consumers. A few years ago a calculation was made concerning the very considerable sum which went into the pockets of landowners in Italy as a result of the grain tariff. In such circumstances it would be better not to introduce a protective tariff, but to subsidize those farmers who, in consequence of poor soil, could produce grain only at higher costs. Compared with a protective

tariff a simple subsidy has the advantage of always showing clearly the exact burden to be borne by the community in return for encouraging any particular branch of production.

Tariffs, subsidies, premiums, and so on, raise very ticklish economic problems: certain social classes reap advantage from them to the detriment of other social classes, and in this way sharp conflicts of interest are produced between various groups of producers and even between various parts of the country. And, finally, the vigour and enterprise of industries which are protected and subsidized in this fashion decline by comparison with other industries in which they are kept alive and encouraged by the hard competitive struggle. Consider, for instance, the failure of shipping subsidies in certain countries.

No one will deny the usefulness in certain cases of granting subsidies. Economic theory itself enumerates cases in which the introduction of a protective tariff can be of advantage, even considered from a purely economic point of view.¹ The liberal economist, John Stuart Mill, was in favour of the introduction of tariffs to protect "infant industries". Unfortunately, this condition was often ignored in practice, and very often the only ones to benefit from subsidies and tariffs were groups dominated by private interests, so that public monies were wasted. At the very least it should be generally accepted that all undertakings which are supported in one way or the other out of the public funds should no longer be regarded as purely private undertakings, and that they should therefore be under public control.

5

From what has been said already it is quite clear that there is a great difference between State intervention which aims at creating the most favourable circumstances possible in the interests of social prosperity, and State intervention in the form of tariffs, subsidies and premiums which aims merely at changing the conditions of production in this or that particular industry. With an increase in population and a rise in general well-being, there is no objection whatever to the State extending its field of operations in order to create the best possible circumstances for individual enterprise, provided that it respects the limits laid down above; for instance, the extension of the road network and the increase of

¹ Einaudi observes in this connection: "However, almost always we can see that swindlers and robbers exploit these theoretical admissions in order to pocket public funds. Amongst them are the founders of allegedly young industries which, however, never develop, and adventurers who direct industries which do not serve to protect their country but to destroy it." (*Rivista della Storia economica*, p. 49, 1941.) Many such examples are cited by him in his book, *La condotta economica della guerra*.

public expenditure on health and education so that even the smaller centres can have good drinking water, decent school accommodation, etc. However, a plethora of tariffs and subsidies defeat their own end, lead to senseless results, and, in the last resort, create only confusion and cause damage so that the economic system, as a whole, is the sufferer. It would be senseless to grant all industries subsidies or to protect them by tariffs. For instance, if it was desired to protect the textile industry by a tariff it would be senseless to place a duty on the import of machinery as well, as in this way the costs of production in the textile industry would be increased.

But when tariffs and subsidies are used moderately and with care for a limited number of commodities, and when in particular the market mechanism is not paralysed at the same time, then the whole economic system will automatically adapt itself to the new situation and a new equilibrium will result. Even before the first world war various governments introduced protective tariffs, but, at that time, protectionism was balanced by long-term trading agreements which fixed neither prices nor quotas, but merely erected a sort of framework in which the economic relations of the various countries could develop freely under the impulse of private enterprise. Thus each economic system preserved a certain elasticity which is impossible nowadays owing to the methods of control over foreign trading. This circumstance also explains how it was that these protective tariffs did not prevent the tremendous development of international trade which statistics clearly show to have taken place in the years before the outbreak of the first world war. Thus tariffs on textile goods undoubtedly had a tendency to limit textile imports, but, on the other hand, they encouraged the import of machinery, dyes, and other commodities which were essential for the newly developing textile industries. The tariffs did not eliminate the international division of labour although under the influence of the protectionist policy pursued by many countries it necessarily took on a somewhat different aspect (cf. Chapter XII, 4). After 1930, however, State intervention in international trading assumed such dimensions that the inevitable result was a great decline in international trade, and a general impoverishment of the peoples.

The effect of customs duties—as of all State intervention—is highly complex, because the circumstances with which they coalesce are different from case to case. A very important circumstance which is not always sufficiently considered in discussions of this problem is that when a country adopts tariffs its production factors are often not being utilized to the full, and thus a surplus of labour-power is available. Now the case can arise that by making the protected industry appear more attractive the tariff,

together with other factors such as the safety of foreign investments, encourages the influx of foreign capital into the country in the form of machinery, raw materials and consumer goods for the working class. In this case, the protected industries do not deflect production factors from other industries. But the question of costs remains, because costs in the protected industries are higher than in those of competitive industries abroad—otherwise the introduction of the tariff would have been unnecessary.

6

When during the course of a period of crisis production factors lie idle, then the granting of a State subsidy to a certain industry, or to certain chosen industries, not only assists the directly favoured industries to get to their feet, but, in addition, it can strengthen a whole section of the economic system because, of course, one factor is inter-related with the other. A characteristic example is offered by Germany's economic policy in the years before the second world war. In 1933 the German Government declared itself prepared to grant house-owners a subsidy (to the extent of 25 per cent of their expenses), if they undertook to carry out repairs or improvements to their houses. This subsidy, which amounted to about 700 million marks, persuaded house-owners to expend about 2100 million marks on their own account. This very considerable investment of capital proved a great impetus for all trades and industries connected with building. The subsidy worked as a "multiplier".

Even tax relief can, under certain circumstances, benefit other industries than those industries directly affected. For instance, the abolition of the onerous motor-car tax in Germany in 1933, which was reflected in a substantial reduction in the price of motor-cars, resulted in a rapid development of the motor-car industry (a great propaganda campaign was also conducted in favour of "motorization"). The value of motor-car production rose fourfold in the years from 1932 to 1936, and, at the same time, the number of workers employed in the industry increased from 34,000 to 120,000. All industries connected with the production of motor-cars also experienced a powerful fillip. The tax abolition also worked as a "multiplier". Neither in this, nor in the case previously mentioned, were there any disadvantageous consequences for other industries, because the rapidly extending industries were able to draw freely on the reserves of capital and labour which had accumulated during the economic crisis. However, the distribution of subsidies must take place in such a way that there is not merely a shift in purchasing power from one to the other, such as would be the case if the monies intended for subsidies were obtained by means of taxation.

7

Even when the market forces are given free play, the distribution of the production factors amongst the many possibilities of their utilization is often not the best possible even from the purely economic point of view (cf. Chapter III, 17). In such circumstances one might well conceive of taxes or subsidies which aimed at eliminating disturbing disparities or, at least, reducing them, by securing a better distribution of the economic resources of the country to the benefit of the national income.

According to Pigou there is a tendency in a free market to invest too much capital in some industries, and not enough in others. And in consequence the former should be taxed, and the latter encouraged by subsidies. His proposal remained theoretical because its practical execution came up against insuperable difficulties.

8

Particularly noteworthy are certain forms of State intervention in which the State does not issue regulations or prohibitions, does not fix prices or production quotas, does not impose taxes or grant subsidies, but takes certain measures either directly or with the assistance of other bodies, with a view to neutralizing the actions of individuals or groups which, in its opinion, run counter to the general interests. A typical example of this is offered by the comparatively recent introduction in some countries of a so-called "exchange equalization scheme" as a protection against the effects of "abnormal" movements of gold, i.e., gold movements which are not caused by economic factors, but are carried out for political reasons or as the result of a sudden panic. Let us assume that large quantities of gold suddenly flow from countries A, B, C to country X, where savers consider it safer. This will result in an increase of the gold reserve, the currency, the volume of bank deposits, prices and credit in X. And then, when foreign holders have recovered their confidence, the reverse process can set in just as suddenly and produce the contrary effects. The exchange equalization scheme, of which the "Exchange Equalization Account" in Great Britain is an excellent example, neutralizes the consequences we have enumerated above, and works in the following fashion. The Exchange Equalization Account holds a considerable reserve of gold and Treasury Bonds. If there is an influx of gold into the country it buys it up, not with the aid of newly issued pounds, but with the money it obtains by selling Treasury Bonds on the market, and in this it differs from an ordinary bank of issue. In this way, the effects of the gold influx on currency,

prices, etc., are cancelled out. When gold begins to flow back again the "Account" sells it against pounds which it then uses to buy Treasury Bonds on the market so that the pounds come into circulation again.

Another example of State intervention can be seen in times of crisis when the government observes that private entrepreneurs are no longer investing their capital, or the funds afforded by the savings of the public, because they have no confidence in the future (as a result there is widespread unemployment), and then proceeds to draw up and carry out a programme of public works. But, in boom periods, when private entrepreneurs show a tendency to invest too much capital, the State suspends or reduces public works as far as possible in order to diminish the tension on the capital and labour markets (cf. Chapter X, 7).

CHAPTER VI

DIRECT INTERFERENCE WITH THE MARKET “MECHANISM”

I

As distinct from such measures of State intervention which seek merely to alter the “given magnitudes” of the economic situation, that which seeks directly to determine certain economic magnitudes such as commodity prices, quantities produced, imports and exports, wages, the rate of interest, and so on, I call “direct interference with the market mechanism”. The market is replaced by authority. However, we must distinguish between the following cases :

(a) As a result of the imperfections of market conditions it can happen that the price which actually forms on the market differs more or less from the price which would have been formed on the assumption of “perfect” market conditions. For instance, thanks to the ignorance of the consumer, or, thanks to a previous agreement amongst themselves, producers may succeed in selling a commodity at a price of 100, when the price under conditions of free competition would be only 90. The State now intervenes and fixes the price at 90, whereby unjustifiable profit is prevented. In this case the intervention of the State aims at freeing the automatic economic forces of the market from certain “resistances” which prevent their unhindered development. According to liberal economic theory it is precisely one of the main tasks of the State to create a perfect market as far as possible so that free competition can operate unhindered, a market in which there is no place for monopolists and privileged groups or individuals. We must keep the two expressions “economic liberty” and “free competition” separate. Liberal economic theory recognizes the necessity for the limitation of economic liberty (for instance, the freedom of the employers to come to arrangements amongst themselves) when the preservation of free competition is at stake.

A further example is State intervention to influence prices when the market leaves certain prices “indeterminate” because the conditions necessary for their formation do not spontaneously arise (cf. Chapter III, 5). Finally, the State intervenes to accelerate the re-establishment of the disturbed equilibrium when it is delayed by the “sluggishness” of certain economic factors.

(b) The State fixes economic magnitudes which are not in accordance with the market situation.

The cases (a) and (b) must be clearly separated from each other. When, in the first case, thanks to State intervention, economic equilibrium is restored, the matter is at an end. In the second case, however, a disturbance is created which makes further intervention necessary in order, as far as possible, to eliminate the disturbance. We propose to deal here with case (b), which is much more interesting.

Figure 3 illustrates the problem. AB represents the curve of demand; OM represents the quantity of goods offered on the

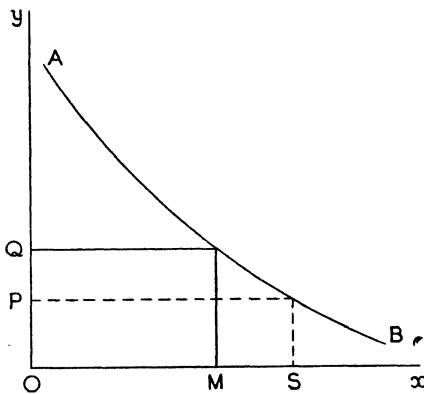


FIG. 3.

market. These are the "given magnitudes" of the problem. On a free market OQ would be the equilibrium price. Now in order to meet the wishes of consumers the authorities fix a maximum price OP. From the diagram it can be seen that the first effect of this State intervention is to create a disparity between supply and demand because the quantity of goods demanded at the fixed price OP is OS, which is greater than the quantity available on the market. Economic forces are, therefore, at work striving to drive the price above the maximum fixed by the State. And in fact past experiences have repeatedly shown that the mere fixing of maximum prices is generally ineffective. The excess of demand over supply sets up a pressure which renders the fixed maximum price practically useless. In reality the commodity in question, or part of it, is sold, either openly or covertly, at a higher price. But let us assume that no one tries to evade the fixed maximum price, i.e., that the total volume of commodities OM is disposed of at this price. The result

is that a part of the consumers will be unable to satisfy their demand and will have to put up with smaller quantities than they require. Queues will form in front of the shops. Those who come first, those who have the greatest persistence and patience, and those who are on good terms with the shopkeeper will obtain the commodity and the others will have to go without. This is also a disturbance of the economic equilibrium. Thus it is by no means enough for the authorities to fix maximum prices: in addition they must strive to establish the conditions necessary for market equilibrium, i.e., they must try to equalize supply and demand. When free market conditions prevail then, as we have seen, this equalization is automatically brought about by price movements. Now if the price is officially fixed the equilibrium must be attained in some other fashion.

This can be brought about either by an increase in the volume of commodities available or by a reduction of demand. In general, and particularly in times of shortage, the latter method is chosen and rationing is introduced. In this way total demand can be brought within the limits of availability and, in addition, it prevents those who have bigger purchasing power from obtaining more than their share. When the commodity is rationed each citizen gets his fair share. Where the clothing industry is concerned individual demand is so varied that it is not easy to give each individual a definite "ration". This difficulty was solved during the second world war by giving everyone a certain quantity of coupons, a method which was adopted by many European countries.

The distribution of coupons can be used together with a system of price scales for one and the same commodity according to the particular consumer class in question—always with the aim of favouring the poorer classes. Finally, certain goods can be sold at lower prices exclusively to poorer people.

2

We have now investigated a case in which the authorities intervene to reduce prices in the interests of the consumer, but very often the interference in market relations is carried out in order to increase the price in the interests of the producer. During the world economic crisis (after 1929) the attempts of many governments to "valorize" the price of certain products such as grain, cotton, coffee, and so on, offered many examples of this—but the policy was condemned to failure.

When the price officially fixed is in excess of the price which forms naturally on the market then demand shrinks and the supply of the commodity in question exceeds the demand, and the result must be a drop in the price unless the authorities intervene again

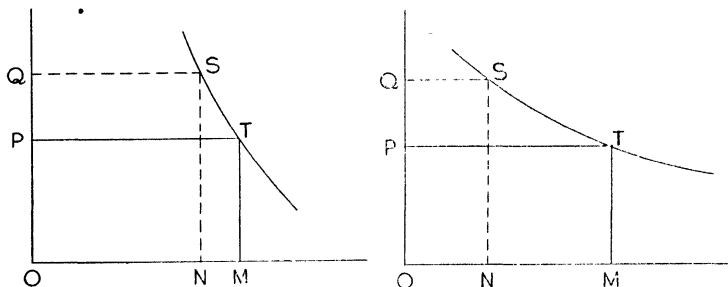
with further measures. A measure which is frequently adopted by price-control authorities is to purchase such quantities of the commodity in question as the market cannot absorb, in the hope that in this way they will succeed in equalizing supply and demand and in making the official maximum price the equilibrium price of the market. However, in such circumstances producers see no reason to throttle supply, a thing they would most certainly do if the market price fell. The authorities are then compelled to buy more and more until the financial burden becomes too onerous, although the lack of equilibrium on the market persists obstinately and possibly intensifies. A characteristic example of this was the intervention of the Egyptian Government in the cotton market some twenty years ago. In order to assist the cotton growers, it fixed prices for the most important kinds of Egyptian cotton which were considerably above world-market levels and then declared itself prepared to purchase any quantities of cotton at the fixed prices. It was hoped that this measure would greatly benefit the Egyptian economic system by compelling foreign importers to pay higher prices for Egyptian cotton.

This example also demonstrates the practical importance of the concept of the "elasticity" of demand. Let us assume that the quantity of cotton on the market equals OM , and that the market price formed before the intervention of the State was OP . Now the State intervenes and fixes the price at OQ . The first consequence of the rise on the market, which is particularly sensitive when the demand is elastic, is a decrease in demand. In the case illustrated in Figure 4 (inelastic demand) the fall is slight, so that the government is compelled to buy only a relatively small amount of cotton (NM). The remainder of the cotton (ON) is sold to the ordinary consumers who are compelled to pay a higher total price than before, represented in the diagram by the right-angle $OQSN$. As these consumers are foreign importers (only a small portion of Egyptian cotton is consumed at home) the intervention of the State actually benefits the Egyptian economic system.¹ But very different conclusions are reached when we assume that the demand for Egyptian cotton is elastic. As a result of the increase in price the total sum paid by the importers in this case will be less than before (see Figure 5). Now statistics show that the demand for

¹ Even in this case the benefit would probably not last very long, because cotton would be grown elsewhere.

A further example of the application of the concept "elastic" demand was offered when the British authorities fixed the price of milk. A lower price was fixed for milk destined to be made into cheese than was to be paid for milk sold directly to the consumer, because the demand for the former is, on the whole, elastic owing to the fact that before the war the consumer could buy foreign cheese. As milk could not be imported from abroad the demand for this kind of product was less elastic than in the first-mentioned case.

Egyptian cotton is, in fact, very elastic. The main cause for this is the fact that when prices for Egyptian cotton are higher than is justified by the situation on the cotton market in general, importers prefer to use other kinds of cotton, and in particular the better qualities of American cotton. And that is what actually happened ; as a result of the intervention of the Egyptian Government the purchases of Egyptian cotton by foreign importers declined considerably with the result that the Egyptian Government had to



Figs. 4 and 5.

buy up large quantities and expend large sums of money. In the end the cotton thus purchased had to be sold again at a loss. In this case State intervention completely failed to attain its object.¹

3

The mutual dependence of economic magnitudes, scientifically demonstrated by the modern theory of economic equilibrium (cf. Chapter II), is also of very great importance for economic policy because it permits the formulation of a fundamental principle : when an authoritative body intervenes in market relations and fixes a certain maximum price for a particular commodity, then it must take the possible reactions of the prices of many other commodities and of the other economic magnitudes into consideration. For example, the preliminary object of an authoritative intervention is, shall we say, merely to change the price of a commodity A ?

¹ One of the most characteristic features of the present economic policy of the U.S. Government is its support of agricultural prices. Prices of five basic commodities—wheat, corn, cotton, peanuts and rice—will be supported at 90 per cent of "parity" in 1950 and at 80 to 90 per cent in 1951. The prices of a number of other agricultural products will be supported at various percentages of parity. "Parity" means a price calculated to give the farmer a return about equal to what he received in an earlier favourable period. This is done by government purchases and by loans to the farmers to prevent surpluses from depressing the market.

But as the price of A is connected with the prices of the commodities B, C, D, and so on, the result is that the market equilibrium is disturbed not only for commodity A, but for other commodities as well as soon as the official price fixed for commodity A differs from the market price. The result is that the authorities have to intervene again. An instructive example of this was offered by the experience of the German Government during the first world war. First of all, the authorities fixed maximum prices for grain and bread. The bakers thereupon circumvented the regulation by baking sweet pastry, which they sold at high prices. The government was then compelled to intervene again and fix maximum prices for sweet pastry, cakes and so on. But the fixing of a maximum price for grain upset the relation between grain and meat prices, with the result that instead of selling their grain the peasants preferred to use it as fodder for their pigs. The government was then compelled to intervene again to reduce the price of pork.¹ Experience also showed that it was necessary for the government to exercise a close control on supply in order to prevent commodities disappearing from the market or being used for socially undesirable purposes, and this was done by compelling the producers to deliver up their products to the authorities, retaining only what was necessary for their own consumption and for seed purposes. However, there is then a danger that producers decide that the maximum price does not cover their production costs and proceed to cut down production. Experiences of quite recent date in Italy indicate that this danger is by no means imaginary. Further government measures then become necessary in order to reduce the costs of production, i.e., maximum prices will have to be fixed for goods the farmers need, such as machinery, fertilizers, etc. Thus it comes about as a result of the close interdependence of all economic factors that State intervention referring perhaps in the first place to one commodity only has subsequently to extend its operations to an increasing number of other commodities—moreover, control cannot be confined to market operations alone—and measures have to be taken in the sphere of production itself. With this we have revealed the economic basis of a contention we often hear to-day, namely, that government control must be “totalitarian” and cannot confine itself to sectional operations.

In Germany, too, when the authorities introduced price control in 1933 they were soon compelled to recognize that control had to be extended to the price-determining factors as well, if price control

¹ Similar disturbances of the economic equilibrium occurred in Italy. Einaudi cites numerous examples in his book, *La condotta economica della guerra*. On p. 361 he observes that the peasants found it much more advantageous to feed their animals with cheap flour rather than on expensive hay. Cf. also U. Ricci's *La politica annonaria dell'Italia durante la grande guerra*, Bari, 1939.

was to be at all effective. The title of the Reich's Commissar who was charged with operating the control was later altered from "Price-Control Commissar" to "Price-Fixing Commissar", a truly significant change.

Thus, owing to the numerous consequences it involves, to say nothing of the obstinate resistance it encounters from consumers, merchants and producers, price control is anything but a simple operation. It is, in fact, a very difficult problem; in the first place, because every commodity comes on the market in a whole series of different kinds and qualities so that it is hardly possible to fix a maximum price for each kind and quality. There is then a tendency amongst sellers to circumvent the maximum prices by getting rid of inferior-quality goods at the prices fixed for better-quality goods, which disappear from the market. Or a seller will often make some unimportant change in a commodity for which a maximum price has been fixed and then sell it at a higher price on the ground that it is a different commodity.

Wholesalers whose goods are subject to maximum prices will often do their best to circumvent them by changing other sales conditions in their own interests. In times of shortage some of these conditions are very important, for instance, conditions referring to delayed deliveries, settlement dates and terms, the right to return goods, acceptance conditions, rebates, insurance, packing, and so on.

Despite all the difficulties I have enumerated I believe that the majority of economists are of the opinion that in the abnormal circumstances which obtained during the war the authorities were unable to avoid concerning themselves with prices and could not have left them to be formed automatically by market conditions alone. Even upholders of the traditional economic doctrine are in favour of measures to prevent clever speculators from exploiting a temporary shortage of goods in order to force up prices. In describing the equilibrium of the commodity market created by "supply" and "demand", economists have always stressed that it is only a temporary equilibrium, because the "normal" equilibrium is marked by an equalization of commodity prices and production costs. Within the framework of a temporary equilibrium the shortage of a commodity whose supply can be increased certainly influences the price, but only for a short time, because the higher price causes either an increase of production or the bringing in of stocks from other districts. But in the circumstances created by war the situation is different. In most cases high prices have no economic justification and they represent nothing but an exaggerated and unjustified profit for certain greedy merchants and middlemen in view of the fact that the normal channels of trade are closed and that the government seeks to throttle down the production of

consumer goods for the civilian population in the interests of essential war production.

The opponents of a free-market economy are very fond of trying to bring a system into discredit which, they say, ceases to operate when the country is in real difficulties. The plain fact is that at such times a free-market economy is simply no longer possible, not because of any inherent defects in the system itself, but because some of its essential conditions have been destroyed. All parts of the system are closely connected with each other, and therefore the market system cannot continue to operate normally when the whole mechanism of production and the supply system are out of joint.

A rise in the cost of living results sooner or later in a rise in wages, and this, in its turn, produces a further rise in prices, including the prices of the commodities purchased by the State or produced by the State for war purposes, with the result that all economic relations are upset, including the State finances.¹ It is therefore easy to see why the "ceiling price" was the mainstay of the economic policy of most countries during the war.

4

A price policy, however, must be attuned to a whole series of other measures: financial, political and currency measures. I have previously declared that if a maximum price is to become an equilibrium price and thus a stable price, the demand at this price must equal supply. The rationing system which aims at restricting demand to fit supply will not be entirely successful if many people possess additional purchasing power which can endanger price stability by breaking into circulation. In order to avert this danger measures are necessary to prevent the growth of purchasing power in the hands of certain social classes, or, if the creation of supplementary purchasing power is unavoidable, to "sterilize" it and absorb it by appropriate measures.

The "wage standstill" ordered in many countries is an effective complement to the "price standstill". Nevertheless, the money income of the working class increased in the belligerent countries generally during the war thanks to decreased unemployment, the increasing employment of women and the payment of generous allowances to the dependents of mobilized men.

In spite of all precautions taken to avoid inflation, a part of

¹ "Everything in that immense machine, the political State, is an integrated whole; everything is connected, everything is tied to everything else; nothing must be allowed to detach itself from the general equilibrium unless the whole machine is to be upset. That is why the science of politics is so difficult." Galiani, *Dialogues*, p. 13.

the war costs in all countries was met by the issue of new means of payment, and in fact an increase in the amounts of currency in circulation was evident everywhere, and it was compensated for only in part by a slowing down in the rate of circulation. That meant in effect that new individual money income was created. Above all profits increased. In order to prevent this increase in profits from being used to purchase consumption goods, some countries adopted measures to limit the distribution of dividends. New taxes absorbed a considerable part of these profits whilst excess profits often had to be surrendered directly to the State.

A further measure to "freeze" purchasing power was the encouragement of savings and their investment in various government securities. In Great Britain the government even adopted the method of compulsory savings: a part of wages was not paid out immediately but withheld until a later date. The German Government encouraged what is called "iron savings": workers who were prepared to pay a part of their wages into a special account which could not be touched until the end of the war were granted quite considerable tax relief; for instance, for a worker who saved 26 marks a month in this way the relief amounted to 11 marks. In the same way entrepreneurs were invited to pay the money which would normally have been used for the purchase of new technical equipment into special accounts which were "blocked" for the duration of the war. In return they were to have received special tax reliefs after the war. Merchants who surrendered liquid resources which they were then unable to use to fill up their warehouses, were offered similar facilities.

Another measure adopted by the German Government in its campaign against inflation was to limit, or stop altogether, the advance payments by the State to the account of entrepreneurs carrying out war contracts. These entrepreneurs were expected to fulfil their contract with their own resources or finance them with bank credits. Another measure was the prepayment of the house-rent tax. House-owners were compelled to pay ten times the annual amount due in house-rent tax before December 31st 1942. It was calculated that in this fashion something like 8 milliard marks would flow into the Treasury. The mortgage banks were empowered to grant appropriate credits to such house-owners who were not in a position to pay such a sum. These banks provided themselves with the necessary means by the issue of debentures.

During the late war the effectiveness of government price control varied considerably from country to country. In some countries it was practically useless and a widespread Black Market developed

which drove prices up to a height—which included a high premium for the risks the seller was taking—such as they would in all probability never have reached in a free-market economy. The best results in government price control were probably achieved in Germany and Great Britain. The German Government was in a particularly favourable position because long before the outbreak of war it had worked out control measures based on the experience of the first world war. However, it is not given to every country to institute a system of controlled economy on the German plan. It demands particular capacities and particular characteristics, and, above all, a talent for organization which not all peoples possess. It requires, too, a large body of intelligent officials jealous of their traditions and determined to do their duty efficiently ; a feeling of responsibility and a sense of discipline deeply rooted from the past in all sections of the population ; and the existence of an accurate and reliable body of statistics concerning production, consumption and costs not hurriedly collected under the pressure of events, but carefully built up in a methodical fashion long beforehand. And finally, as far as Germany was concerned, a uniformity in consumption compared with other countries—Italy, for instance—greatly facilitated the distribution of coupons.

Nevertheless I believe that the main reason for the success of Germany's price policy during the war is to be found in the fact that food was, on the whole, less scarce in Germany during the war than it was in other European countries, a fact which can clearly be seen from the size of her food rations. The weekly German ration of bread varied from 2·4 to 4·8 kilograms ; fats from 270 to 738 grams ; meat from 400 to 1000 grams ; and sugar 225 grams, whilst potatoes were never rationed and were always readily available in large quantities. (Compare these figures with the meagre rations allotted to the Italian population.) From 1933 onwards the German Government began to take measures to prevent any very great shortages of essential foodstuffs in the event of war. Agricultural production was encouraged, and in particular the production of fodder because Germany's dependence on fodder imports was one of the main reasons for the food crisis she suffered during the first world war. Trade with the agricultural countries of Europe, and particularly with the Balkans, was encouraged in order to have them as sources of supply in the event of a British naval blockade. At the same time large stocks of grain, sugar, fats and tinned meat were accumulated to enable the government to organize a regular food supply in the event of war. In addition, during the war the resources of occupied Europe were exploited for Germany's benefit, and a number of the occupied countries, Holland and Denmark, for instance, were important food-producing areas.

The author of this book, who was often in Germany during the war, was able to see for himself that the prices of staple foodstuffs such as bread, flour, potatoes, meat and sausages, vegetables, eggs and fodder were stable not only on paper but in reality. However, complete price stability was not attained even in Germany. The official cost-of-living index figures did not altogether accurately reflect the real price increases because they did not embrace all types of commodities. And where the price of goods or services did not increase, to obtain them was fraught with great difficulties, including the loss of time spent in queueing and going from shop to shop in search of them. Restaurants and public vehicles were overcrowded. Even in Germany the Black Market was not entirely suppressed, as the numerous sentences passed for infringements of the regulations indicate. However, the general opinion is that the Black Market in Germany was not so widespread as during the first world war. On the other hand, barter in foodstuffs developed on a considerable scale between producers and merchants, despite its prohibition.

The increase of nominal purchasing power in the hands of the German people, baulked in so many ways on the market by the strictly enforced system of rationing, sought satisfaction in other directions with the result that price increases took place with regard to those goods and services which were not so strictly controlled because no particular social interest was involved. This newly created purchasing power was not entirely absorbed. The prices of good clothing, leather goods, gold and silver ornaments, diamonds, furs, oriental carpets and works of art rose very considerably in Germany compared with 1938 price levels. The rise in industrial share quotations was also considerable. People in search of food in excess of their rations, which was difficult to obtain privately, crowded into the good-class restaurants which were better supplied with food. The prices in these restaurants were also much higher than 1938 prices. Naturally, the quality of the goods offered had also suffered. However, as a matter of justice it must be recorded that Germany's economic policy during the war did succeed in providing the masses of the people with rationed goods for immediate consumption at fairly stable prices.

Economic theory confirms the impossibility of establishing a "general" equilibrium when prices are officially fixed. We have already seen that in a free-market economy the number of unknown magnitudes—commodity prices, the prices of the production factors and the quantities of commodities produced—are equal to the number of conditions which determine that equilibrium. When

the authorities now intervene and fix prices, the number of conditions is greater than the number of unknown quantities, which means, in other words, that the establishment of an equilibrium is now impossible, since not all the conditions necessary for the establishment of an equilibrium can be satisfied. It is impossible to fix prices and at the same time insist on the application to all commodities of the principle that the quantity demanded should equal the quantity in supply, that costs should equal prices and that all consumers should be satisfied. The fact that a Black Market can flourish at all is an indication that the last-mentioned requirement is not being fulfilled. But economic theory assumes the existence of a state of affairs which war renders impossible, so that even if there had been no government intervention the theoretical state of equilibrium would not have been present.

However, now that the war and the early post-war years are behind us the question of government price controls must be re-examined in the light of peace-time requirements. The difficulties, inefficiency and inherent defects of the system, which were accepted during the war as inevitable, blemishes in otherwise justifiable measures made necessary by exceptional circumstances, now appear particularly onerous because the necessity for their existence is disappearing. Instead there are other problems which demand a solution: for instance, that of making good the damage caused by the war by a rapid increase in production.

The tasks of a price-control authority are facilitated at first by the fact that the market itself has already formed prices for all commodities. Thus the authorities can accept the prices which prevail on the market in normal times as basic prices. This was the method adopted in Germany when general price controls were first introduced. The market prices prevailing on October 16th, 1936, were declared standard prices and "frozen" at that level. Gradually these prices were changed as raw materials imported for the manufacture of German goods grew more expensive. However, the more remote that standard date became the greater grew the difficulties. The conditions which influence prices themselves change: new commodities are produced, or the quality of those already being produced changes, and therefore prices cannot be fixed once and for all, but must be revised again and again. How can the authorities keep taking account of every change in the situation when fixing prices, as they must if their system is to remain sufficiently elastic?

The German authorities hoped to get over their difficulty by alleviating the rigidity of their system and always applying the principle that prices should be related to production costs. Individual entrepreneurs had to submit exact details concerning their production costs to the Price-Control Commissar in a form laid

down by him. A "just" price from the economic standpoint is a price which is in accordance with the costs of production.

But in this way the principle of price stability is gravely breached, because if production costs rise then prices must rise accordingly. Now it is quite clear that in times of commodity shortage the production costs of many undertakings will rise ; for instance, if an undertaking is not working to capacity then the fixed costs per commodity unit produced rise accordingly.

But there is another accompanying phenomenon which can have very considerable effects in a peace-time economy. If an employer knows that he is guaranteed a price which will cover his costs of production then he has no incentive to introduce technical improvements in order to reduce the costs of the labour process such as he would have under the pressure of competition in a free-market economy.

The German system of price control aimed above all at eliminating profits, though it was permissible to include normal profit in the costs of production in the form of a return to the entrepreneur for his managerial activity. Excess profits over and above this had to be surrendered in full to the State, so-called *Gewinnabführung*.

In a system of free competition profit and loss are temporary but necessary phenomena in order that a new equilibrium in accordance with the new situation can establish itself when the "given conditions" of the market change. In a free market prices tend to equalize costs, and a disparity between prices and costs sets a whole mechanism in operation as a result of which production factors flow from one branch of industry to another in accordance with changed demand. Measures to eliminate profit and thereby permanently equalize prices and costs are quite justified in times when a general shortage of commodities offers favourable conditions for unjustifiable monopolist profits. But if this measure were to be adopted as a permanent principle of economic policy it would mean that the economic system would be forced into rigid forms and the production factors would be prevented from constant redistribution amongst the most favourable utilization possibilities. The final result would then inevitably be a reduction of the national income.

What interest can an entrepreneur have in reducing his production costs when he has to surrender all profit in excess of that fixed by the government? In such circumstances the attitude of mind of the German business men, described by a certain German industrialist, is typical. They were attending a meeting to discuss a certain war-time measure recommended by their government. One of them opposed the measure because it would compel him to abandon certain rational organizational principles in his undertaking and at the same time increase his production costs by

100,000 marks. To this the chairman replied : " Isn't it just the same to you whether you shoulder the increased burden of costs or whether you pay out the sum you can save as a result of a reduction of costs to the government ? "

The *Frankfurter Zeitung* quotes another example of the same sort of thing : business men were accustomed to making priority trunk calls even for quite unimportant matters, because the expense involved had simply the effect of reducing the amount which had to be surrendered to the government.

The Price-Control Commissar recognized these dangers; and realized that it was not sufficient to order a price " standstill " and to decree " just prices " ; but that some force of equal effectiveness had to be introduced to take the place of the free competition which had been abolished, so as to keep the costs of production under constant pressure. The system the Price Commissar introduced for this purpose in 1941 is very instructive. Every entrepreneur had to submit a detailed statement to the Commissar not only of the total costs of production of his commodity, but of the costs of each separate labour process. All undertakings producing the same commodity had to submit similar data. Generally speaking, production costs varied from undertaking to undertaking. The Commissar then fixed a standard price on the basis of an average estimate of costs. The latter was, however, not an average worked out with the aid of arithmetic but embraced the costs of a well-run undertaking working under normal conditions, i.e., a sort of " Representative Firm " in the sense of the term as used by Marshall. Undertakings which had submitted a higher cost estimate now had to make up their minds either to work at a reduced rate of profit or do everything possible to reduce their production costs. And at the same time those undertakings whose costs of production were below the average fixed by the Price Commissar were now in a position to pocket a " differential profit " which was not subject to the provisions of the *Gewinnabführung* law. The Price Commissar then brought a certain amount of pressure to bear on those undertakings which had submitted a higher-than-average costs estimate—even when it concerned only part of the labour process. In addition he promised that the prices he had fixed would not be changed for a certain period. In this way he hoped to encourage the firms in question to produce at prices lower than costs in order to obtain an excess profit, but he reserved the right to lower prices at some later date in order to liquidate such excess profits.

Thus the Price Commissar sought to create something like an artificial market which would function like a free-market economy. However, the system only proved useful for firms engaged on government work.

We have already pointed out that if the prices it fixes are to be really valid the State must also exercise control over the supply of commodities. The German Government sought to do this in respect of a number of commodities, for instance, grain, by opening "collecting centres". But if this institution were regarded as a permanent component of economic policy it would be very difficult to operate in ordinary peace-time conditions in view of the profound disturbances it would cause in economic relationships, quite apart from the losses by waste and the cumbrous nature of the bureaucratic apparatus required for its operation.

7

The theoretical pattern described in Chapter II makes it possible for us to record the effects of State intervention on the production-factor market. Here, too, we must differentiate between a situation in which the prices of the production factors before the State intervened are not in accordance with the equilibrium evolved by the market, and a situation in which State intervention has disturbed the prevailing equilibrium.

Thus a government wage policy can aim at restoring wages to the level of the marginal productivity of labour when they have greatly deviated from it as a result of market maladjustments or the machinations of monopolist groups. In times of economic prosperity, when prices rise, wages limp along in the rear. In such circumstances the government, or the trade unions, can accelerate the process, and such intervention is particularly valuable, because it tends to prevent an excessive growth of profits, which might cause certain branches of industry to expand excessively and so cause grave economic disturbances (cf. Chapter X, 1). In times of economic depression, on the other hand, wages tend to sink more slowly than prices. Thus when the Italian Government intervened after 1930 to reduce wages it helped the economic situation to adapt itself more speedily to the circumstances created by the crisis, which urgently demanded wage reductions in accordance with reduced prices.

When wages are low it does not necessarily mean that labour is being exploited.¹ It may be that they are low because the

¹ The law which declares that in a free-market economy wages are determined by the marginal productivity of the available labour-power must not be interpreted to mean that the weekly wage of each individual worker must always be equal to the marginal productivity of labour. Money wages are not continually changing; they remain at more or less the same level for definite periods of time. A minor change in prices will not immediately cause the entrepreneur to change the level of wages accordingly. Like all economic laws, the wage law reveals only a tendency in the course of time. There are numerous systems for changing wages in accordance with the value of the marginal product of labour, sliding scales, for instance.

marginal productivity of labour is low. We can talk of economic "exploitation" only when wages are lower than the value of the marginal product, i.e., when the entrepreneur succeeds in obtaining labour-power at a lower rate than its value to him, either because he exploits the ignorance of his workers concerning the market situation, or because he knows that his workers, for family or other reasons, are either not in a position to seek work elsewhere or are disinclined to do so. People employed in domestic occupations probably received wages which were lower than the value of the marginal product until the State intervened to improve their situation. The easier it is for the worker to change his place of work (thanks, for instance, to the speed and facility of modern communications) the more difficult it is to exploit him. It is clear, therefore, that restrictions imposed in numerous countries on the liberty of the worker to seek his job wherever he can will increase the possibility of exploitation. Now that the war is at an end the reason for such measures no longer exists and the sooner they are withdrawn the better.

As Professor Hicks points out, labour specialization, which is a consequence of modern industrial development, has created new possibilities of exploitation. In practice it prevents numerous workers from changing their jobs because if they did so they would lose the fruits of a long and costly period of training together with their hard-won experience.

There is a widespread opinion that the exploitation of the worker derives from the fact that, unlike the entrepreneur, he possesses no capital on which he could live so that he is compelled to accept any agreement because he cannot afford to wait. But if we assume the existence of a perfect labour market, then the worker, even though he possesses nothing but his labour-power, necessarily receives a wage which is in accordance with the marginal product of the labour of the particular labour category to which he belongs. The smaller the amount of labour-power available in comparison with the other production factors, the higher his wages will be.¹ But if, as often happens, the situation on the labour market is not so perfect as economic theory assumes, and the worker is left to his own resources in his negotiations with the entrepreneur, is ignorant of the situation on the labour market and is not in a position to change his place of living, then he can certainly become the object of exploitation. The principle of collective agreements obviates the disadvantages which invariably beset the worker when he is compelled to proceed on his own.

Generally speaking, we can say that the State does not violate

¹ For instance, European domestic servants in Egypt are paid very high wages, although they possess no more there than in any other country, because the demand for them is greater than the supply.

"economic laws" when it takes action to remove those obstacles which prevent the market from automatically re-establishing an equilibrium, and that, in fact, it contributes its share to that re-establishment. This is the case when, after careful examination of the wages paid in the various branches of industry, the State intervenes to increase wages which are lower than the value of the marginal product and fix them at that level.

8

Let us assume that the State fixes a price for a certain factor A which is higher than its equilibrium price. The equilibrium is immediately disturbed, and the extent of the disturbance will be governed by the importance of this particular production factor to the individual undertakings. Each entrepreneur who is determined to continue production at the minimum average costs consonant with the new price of the factor in question will have to make a new calculation. He will try to decrease his use of the factor which has now grown more expensive and as far as possible, to use other factors, whose price has remained stable, instead. The demand for factor A will then drop, whilst the demand for factors B, C, and so on will rise accordingly.¹ Thus the disturbance caused by this State intervention is not confined to factor A, but affects the market relations of all other factors as well. Whereas a part of the stocks of factor A will now find no outlet, the demand for other factors at current prices will be far greater than the available supply.

In addition there is another and no less important consequence : the extent to which one factor can be replaced by another is naturally limited by the character of the various branches of industry and by their methods of production. There are industries which by their nature primarily require the factor labour-power, whereas in others technical capital is predominant. From this it follows that those undertakings which use the factor which has increased in price, slowly decline, whilst those which can use cheaper production factors experience a boom. In this way the disparity between supply and demand with reference to the individual factors becomes worse. And finally, the distribution of the factors amongst the various industries is also upset and is no longer the best possible in the given market conditions.

These theoretical considerations are confirmed by the results of the policy pursued in recent years by labour organizations of forcing up wages higher than market conditions justified. Here,

¹ We are ignoring here the influence which the changed demand for products whose price will have risen on account of the increased price of factor A will exercise on the demand for factors B, C, etc.

too, we must distinguish the direct from the indirect consequences. At first, perhaps, the action of the workers seems to meet with success, and the entrepreneurs agree to pay the increased rates in order to prevent the damage which would be caused by a strike, or to prevent the strike from lasting any longer where the strike weapon has already been adopted. However, later they will do their best to replace labour-power, which has become expensive, by machinery, and if, for technical or legal reasons, this should be impossible, then they will gradually withdraw their capital in order to invest it elsewhere where there is a chance of higher profits. The workers will then have to look round for other work, probably at lower rates. But supposing all wages are raised? In this case we must remember that the relation between capital and labour is not the same in all branches of industry.

Thus those countries which require more labour-power in relation to the other production factors will be harder hit by the higher wages imposed either by the State or the labour organizations. Capital will then show a tendency to turn to those industries which employ more machinery than labour-power because they offer the possibility of higher profits, and more or less widespread unemployment will be the result. The most instructive example of this was the constant unemployment which existed in Great Britain in the years after the first world war. In the opinion of leading British economists it was brought about by the policy of the trade unions and their insistence on keeping wages at a level which was much higher than the market situation justified.¹ Before 1914, when the unemployed were a burden on the trade unions, the latter were prepared to take into consideration in negotiating with the employers the possibility that too high wages might be causing unemployment. But after the first world war when the State introduced unemployment benefits the unions could naturally no longer see any danger in the possibility that they might cause widespread unemployment by demanding wages that were too high.

It is true that an individual union may find it advantageous in its own selfish interest to demand a wage increase and to support the unemployed from its own funds when the demand for labour-power is inelastic. First of all, in this case, the diminution of demand will really not be very great. And as further the total sum in wages has risen (despite the reduction in the number of workers employed) the situation of the employed workers will be better

¹ The rigidity of wages in Great Britain, which were much too high after the reintroduction of the gold parity of the pound sterling and thus prevented the adaptation of domestic prices to world-market levels, was one of the chief causes of the chronic currency chaos which finally persuaded Great Britain to let the pound find its own level in 1931.

than before even if the union pays out unemployment support in the sum of the former wage. However, the total demand for labour-power is very probably highly elastic, as is proved not only by theoretical considerations, but also by statistical data. From this it follows that an artificially created general wage increase above the level justified by the situation on the labour market creates considerable unemployment and, in addition, decreases the total sum paid out to the working class in wages.

At this point some people object that although an increase in wages may cause a disturbance of the equilibrium at first, it will eventually result in an increase in labour productivity thereby re-establishing the wage equilibrium because the marginal productivity of labour will be greater than before. This objection raises a problem which economists and industrialists have discussed at great length and in great detail, namely, the relation between the level of wages and the productivity of labour. Opinions differ on the point. Some people even say that low wages encourage the worker to work longer and harder. But experience suggests that it is impossible to lay down hard-and-fast rules. Under certain circumstances an increase in wages *may* be followed by a rise in the productivity of labour, but as Böhm-Bawerk rightly points out, although this may be the case on one occasion for a certain group of workers it by no means follows that a further increase in wages will have the same result. If a worker is badly paid in the first place and then receives a wage increase the result may then be that his labour productivity rises because he is better fed, and perhaps also because his moral confidence is heightened—and finally in all probability because he cherishes the hope of retaining his higher standard of living. But if wages are high in the first place, it is hardly to be supposed that a fresh increase in wages will make labour productivity rise, for this depends not only on the capacity but also on the goodwill of the worker.

Similar considerations can be applied to the consequences of a reduction in working time either as a result of government regulations or of trade-union pressure. Long working hours weaken the worker, and if in such a case working time is reduced then the total product of the working day will increase. However, there is obviously a limit beyond which the number of hours worked cannot be reduced without also reducing the product of the working day. There is an "optimum" of working time; naturally, it varies and it can be determined only on the basis of experience. Now many employers do not dare to reduce working time on their own initiative for fear that competitors might not follow their example and would then be in a favoured position. Therefore outside pressure must be applied either by the State or by the trade unions. However, an excessive shortening of the working day has the same

result as when the authorities fix wages at a level higher than the value of the marginal product of labour, i.e., unemployment. An example of this can be seen in the disastrous effects on French economy of the general introduction of the forty-hour week in 1936 by the Popular Front Government.¹

As we mentioned in Chapter III, wages remain indeterminate if a bilateral monopoly exists on the labour market, and State intervention is then justified. But this does not mean that wages can be fixed at an arbitrary level ; on the contrary, if the authorities intend to re-establish the equilibrium of the labour market then their course is clear. If wages are fixed too high then unemployment is the natural result. And if wages are too low, then the demand will greatly exceed the supply : this situation arose in 1933 in Germany when it was one of the main tasks of the authorities to distribute a labour supply which was insufficient to satisfy the demand on the part of employers. There is an equilibrium of labour supply and labour demand when wages are equal to the marginal product of the available labour-power.

A difference in wages (with the same labour productivity), in respect of age or family circumstances, shifts the relation between wages and the marginal productivity of labour, so that from the economic standpoint a disturbance of the equilibrium is caused, because the demand of employers for labour-power is affected : they prefer the cheaper labour-power, and, in the event of an industrial crisis their first step is to dismiss workers with families.

When we thus stress the limits which are set by "economic laws" to any action of the authorities to fix wages, this does not mean that we wish to decry the importance of their task. In particular they must raise wages when, in consequence of the ignorance of the workers or the selfishness of the employers, they are below market level ; increase the adaptability of wages so that they can rapidly conform to changed market relations ; encourage the widespread adoption of the principle of "collective agreements" ; and adjust wages in the various branches of industry to each other. And, finally, it is the task of the State to create all those great social institutions, and to introduce those social measures which we shall discuss at greater length in Chapter XIV, 3.

9

If there is a shortage of a particular production factor so that its price in a free-market economy rises, then this circumstance acts as a brake on its excessive use, because there is then every reason

¹ The questions raised here have been dealt with in greater detail in Böhm-Bawerk's *Control of Economic Law*, 1931, and in Hicks's *The Theory of Wages*, Macmillan, London, 1932.

to use it only for important purposes. Firms which are unable to pay the high price prevailing are compelled to limit their demand for the production factor in question. But when State intervention prevents any price increase, then this braking mechanism ceases to function. Whoever uses this factor has no interest in using it economically, as he would have if its price had risen. The result is that it is used wastefully by some people, while others are unable to obtain as much of it as they require. The result is a disturbance of equilibrium, and, as in the case of goods for immediate consumption, the authorities seek to remedy the difficulty by introducing rationing.

Even before the last world war German employers were forbidden, under pain of fines, and even imprisonment¹ to persuade workers to change their employment by promises of higher wages and more favourable working conditions. It is obvious that such a proceeding hinders the best-possible distribution of the production factors. The German authorities also fixed land prices in order to prevent speculation, but in this way they prevented the shortage of various kinds of land from finding its expression in prices. And the prices for raw materials produced at home were kept almost unchanged despite increased demand.

Even before the outbreak of the second world war Germany suffered the consequences of a suppression of one of the chief functions of the price system, *namely to secure an economically rational distribution of factors in short supply*. Every State undertaking and private firm which required raw materials or labour-power tended to regard its own requirements as the most urgent. As a result the government departments entrusted with fixing the quotas were deluged with applications each of which claimed to be of urgent importance, and there was much confusion and waste.² In order to introduce some sort of order, the German Government appointed an economic dictator for each important branch of industry, beginning with building, engineering and motor-car production. It was his task to sort out the individual claims, and to distribute raw materials according to urgency. Now in a war economy the question is quite simple: industries working for war purposes have an absolute priority. But, in normal circumstances, it is hardly possible to organize a distribution of the production factors which satisfactorily meets the requirements of the consumers without a system of prices formed by the market.

¹ Cf. the decree issued by the State Labour Executor for Thuringia on August 15th 1938.

² In its monthly report for July 1939 the Deutsche Bank stressed the disturbances caused by the distribution of raw materials by official bodies.

During the course of the past few years State intervention seeking to change the organization of undertakings by fixing their supplies of certain of the production factors they use, has become more and more frequent in a number of countries. For instance, employers have been compelled to dismiss certain workers, or to employ them, or to employ a certain number of workers in their undertaking irrespective of declining production ; or the use of machinery has been restricted ; or the number of apprentices employed limited. In some Italian provinces farmers have been compelled to employ a fixed number of agricultural labourers. Industrial entrepreneurs were not allowed to dismiss surplus workers : this was one of the main causes of the high production costs obtaining in certain branches of industry (particularly steel and engineering). Naturally, such measures make it impossible for the entrepreneur so to determine the respective quantities of the individual production factors he uses that, on the basis of their prices, his production costs per commodity unit are the lowest possible. If the prices of the various production factors are fixed by the authorities in a fashion which takes no account of their actual availability, and if a rational organization of the undertaking is prevented because the " coefficients of production " are arbitrarily changed, then the total national product is diminished.¹

An example of this is a decree which the German Government issued before the war during a severe economic crisis compelling employers to re-employ workers who had reached the age limit of usefulness, and to dismiss young workers and women. The government undertook to pay the employers compensation. Moral considerations were particularly stressed in order to justify this measure : during the crisis firms had tended to dismiss older workers with the result that in many families the father had been unemployed for a long period, though his sons still had work ; and it was considered that would have a deleterious affect on family relations.

Trade unions have also often attempted to suppress the free play of forces on the market, or to guide them into certain channels. All such attempts to limit the freedom of the employer to choose his labour-power according to productive relationships whether by limiting the number of apprentices, resisting the introduction of improved machinery, insisting on the principle of the " closed shop ", or that in times of crisis the employer should dismiss young workers rather than older men with families, all these make it impossible for him to combine his production factors in the way

¹ " Coefficients of production " give the quantities of the various production factors which are used in the production of a commodity unit.

that will enable him to work at the lowest possible costs of production. And as such measures have an unfavourable effect on production itself they are, in the last resort, against the interests of the working class as a whole, even though certain privileged categories of workers may gain an advantage from them. It should not be forgotten that the total social product is the joint source of all incomes, including the wages of the workers.

CHAPTER VII

THE SOCIALIST ECONOMIC ORDER

I

SOCIALIST doctrine propounds it as an axiom that economic individualism, by clearing the way for private enterprise, causes great waste, because the productive resources of the country are not utilized to the full. If technical capital and land were the property of the community the latter could organize production, and so obtain better results than are possible under a system which is based on private property and a free-market economy. These views are very widely held at present, and for many they seem to have been confirmed, in particular, by the experiences of the great economic crisis of 1929.

However, socialist writers often neglect a problem of fundamental significance : is it possible to organize production rationally under a system in which the means of production are communally owned ? By "rational production" we understand a production which is based on the lowest possible costs, so that it is possible to attain the greatest possible volume of commodities consonant with the given level of technique and the given quantity of economic resources, thus achieving the greatest possible satisfaction of the requirements of the community. In exceptional circumstances, such as a war, costs are unimportant and, at the same time, it does not matter whether the requirements of the individual are satisfactorily met or not. But in a peace-time economy a socialist government will also have to consider the material well-being of the community, and do its best to increase it within the given limits. For this reason many contemporary exponents of the collectivist doctrine believe that even under such a system consumers should normally have a freedom of choice, and that a market should exist for direct consumer goods on which commodity prices are determined. Price fluctuations, which would act as an indication of changed demand, would show the authorities what kinds of goods should be produced in the State factories, and in what quantities, for sale in the market.

Under a socialist economic system the national income would be distributed amongst the members of the community according to the principle of "social justice". But if the government permits each individual to do what he likes with his own income then, as

Pareto has rightly pointed out,¹ we shall inevitably find the same conditions which exist under a liberal economic system. And, in fact, the unknown quantities are still $mn + m - 1$ (whereby m represents the number of commodities and n the number of individuals), whilst the conditions are still : (a) the $n(m - 1)$ conditions which express the full satisfaction of each individual ; (b) the n conditions, which represent the equilibrium of the individual balances ; and (c) the m conditions which express the equalization of supply and demand for each type of commodity. Consider in this connection that one of the conditions b and c depends on all the others (cf. Chapter II, 5). If the Socialist Government uses paper money as a standard of value instead of a money commodity, then we have to consider another unknown quantity, so that a further condition, namely, the amount of money in circulation, must be added to the problem (cf. Chapter III, 4).

In a society in which social income is *a priori* distributed according to the principle of social justice, the argument brought forward to justify "political prices", namely, the desirability of sustaining the poorer classes, naturally no longer applies. Thus if a socialist government is to remain true to the accepted principle of distribution and, at the same time, secure the greatest possible satisfaction of the needs of society, it must see to it that the market forces are allowed freely to determine the price of direct consumer goods. If the price of a commodity is higher than its costs of production at the start then the government will order an increase of production ; if the contrary is the case, it will order a decrease of production. This system, it is contended, would function without friction.

Those socialist writers who admit the necessity of a system of free-market prices for direct consumer goods under a socialist economic system are making quite a considerable concession to the laws evolved by economic science. However, many of them fail to notice that the problem of production is still unsolved. Let us assume that on the basis of consumer demand the authorities reckon that a million tons of grain are required. This grain can be obtained in various ways : either by using a large area of arable land and little labour-power and capital, or by using a lot of labour-power and capital on a comparatively limited area of land. The problem of production is not only a technical but an

¹ I should like to indicate briefly an objection which Einaudi (*Intorno al contenuto dei concetti di liberismo*, p. 13) has rightly made to Pareto's assumption. The assumption that a communist social order would produce everything the heart of the consumer desired and in the requisite quantities is Utopian. A different assumption is more in accordance with human nature : "the assumption that he who holds absolute political power will use it not in order to perfect mankind but in order to consolidate and extend his own power and that of the governing clique."

economic one. It may be that the expert comes to the conclusion that the best solution is to use a large amount of capital (agricultural machinery, artificial fertilizers, etc.). But if this solution means to take capital away from other more important needs whilst there is plenty of arable land available, then from an economic standpoint it will be more advantageous to produce grain by less intensive methods. The comparative availability of the various production factors decides the most favourable economic combination. In a free-market economy the availability of the various production factors is expressed in the prices entrepreneurs must pay for their use. A system of prices for the production factors is essential if production is to be carried out on a rational basis. This is the cardinal point which socialist doctrine usually ignores, because it proceeds from the erroneous assumption that land rent and interest on capital are historico-legal phenomena which arise only when the land and the other means of production are private property, and that they will not exist in a collectivist social order. Labour would then be the general measure of value ; and when estimating costs of production, rent and interest paid to private persons would no longer be taken into account. But two separate things are being confused here : rent and interest as the source of private income, and rent and interest as a measure for the marginal productivity of land and capital. Under a socialist economic order land and capital will still be scarce, and their utilization in a certain form of production will impose specific costs on the community because at the same time other possible kinds of production will then not be possible. If two commodities A and B require the same quantity of labour-power for their production, whilst the production of A requires land in addition, then both commodities cannot have the same price even in a socialist society. The price of A will have to be higher than the price of B in order that the indirect demand for land which is set up by the consumers of A shall adapt itself to the available quantity of land. The same conclusion is reached if A and B are produced with varying capital quotas. The available quantity of capital is naturally limited because it owes its existence to savings, which cannot proceed beyond certain limits set by the possibility of restricting consumption.

In a socialist economic order, just as in an economic order based on private property, we must distinguish two different sides of the problem of production : (a) the best internal organization of the individual undertakings when definite prices for the factors of production are given ; and (b) the fixing of these prices. If those in charge of the various agricultural and industrial State undertakings are to be able to combine the individual production factors in the best possible way then the government must fix their prices. What will be best : to manufacture machinery constructed

to last a long time but consequently expensive in production, or cheaper machinery which will soon be worn out? This depends, as is known, on the rate of interest. The leader of a "collective farm" is not in a position to decide to what extent he will replace labour-power by agricultural machinery unless he knows the price of the machinery, the rate of interest and the level of wages. Once these prices are given how will the production factors then be used in the individual undertakings? There are two groups of conditions to be satisfied: 1. Above all, the commodity price must be sufficient to cover all costs without any surplus, because under a socialist regime no provision is made for entrepreneur profit; 2. The costs of production per commodity unit must be minimum (which is the case when the undertaking has reached its "optimal" extent). Under these circumstances the best combination of the production factors will be when in each case the marginal productivity and the price of the factor are equal (cf. Chapter II, Appendix). Thus under a socialist economic order the various production factors used in an undertaking must be combined according to the same economic laws which operate under an individualist regime. There is only one difference: whereas in the latter case the prices for the use of land and of capital are actually paid over to the individuals who own them, under a socialist economic order they would be pure calculations, "auxiliary magnitudes", as Pareto points out, which would reflect production equations.

The question then arises of how, in the absence of a market, these price calculations for the production factors are to be arrived at in such a fashion that they express the relative availability of the factors. Theoretically the problem is determinate: these price calculations are the root of a system of equations just in the same way as in the system which develops under free competition, that is to say they must each conform to the equation of supply and demand of each individual factor.

2

The practical solution of this problem would, however, meet with insuperable difficulties. A mathematical solution arrived at by a socialist government department is unthinkable even if it were possible in practice (which is not the case for reasons which will follow) to construct a theoretical system which would give the equations necessary to discover the unknown quantities—millions and millions of simultaneous equations would have to be solved!

A number of contemporary socialist authors believe that the problem could be solved with the creation of an artificial market whose mechanism would operate in the same fashion as under a system of free competition. The central authorities would fix a

certain price for the investment of capital and then inquire of the directors of the various undertakings how much capital they would be in a position to invest usefully at the price fixed. Should the answers show that the demand at this price would exceed the supply available then the central authority would increase the price until an equilibrium had been established between supply and demand. The same procedure would be adopted with regard to land and every other production factor. However, it would be an illusion to suppose that the problem of the best possible use of the production factors could be solved like this. In particular it must be borne in mind that it is not a question here of establishing an equilibrium between sectional spheres, independent of each other, of supply and demand with regard to each production factor itself and each individual commodity, but of an equilibrium embracing simultaneously all commodities and all production factors. Every price fluctuation in relation to capital changes the demand for land and for the other factors, so that the prices of the latter must also change. And as the prices of direct consumer goods are also changed consumer demand is also involved. In short, the central authorities would have to make all their calculations anew. Such a system might possibly be adopted in a small community, but hardly in a big country with innumerable agricultural and industrial undertakings.

It might be objected that in the last resort the free market arrives at a solution of the equations of economic equilibrium only by successive approximations. But how rapidly a free market reacts compared with the cumbrous operations of the mammoth bureaucratic apparatus which would be required to organize the production of a big country !

Another important argument can be adduced. The quantities of the factors demanded by entrepreneurs at certain prices depend on the condition that the utilization of each factor in each undertaking takes place up to that point at which the marginal productivity of the individual factor equals its price. Thus each entrepreneur, encouraged by his own private interest, will push the production of his commodity until the marginal costs are equal to the price of the commodity itself (cf. Chapter II, 10). At the same time competition sees to it that the undertaking reaches its "optimal extent", i.e., that it produces that quantity of commodities which can be produced at the lowest possible cost per unit. Thus in a state of equilibrium the quantities of the individual factors required by entrepreneurs are determined by the condition that the undertaking shall produce that quantity of commodities for which the cost per unit is lowest. But within the framework of a collectivist economic order the individual undertakings would not be in a position to inform the central authorities *a priori* of the quantities

of the individual factors they would require in order to be able to produce their commodities at a minimum cost per unit. For this purpose each entrepreneur must first have a great deal of experience which he acquires by increasing or decreasing the quantities of the various factors he uses, and be free to decide the most advantageous extent for his undertaking. If he increases its size under an individualistic economic order he takes a certain risk, and this acts as a brake on excessive expansion, whilst if he succeeds then he pockets his reward in the shape of profits.

It is difficult to imagine that under a socialist economic order the directors of State undertakings would be given a free hand to invest new capital and employ more workers in order to extend their operations, or to limit their operations (even stopping production altogether) by handing over their invested capital to other entrepreneurs and dismissing their workers if they came to the conclusion that such measures were necessary. Now the demand for capital does not depend only on those who are already running an undertaking, but also on those who propose to bring a new one into being. It is unthinkable that under a socialist regime anyone who felt inclined to become an entrepreneur could obtain the necessary credits for the purpose from the State Bank.

From what has been said above it is clear that under a socialist economic system there would always be a demand for the individual production factors proceeding from the directors of the State undertakings, but that this demand would no longer be determined on the basis of that volume of commodities for which production costs would represent a minimum in the individual undertakings, because that mechanism by which in a free market each undertaking strives to reach its "optimal" extent, would be lacking. All plans for extensions, the closing down of existing undertakings or the opening up of new ones, would have to be supervised by a central authority, which presupposes that the officials concerned must be informed of the internal conditions of thousands of undertakings and in a position to form an opinion about the possibility of making alterations in them. Now if that ceaseless ebb and flow of the production factors from one undertaking to another, such as takes place in a free-market economy, is prevented then it will also be impossible for that level of marginal productivity to form for each individual production factor (cf. Chapter II, 8) which in a system of free competition indicates the respective availability of the various factors and finds its tangible expression in their market prices. In other words, it is impossible to create an artificial market for production factors similar to the one which forms naturally under a system based on private profit and economic liberty. In the same way there can be no best possible utilization of the individual factors. Certainly, in broad outline it would be clear whether

land were available readily or not in comparison with other factors, but such approximate knowledge is of no very great practical value.

Despite these negative conclusions it is interesting to note that some of the most capable of our modern socialist authors have, under the influence of the results obtained by economic science, abandoned the belief of the old socialist leaders in the practicability of an economic system under the direction of a central authority. Instead they turn their attention and their hopes towards the solution of the problem of devising a mechanism within the framework of a socialist order of society similar to that which exists under free competition in an individualistic economic order.

Some socialist writers point out that in our day the private entrepreneur system has lost more and more ground to the joint-stock company. At the same time they contend that there is not a great deal of difference between the joint-stock company and the State undertaking of a socialist regime : whereas in the former the directors of the concern act in the interests of their shareholders, in the latter they would act in the interests of the community. In one case as in the other the private entrepreneur no longer exists.

That is not altogether accurate. In a joint-stock company it often happens that there is a single personality, or a group of shareholders holding a considerable part of the share capital, who exercise a preponderant influence on the affairs of the company so that, in fact, both private enterprise and the incentive of personal interest are present. And there is still another important factor : the capital of a joint-stock company is divided into shares which are usually, at least when it is a firm of any importance, quoted on the stock exchange. These stock-exchange quotations are the index for the affairs of the firm. When business is bad, shareholders tend to sell their shares and invest their capital elsewhere. In this way capital, attracted by the promise of increased profits, flows from one undertaking to another, and this freedom of the saver to invest his capital where he pleases allows him to use it to the best advantage. On the other hand, it is not clear how it would be possible in a socialist economic order to distribute capital investments rationally once private ownership of capital had been abolished and all the institutions such as stock exchanges and banks, which are instruments for the distribution of capital amongst the many possibilities of investment open to it, closed down, and when the personal interest of individuals in the best possible investment of their savings had vanished.

For all these reasons economic science still maintains that it is impossible in an economic order in which private property in land and capital has been abolished to make economic calculations with a view to carrying on production at its minimal costs, because there

would be no market in the means of production, and no artificial substitute is possible.¹

With this social science delivers a telling blow at socialist theory.

The previous considerations emphasize the economic importance of private property in the means of production. As there is a market for the means of production and an automatically functioning price system only in an economic order based on private property, it is only under such conditions that rational production is possible. In a socialist economic order the central economic authority would be faced with the insoluble problem of putting production on a rational basis without the assistance of a price system which would express the respective availability of the various means of production.

3

A practical example will illustrate the difficulties a bureaucratic organization of the whole productive apparatus would encounter. In the second half of 1942 some technicians in Germany proposed (cf. *Frankfurter Zeitung*, September 20th 1942) to save steel in the manufacture of piping by using hard steel and thus manufacturing lighter products. However, for technical reasons which need not be discussed here, as the production of these lighter products required more labour-power, and in particular more skilled labour-power than the production of the ordinary heavy products, the problem was not merely technical but economic. If the proposal had been adopted then steel would certainly have been saved, but more labour-power would have been used. Thus the question arose of whether this saving of steel at the expense of labour-power was economically justifiable. In other words, those responsible had to decide which was the scarcer, steel or labour-power. In a free-market economy prices are formed automatically, and, as we have seen, they indicate the respective availability of the individual production factors, thus enabling the entrepreneur to make his decision. But as by that time prices were officially fixed in Germany the free market no longer existed. How many difficulties arose when those responsible attempted to solve this apparently simple

¹ In his classic work *Socialism*, Jonathan Cape, London, 1936, and in other books, Mises has demonstrated that in a socialist economic order it is equally impossible to calculate costs in a rational way and to create an artificial market. However, in the present chapter we are only partially following the ideas of Mises, and we prefer in particular the works of Pareto and Barone, which Mises was unwilling to use to confirm his thesis owing to an unexplainable objection to the theory of economic equilibrium. Hayek's book, *Collectivist Economic Planning*, Routledge, 1935, is particularly instructive: it has been freely used in the present chapter.

problem ! Tedious negotiations between one government department and the other had to be conducted—primarily between the departments in charge of steel production and the labour exchanges. But as the production of steel involves the use of coke, the opinion of the department in charge of coke had to be obtained. And as the coke for the production of steel had to be transported from the place where it was produced to the place where it was used for the production of steel, the Transport Ministry had also to be consulted. Then there was the question of the increased number of workers required for the production of the lighter goods : these workers had to be brought in from other districts, and so the problem of feeding them arose, with the result that the Food Ministry also had to join in the chase.

The above is a characteristic example of the insoluble problems which arise in an economic order when, instead of the free play of economic forces on the market—which settles such problems rapidly and almost automatically—there are the deliberations of bureaucratic departments.

4

Such considerations are often opposed by citing the example of Russia. Under the Soviet regime Russia has created powerful industries and vast towns almost out of nothing ; considerable natural resources have been opened up ; and victorious armies were created which proved capable of dealing with the German military machine, reputed to be the most powerful in the world.

A preliminary observation is essential at this point. When economists contend that economic freedom guarantees the greatest possible total product, they mean implicitly and as far as this is consonant with individual tastes. Now many people do not give the maximum labour productivity of which they are capable. When their work has gone on so long that it becomes tedious they prefer leisure to greater gain. Many women prefer to work in their household rather than in a factory. Many older men enjoy the fruits of their past labours in peace. And finally there are many young people who are kept by their parents for years whilst they are studying before they take up an occupation. Then there are those workers who avoid dangerous work, or who demand such high wages for doing it that no employer can be found to pay them, so that the work remains undone.

An authoritarian government is in a position to compel people to work. During the course of the recent world war we had ample opportunity of observing what tremendous reserves of labour-power the belligerent countries were able to mobilize. The working time of those already employed was increased and up to a certain

age-limit women were also mobilized for the factories. Retired men were called back to their work and even young people were used for lighter work. Soviet Russia was in a position to use the forced labour of hundreds of thousands of political prisoners to lay down roads and build railways in the tundras and so open up rich areas which had previously been neglected.

In the exceptional circumstances brought about by a war, or by preparation for war, when all the forces of the nation have to be bent to one aim, when the riches and the blood of the individual have to be sacrificed to the common good, when even the interests of coming generations must be sacrificed, then we can admit that an authoritarian economic order is more effective than a liberal one, which can, in any case, not function in such circumstances because a number of the essential conditions for its existence are put out of action. But even if in normal peace-time conditions—or must the hope of a real peace remain unfulfilled?—an authoritarian economic regime were able, with the help of compulsion, to obtain a greater total product than would be possible if the individual were left to decide his affairs for himself, the community as a whole would still find less opportunity to satisfy its requirements because its members would be compelled to work beyond that limit within which the burden of labour seems compensated for by increased gain.

From the still fragmentary and uncertain information which we possess up to the moment concerning the living conditions of the Russian people it would seem that the standard of the great mass of the people is still very low. In fact, in past years the attention of the Russian Government has been primarily concentrated on the building up of a powerful industrial system and thus the development of the capital goods industries rather than those which produce direct consumer goods. The system created in Germany by National Socialism after 1933 was a war economy whose aim was to forge the weapons necessary to enslave Europe. The authoritarian planned economy which socialists advocate still owes us proof that it would be in a better position to satisfy the needs of the population than the liberal economic order.

CHAPTER VIII

ECONOMIC PLANNING

I

IN the opinion of many people, an opinion not shared by the writer, there is a third economic system which occupies a place midway between a liberal economic order and socialism, namely, what is called economic planning. This system, they believe, *organizes the market*, compensates for the shifts of equilibrium, eliminates the abuses of economic liberalism, and at the same time leaves private property in land and the means of production untouched in principle.

Even in liberal States there is no lack of intervention in the economic life of the country. The most striking example of this is perhaps the institution of protective tariffs, by means of which the State exercises a more or less powerful influence on the economic system. However, such intervention represents the exception rather than the rule, and, in particular, the market mechanism is permitted to function without let or hindrance, with the exception of a few attempts to fix the prices of this or that commodity, or when the State intervenes to influence wage movements—one of the earliest examples was a law passed in Great Britain in 1909. The following are the essential characteristics of what is called a “directed” or “controlled” economic order: *économie dirigée*, economic planning, *Planwirtschaft*, etc.: State intervention is not casual but systematic; it is not limited to this or that branch of production, but embraces the whole economic system. *Free-market economy ceases to function*. Those economic magnitudes which are determined under free competition by automatically operating economic forces, i.e., commodity prices, wages, the rate of interest, the price of capital and land, the imported and exported quantities of commodities, the quantities of raw materials used by each individual undertaking, and so on, are now determined by official decision. Entrepreneurs are still legally the owners of their factories, etc., but they gradually become officials of the State (“non-commissioned officers” was a popular phrase in Germany at one time) who carry out the instructions of the authorities—unless they are clever enough to circumvent them. For the most part they are no longer free to determine the price of goods and services, the most advantageous size of their undertakings, the number and choice of workers and the combination of the production factors.

Within the framework of a planned economy, consumption must also be "regulated". Once the State has abolished the whole mechanism of prices, exchange and production it cannot leave the sphere of consumption alone as some people hope. On the contrary, the whole population will become like an army in which each man receives the rations fixed for him by the bureaucrats. Not only will freedom of consumption be restricted but also the freedom to choose an occupation, for of course it could not be otherwise, because if the State desires to produce certain quantities of various kinds of commodity then it must see to it that the individual factory director receives the necessary labour-power for the purpose. The individual will also not be able to invest his capital as he thinks fit: savings will be guided into investment channels approved by the State. The functions of the various organs of the capital market, namely, the collection of savings and their distribution amongst the various industries according to their requirements, will cease to have any meaning.

We shall have to admit that during the course of a long and all-embracing conflict like the second world war economic planning was necessary. War must be waged with authoritarian means in the economic sphere as elsewhere, and even liberal States found themselves compelled to adopt such measures. In face of this necessity it might appear purposeless when I subject the system to criticism in this chapter, but the point at issue now is whether economic planning should continue to exist in a peace-time economy, or whether it would be better to give private initiative a wide field of operations again? Obviously, this is a question of fundamental importance, and, in fact, it is now being discussed at great length both at public meetings and in the press in many countries. Owing to the deep differences of opinion between those who advocate "economic planning" and those who are in favour of a liberal economic order, Italy, for instance, has not yet wholly succeeded in making her choice, though there is now a definite tendency towards the re-establishment of a free market. In a peace-time economy where there is no imperative necessity to maintain economic planning, the defects of the system are particularly onerous, and it is therefore well worth while to investigate them. In this respect I have principally used the experiences obtained in Germany during the last world war and during the years immediately preceding it, and I have done so for a definite reason. As the German people possess an exceptional degree of self-discipline and as they were then living under an authoritarian regime *par excellence*, it is clear that if any country were in a position to carry the economic-planning experiment through to a successful conclusion it was Germany. Now when, as we shall see, even in Germany the system brought serious inconveniences and disturbances the

question arises: how much more onerous would they be in countries where the conditions for the success of the system are by no means so favourable? At the same time, I do not wish to dispute that in some spheres—particularly in the matter of public works (cf. Chapter XI)—Germany's economic planning met with quite impressive successes.

In the view of many people economic planning represents a great advance on the sectional intervention practised in the liberal epoch which often failed to achieve its purpose and sometimes produced quite opposite effects to those intended. Economic planning, on the other hand, now organized these sectional actions into a harmonious whole. Such co-ordination was necessary because, owing to the interdependence of all economic factors, each separate measure usually required further measures later on to eliminate the deleterious consequences of the preliminary measure. By recognizing the desirability of reducing the various interventions with regard to prices, production and finance (cf. Chapter VI, 3 and 4) to a common denominator, Germany's economic planning undoubtedly achieved certain objects of a war economy more successfully in the second world war than was the case in the first.

However, it would be erroneous to conclude from this that a system could be developed to deal with the tasks of a normal peace-time economy with the object of securing a maximal total product. If, according to economic theory, the prices and other economic magnitudes (i.e., the "unknown quantities" of the problem) are exactly equal to the number of conditions which must be fulfilled in order to obtain a maximal total product in a free-market economy (cf. Chapter II) it is clear that if the State intervenes and officially fixes the value of a number of "unknowns" the problem becomes insoluble, because the number of unknown quantities whose value has to be determined by spontaneous economic forces is diminished whilst the number of conditions which determine the equilibrium remains the same, so that the number of conditions is greater than the number of unknowns and all the conditions cannot therefore be simultaneously satisfied. Under such circumstances the total social product cannot be anything else than smaller than the maximum^h permitted by the available economic resources of the country.

Efforts to harmonize all the control measures adopted by the various departments meet with insuperable difficulties in practice. In this connection, too, the German experiment is highly instructive. There were special departments in Germany for the distribution

of raw materials, machinery, labour-power, electric-power, fuel, gas and means of transport on land and water. Each of the many raw materials often required by one single undertaking had to be obtained from the special department in charge of its distribution. At the same time each production factor was to be distributed in a certain proportion to the quantities of the other production factors. But this fundamental problem, which easily solves itself in a free-market economy, cannot be solved by departmental decisions taken independently of each other. And experience has shown* that it cannot be solved even when all the various departments are amalgamated into one central body. This amalgamation would be a matter of form only because special departments would still have to exist for each production factor. In practice it will never be possible to prevent a frequent disparity between the quantities distributed by one department and those distributed by another, or to prevent the adoption of contradictory decisions. Sometimes, for instance, a German entrepreneur would receive categoric instructions from one department to cut down his power consumption whilst at the same time he received equally categoric instructions from another to speed up the delivery of certain materials. In such cases entrepreneurs were compelled to act as a go-between and seek to establish a proper proportion between the factors distributed to them.

3

The bureaucratic apparatus of economic planning steadily becomes larger and more complicated. Departments have to be set up to grant export and import licences, to control the distribution of foreign exchange, to allot raw materials amongst the various branches of industry, to fix wages and commodity prices, to investigate the production costs of the individual undertakings, to distribute labour-power amongst them, to issue food cards, clothing coupons, etc. In this way the number of departments grows indefinitely, and laws, decrees, supplementary regulations, guiding principles and so on are churned out ceaselessly until whole volumes are filled with them, and entrepreneurs, banks and merchants have to call in experts* to explain and interpret them all. The network of instructions and prohibitions becomes more and more dense, because economic intervention once started can never stop : one step leads on to the next. In this way, price-control, which was first introduced in Germany for agriculture, was gradually extended to many other economic spheres so that by the year 1937 three-quarters of the volume of commodities sold were subject to price control. In 1935 these controls were exercised by 49 departments, to which were attached 19 committees of the Agricultural

Association and 27 further departments for the control of foreign trade. By the same year 700 price-control regulations had already been issued—later on their number increased considerably.

There were 31 industrial associations in Germany divided into 250 groups, which in their turn were subdivided into 600 others. Then there were at least 1700 "cartels". It is therefore not surprising that unproductive labour began to increase rapidly. According to official estimates the various economic control bodies employed approximately 400,000 more people in 1937 than in 1933. But there was no total estimate of the enormous amount of unproductive work involved for banks and industrial undertakings as a result of the numerous State controls. The German press was always stressing the necessity of simplifying the system. The decree issued by the Price-Control Commissar in March 1942 changing the system of *Gewinnabführung* into a simple profit tax collected by the ordinary tax authorities was also an attempt to alleviate the bureaucratic cumbrousness of the Price-Control Department. In the hope that the apparatus of State control might be somewhat reduced thereby, the government appealed to the self-discipline of the individual and sought to introduce new forms of voluntary discipline into industry.

The "given factors" of the economic situation are constantly changing, and if grave disturbances are to be avoided, the economic system must possess the necessary degree of elasticity in order to be able to adapt itself. All prohibitions, control measures, licence and quota systems, and all measures to stabilize prices or wages, or to compel the consumption of certain commodities are calculated to make the economic system rigid and inelastic. "Stability" cannot be taken to mean that an economic system marks time; it should mean its capacity to adapt itself rapidly to whatever changes take place in the market situation.

4

The psychological results of a plethora of controls and prohibitions are also serious. The spirit of enterprise is hamstrung. The German press was well aware of this, and it was constantly drawing the attention of the authorities to the danger. It pointed out that the development of German industry and the remarkable system of foreign-trade relations which had so much assisted Germany's economic progress in the past had not been the creations of governments but of private enterprise, and it asked most pertinently whether these same men would have been able to display their exceptional talent as organizers, inventors and pioneers to the same extent within the framework of an authoritarian economic system. The authorities replied in the affirmative and declared

that although great "strategic" economic problems would naturally have to be solved by the central authority private enterprise would always be given room to deal with "tactical" problems. But even this limited task demands a certain freedom of movement which is not granted in a system of economic planning. This is a very difficult problem, and there seems no prospect of its ever being solved within the framework of an authoritarian economic order. Even before the outbreak of the second world war there were complaints in the German press that the spirit of enterprise was disappearing, and it was alleged that the increasing limitation of profits, the bureaucratic organization of the economic system, and the many obstacles put in the way of international trading relations which prevented Germany's new generation of business men from going abroad to secure sound business experience, were all contributing to the unfortunate situation.

Finally, we must not overlook the fact that a very great part of the time of the entrepreneur and a very great deal of his energy are taken up by complying with innumerable formalities before he can get whatever permission or licence he requires from whatever department he is compelled to approach in the matter. A German official declared: "Those who are dissatisfied with the quotas allotted to them adopt every conceivable device to secure their increase." The requisite negotiations are long and tedious—and the tasks of the various officials involved are also very difficult. It was stated before the war that every morning a train left Hamburg for Berlin full of business men on their way to the capital to present their own case to the central departments there. It was called "the quota train". A sardonic German exporter conceived the idea of papering his office with the forty different forms he had to fill up and send in before he could get a licence to export. And, finally, the constant chopping and changing in the price-control regulations, costs regulations, foreign-exchange regulations, etc., produced a growing feeling of insecurity, depression and despair. A good business man does not take long to recognize that the success of his business no longer depends on his personal efforts and his personal abilities, but on the hazards of obtaining a licence, or whatever it is he requires, from the appropriate government department. The unfavourable moral consequences are easy to imagine. Corruption inevitably develops amongst government officials and employees. Entrepreneurs find themselves compelled—as the President of the Italian Association of Industrialists recently publicly complained—to spend the greater part of their time not in their offices and factories but in the anterooms of the various ministries, and in order to get what they require they have to adopt tactics which they find highly disagreeable.

Private enterprise progressively declines when men are more

and more compelled to confine themselves to acting only in accordance with instructions issued by government departments. In his famous work on the limits of State intervention¹ W. von Humboldt observes that whoever is constantly compelled to bow to the will of another is finally inclined to surrender even what little independence still remains to him.²

Cunning and unscrupulous men circumvent all control measures because the prospect of big profits makes them ready to take any risk involved. People with decent instincts come off badly. The whole extremely complicated system of German control measures did not prevent a number of Swiss towns from being flooded with German paper money and, to a lesser extent, with silver mark pieces. In July 1938 the paper mark was being sold in Zurich at a rate of 60 Swiss francs per 100 marks, although the official rate was 170 Swiss francs. In May 1939 Italian banknotes were on offer in Cairo in exchange for Egyptian pounds at a rate of approximately half the official rate. These banknotes came from Djibuti and Port Said where they had been spent by soldiers and workers returning from Africa. They were then bought up by speculators and despatched in bundles to Switzerland from where they were smuggled back into Italy to pay for Italian export goods.

As Humboldt also observes, too many prohibitions and restraints irritate and make some people go to extraordinary and often base lengths to circumvent them. In addition such people soon realize that they themselves can profit from measures which hamper others, and therefore whenever they are in a position to do so, they exert pressure on the authorities to issue further protective measures. As there always exists some possibility of hampering other people's activities, more and more requests of this nature are lodged. If they are granted, then those who are favoured by them are protected from disagreeable competition. In this way, measures are issued favouring certain undertakings at the expense of others.

Sometimes control measures have an unfavourable effect on the general public. Public opinion is often far from strict in its condemnation of attempts to circumvent onerous hindrances—which are often based on very questionable economic theories—and in consequence respect for law and for the authority of the State declines. For instance, public opinion is astonished to find that offences it has always been taught to regard as of a very serious nature are often not so severely punished as minor violations of price orders and foreign-exchange regulations. In August 1939,

¹ W. von Humboldt: *Ideen zu einem Versuch, die Grenzen der Wirksamkeit des Staates zu bestimmen*, Berlin, 1841.

² Humboldt gives a highly interesting exposition of the decisive role played by liberty in the formation of man's feeling of responsibility. G. de Ruggiero: *Storia del liberalismo europeo*, p. 240, 1925.

for example, a German court sentenced an unfortunate Jew, who had been caught trying to take one or two gold articles of only moderate value over the frontier, to three years' imprisonment. Almost at the same time a brute who had violated two girls was given a sentence of only one year and nine months' imprisonment. Such contrasts have devastating moral effects because they upset the whole scale of moral values, though, of course, in the exceptional circumstances of war-time when a country is fighting for its existence, it can readily be understood that offences which seem rather unimportant in peace-time can endanger the security of the State if they take place frequently and that they must therefore be severely punished. During the war, very severe terms of imprisonment, and even the death sentence, were imposed in Germany, for hoarding and for illegal profit-making. In times of peace such drastic measures could hardly be adopted. On the other hand if the punishments provided are too mild then there is a danger that the control regulations will prove ineffective.

5

An authoritarian economic order raises another important question. All its prohibitions and controls restrict the personal liberty of each individual. The powers of a bureaucracy whose writ runs everywhere, which can give orders, issue prohibitions and grant permission, issue licences, shift labour-power from one place to another and distribute raw materials, is overwhelming. The individual has no means of redress against administrative actions which injure his proper interests, for instance, when one of his applications is settled only after excessive delays. In Germany constitutional innovations were introduced during the Nazi regime which made the individual helpless against the public administration; the utmost the authorities were prepared to grant him was the right to represent his private interests "where they happened to coincide with the public interests". All those who are convinced that the advance of human civilization expresses itself above all in the progressive abolition of arbitrariness cannot look without the greatest anxiety to a future in which economic planning develops from an emergency war-time measure to the permanent state of economic life.

A feeling of hopelessness befalls all men who are unable to decide their future in their own way. This was certainly true of all those workers and apprentices in Germany who were prevented by the German labour exchanges from following the career of their choice, or from taking better employment elsewhere. Certainly, the automatic distribution of the production factor labour-power amongst the various occupations involves disturbances of the

equilibrium (cf. Chapter III, 7), but when we come to examine the underlying reasons for the general dislike of certain occupations we very often find that they are rooted in bad working conditions (low wages, the absence of welfare legislation, unhealthy workrooms and so on). The best way to overcome such resistance is not by compulsion but by improving working conditions until they again become attractive as occupations.

6

There is a great deal of reliable evidence to show that, even in Germany under the iron regime of National Socialism, economic planning had many difficulties to contend with and that its effects were very far from being favourable from an economic standpoint. An article which appeared in the columns of the most important German financial organ¹ on the "Four Year Plan" is particularly interesting on the point. "All friends of liberty and private enterprise, all enemies of communism, and all those who have the future of our civilization and culture at heart," it wrote, "are anxiously asking themselves whether the authorities intend to establish a new economic order in which a central authority will determine and regulate the whole of economic life according to preconceived plans." The writer declared that despite the great organizational capacities of the German people and despite their patience and their willingness to make necessary sacrifices, it would prove impossible to establish a system based on economic planning because the attempt would inevitably meet with insuperable practical difficulties. An omnipotent, ever-present and all-powerful "central brain" capable of directing the economic life of so vast a country as Germany was impossible. And it would be an illusion to suppose that some directing central authority could exercise the functions of such a non-existent brain. Experience had already shown that control institutions, far from representing a higher form of economic organization, produced nothing but a bureaucratic abortion of red tape and "forms". The much-praised "new economic order," the writer declared, was nothing but "the triumph of red tape and the form";² and, in conclusion, he insisted that economic planning could be no more than a temporary phenomenon; it represented "a state of emergency" brought into being by the international situation and must one day

¹ *Frankfurter Zeitung*, December 24th 1936.

² The liberal use of expressions such as "the over-organization of industry", "the flood of forms", "the hypertrophy of economic planning" by the German press persuaded the German Government to issue a decree in April 1942 for "the simplification and standardization of the industrial structure." A "war on red tape" was solemnly declared by Speer, the Minister for War Industry.

disappear, because to retain it indefinitely would be to reduce the total production of the country and lower the living standards of the German people.

In a speech delivered in 1938 Herr Brinkmann,¹ then Vice-President of the Reichsbank, openly admitted that the criticisms being made by business men were more than a little justified. He then added one or two personal observations which are highly interesting. He pointed out that since 1933 large-scale undertakings had greatly prospered, and that monopoly undertakings in particular had increased in numbers and were making large profits. (It is, of course, not in the least surprising that official restrictions on free competition should encourage the development of monopolies.) He then went on to say that on the other hand there had been a diminution in the number of small and medium businesses since 1933. That, of course, was a strange result for a system which was allegedly the enemy of the "plutocracy" and "monopoly" allegedly rampant under a liberalist regime. The trend of development gave rise to serious misgivings, declared Herr Brinkmann, because the men who had made Germany into a powerful industrial country had come from precisely that "regenerative" social class represented by the small and medium business man. Thus Brinkmann, too, came to the conclusion that the economic policy of National Socialism had failed to achieve its avowed objects.

German economic planning was also not without its contradictions. Professor Eulenburg, the well-known German economist, pointed out many of them.² On the one hand the government supported the small and medium industrial undertakings, which were promised a share of government orders, but on the other, a big propaganda campaign was waged in the interests of greater standardization both in production and consumption, and that made it difficult for the smaller men because they could continue to exist at all only thanks to consumer demand for a variety of commodities. On the one hand, the authorities evinced little sympathy for the joint-stock company, but on the other private and personal undertakings were taxed more heavily than the former with the result that more and more of the latter turned themselves into the former to lighten the burden of taxation.

7

There were also frequent examples in Germany of the indirect disadvantages resulting from State intervention, as a result of which they had to be continually altering the original regulations.

¹ Published in the *Weekly Report* of the German Institute for Business Research, in November 1938.

² In his book *Volkswirtschaftspolitik*, Basle, 1937.

The policy of economic self-sufficiency did great damage to big German ports like Hamburg and Bremen. A government decree issued in June 1937 forbade farmers to use their grain as fodder. The result was that between September 1937 and September 1938 the number of pigs in Germany declined by two million and the government was then compelled to introduce new measures to remedy the evil. Price control itself also had many unforeseen consequences. As it was impossible to fix the appropriate price for each of the various kinds of a commodity—a problem which a free-market economy solves easily—the authorities confined themselves to picking on certain types, usually of medium quality. The result was that farmers tended to increase the production of qualities below the average level. The authorities also tried to level out the seasonal price fluctuations of certain agricultural products. In many cases the only result of these efforts was a drop in production in the months when official prices were too low, and when, for the same reason, demand increased. But one of the biggest difficulties of a system of officially fixed prices is the way prices differ, from district to district, for the same commodities, owing to transport costs from the point of production to the point of consumption. Where grain was concerned the authorities tried to solve the problem by dividing Germany into twenty districts for each of which a special price was fixed. But as these districts were necessarily large, there were isolated areas which received no grain because the official maximum price had not sufficiently considered the extra transport costs. In order to meet this difficulty so-called "equalization accounts" were instituted to pay the grain merchants a bonus, or the Central Grain Department undertook the task of itself delivering the grain. In order to eliminate local differences between supply and demand large dumps were organized, not only for grain, but also for butter, eggs, cheese and vegetables.

The prices of almost all industrial products used in agriculture were either officially fixed or arranged in agreement with industrial organizations. For instance, in 1938, the manufacturers of artificial fertilizers were compelled to drop their prices by 30 per cent. In the same year the official price of rye was raised by 10 marks a ton, but as the price of bread remained unchanged the government undertook to pay the difference and it financed this by imposing a special levy on the brewers to the tune of 36 million marks.

But as soon as one hole was stuffed up in some such fashion another opened elsewhere. Producers did their best to circumvent the fixed maximum prices. For instance, peasants sold their cattle direct to the butchers instead of taking them to market. The same thing happened in the summer of 1941 with fruit. There were only small quantities on the market because part of the harvest had been sold on the spot. In order to give their officially

fixed prices real validity the German authorities had to undertake the tremendous task of controlling all agricultural supplies. Even before the outbreak of the second world war producers in Germany were, generally speaking, not in a position to sell their goods where they pleased, and they were obliged to offer them for sale on certain fixed markets. Merchants were also obliged to make their purchases in these markets. Incidentally, this was nothing new : similar measures had been introduced in France in the eighteenth century for grain. Producers were no longer in a position to decide what the prices of their commodities should be or how they should reach the consumer. With this, freedom of trading in agricultural produce practically ceased, and, in fact, the word "trader" went out of use and was replaced by the word "distributor". All the one-time trader now did was to buy produce and sell it again at officially fixed prices, and for this he was paid officially.

In Germany even before the war there existed an enormous apparatus to deal with the distribution of grain. Each peasant was obliged to deliver up certain fixed quantities. A sort of land registry was created which listed approximately two million agricultural holdings, the grain from which was distributed to the mills according to a certain arrangement, which was, however, not sufficiently perfect to prevent certain mills from being in a favoured position. The authorities then tried to iron out these inequalities by introducing an equalization system which provided that mills which ground wheat should pay compensation to mills which ground rye, and for this purpose a special account was established. Another such special account was introduced in order to reduce bakers' profits to one level.¹

8

Even before the last war experience had often shown that State intervention increased rather than diminished the fluctuations in some branches of production. A case in point is the supply of pork, which is a very important product for Germany because it accounts for about two-thirds of the total consumption of meat. In 1934 the shortage of feeding stuffs compelled German pig-breeders to sell a great part of their stocks. In order to avoid waste the authorities had to intervene to see that a proportion of the pork was canned. Later, an improvement in the fodder supply permitted breeders to increase their stocks again—by round about three millions in the year 1935-36. Formerly there were never such violent fluctuations in the supply of fodder because in years of

¹ Details can be obtained from the "Wirtschaftskurve" of the *Frankfurter Zeitung* in 1937.

shortage the free-market economy quickly imported everything requisite from abroad. The authorities had vainly hoped that the introduction of official maximum prices would be sufficient to stabilize the price of meat in order to prevent all fluctuations in supply.

Very often the shortage of certain commodities produced an exaggerated pessimism, chiefly for psychological reasons, amongst the German public. Under a free-market economy the general public does not begin to worry when a shortage of this or that commodity becomes evident because it is accustomed to a rapid re-establishment of the equilibrium thanks to a slight increase in price which encourages supply. The psychological effects of shortages are much greater, however, when consumers fear, often without cause, that supply cannot be increased because of State control. People then storm the shops for fear that prices will rise considerably in the near future and buy more than their current needs with the result that the disturbance looks greater than it really is. According to economic reports this is what happened in Germany in 1934 when the public rushed to buy textiles for fear that the new restrictions imposed on the import of raw materials would reduce the supply available. There was another important consequence : the German textile industry incorrectly interpreted this unexpected increase in demand as evidence of an increase in purchasing power. In consequence, production was stepped up. When the monetary reserves of the public were exhausted and demand fell away the textile manufacturers found themselves with excessive stocks of finished goods on their hands and production was suddenly stopped.

Another example is offered by the reduction in the rate of interest which was one of the main aims of Germany's finance policy even before the war. It was quite unable to prevent a rise in share quotations at a time when company profits were on the upgrade. Now the German Government was by no means pleased with this rise, because it meant that money was being drained from the government-stock market. Moreover, the whole policy of price-fixing was threatened and it began to look as though the investing public had no confidence in the value of money. Warning voices began to make themselves heard to the effect that share quotations were much too high and that restrictive measures would become necessary if the investing public continued to buy shares.¹ The result of this warning was to cause panic amongst the investing

¹ Such measures were actually introduced in 1942. All persons who had purchased shares to a total value exceeding 100,000 marks since September 1st 1939 were ordered to report their possession to the authorities, who then reserved the right to purchase them. In this case the forced sellers were encouraged to invest the proceeds in government stock.

public. They hurried to unload their shares, and in consequence share quotations tumbled. But it was not long before the objective facts of the situation again made themselves felt, whereupon share quotations resumed their upward trend. Thus State intervention merely produced violent fluctuations, and as a result some people suffered losses whilst others gained undeserved profit. Similar situations have arisen in recent years in Italy as a result of frequent State intervention, for instance, the prospect of nationalization.

9

The situation of the German textile industry shortly before the outbreak of the second world war offered a further instructive example of the economic disturbances which can be caused by State intervention. The distribution of raw materials in particular caused a great deal of inequality as between manufacturers with the result that whilst some of them were able to continue producing without hindrance, others were compelled to restrict production considerably. The guiding principle for the allotment of the various quotas was the amount purchased by the individual undertakings in 1933, and in this way conditions were perpetuated indefinitely which in many cases had been brought about at the time by temporary and exceptional factors. When there was a shortage of raw materials it was usually observable that those factories suffered most which produced some special line, whilst factories which produced a variety of goods were in a position to make up for the shortage of materials in one line by producing more in others for which materials were more readily available.

Price fluctuations caused by State intervention in foreign trade also caused more or less serious disturbances. As the rates of exchange were calculated by different methods in the various clearing agreements it came about that the price in marks for raw materials of a certain quality varied according to the country of origin. Such price differences naturally made themselves felt in the prices of the corresponding finished goods. Generally speaking, the German manufacturer paid the proper world-market price for his raw materials only when his finished product was intended for export. But if the particular finished product was sold on the home market then the price of the raw materials used was considerably higher than world-market levels. Here is a typical example: between 1933 and 1935 the price of a certain kind of wool in Germany rose from 2.89 to 6.58 marks per kilo, whereas in the same period the world-market price for the same kind of wool increased only from 2.03 to 2.63 marks.¹

¹ *Frankfurter Zeitung*, November 18th 1936.

10

The price of foreign raw materials had risen considerably in consequence of the artificial shift of trade routes due to political measures and the numerous restrictions imposed on foreign trade which made it necessary for a commodity to arrive at its destination by devious routes after having passed through the hands of a whole series of middlemen before it finally landed in the hands of the consumers.

As long as foreign trade was free—with the exception of certain customs restrictions—Germany's importers naturally bought what they wanted wherever it was to be had most advantageously. But the system of "bilateral" clearing (cf. Chapter XIII, 5) often compels the importer to buy where production conditions are less favourable and prices higher. Price increases were often due to the fact that German demand was concentrated on a territorially limited market. Statistics drawn up in 1936 showed that the prices paid by Germany for imports from countries with which she had clearing agreements were between 20 and 50 per cent above the normal level on the free market. Such an economic policy naturally also drove up domestic prices and thereby came into conflict with the measures adopted to stabilize prices at home. Another peculiar consequence was that when Germany had an active trade balance with any particular country she often purchased commodities which she did not really need rather than maintain blocked accounts abroad. Whilst staple commodities were very often in short supply in Germany, there was sometimes a surplus of non-essential goods such as fur coats.

11

Where Germany's economic policy was particularly unsuccessful in achieving its object was when it tried to alter certain fundamental long-standing tendencies of economic development.¹ A typical example of this was the failure of all measures to prevent the population drifting away from the rural areas, to foster so-called "domestic colonization", to encourage the building of houses for agricultural workers by means of subsidies, to persuade workers employed in industry to go back to the land, and to imbue young people, who were obliged to spend a certain period on the land, with a love of agricultural work. Despite the acute shortage of labour, the number of workers employed in agriculture increased by only 200,000 in the years from 1933 to 1936. At the same time it is

¹ Wagemann repeatedly stresses this point in his *Wirtschaftsstrategie*, Berlin, 1938.

estimated that in this period approximately 800,000 people migrated from the land to the towns. Whereas in 1933, 67 per cent of the population lived in the towns, by 1939 the proportion had increased to 70 per cent. The official campaign against "urbanization" was a complete failure.

Certain brilliant successes from the technical point of view were obtained in the course of the "Four-Year Plan", but from the economic standpoint the great plan resulted, all in all, in a considerable increase in the costs of production. This was due in the first place to the fact that the synthetic raw materials, such as "buna" (artificial rubber) and the oil obtained from coal, were more expensive than the natural raw materials which could have been imported from abroad. Then there was the cost of exploiting inferior deposits of various minerals. In the last resort the higher costs came about because more labour-power had to be used with the probably rather unexpected result that the increased demand for labour-power (even before the war) made the use of foreign labour so necessary that though Germany's dependence on foreign sources for raw materials decreased, she found herself increasingly dependent on foreign sources for her labour.

After a thorough examination of Germany's economic planning Professor Eulenburg comes to the following conclusion: "The automatic mechanism of the market works far more reliably and accurately than economic planning. . . ."

"The great economic and demographic progress achieved in the nineteenth century was obtained thanks to the prevalence of economic liberty; economic planning must now provide the difficult proof that it is in a position to achieve the same results."¹ It is significant that this admission comes from a German economist. His conclusion is confirmed both in present and past experience. Some writers vainly try to show that economic planning represents a new stage in the economic development of the peoples, but this alleged "new economic order", with all its complicated structure and its apparently ingenious methods, is nothing but a return to a stage which preceded the regime of economic liberty. "Mercantilism", i.e., that totality of politico-economic measures which was imposed at a time when Europe was shaken by constant wars and when the great national economic units we know to-day grew up together with the great national States, is experiencing its rebirth in economic planning, which in its whole essence is nothing but a *war economy*.

In the appendix to the present chapter the reader will find a description of a curious example of economic planning, namely, the economic system built up by Mohamed Aly. Once again we find

¹ *Op cit.*, p. 292.

the fixing of prices, the organization of agriculture according to certain preconceived ideas with the peasants under an obligation to deliver up their produce to the authorities, and a State monopoly of foreign trade. In short, the system embraces, though, of course, in a more primitive form, all the characteristics which in the judgment of our "economic planners" represent an entirely "new economic order".

CHAPTER VIII—APPENDIX

THE ECONOMIC SYSTEM OF MOHAMED ALY ¹

WE must distinguish two parts in the great work of economic reconstruction carried out in Egypt one hundred and twenty years ago by Mohamed Aly. The one embraces all those reforms which laid the basis for the economic prosperity of Egypt and for a new social life. These innovations have had lasting effects, and in consequence Mohamed Aly can justly be termed the founder of modern Egypt both politically and economically. The second part of his work embraced numerous measures of economic planning—as we should describe them to-day—which were motivated by the political necessities of the moment and whose significance was only transitory.

Above all, Mohamed Aly created stable conditions at home in place of the anarchy which had prevailed before. The establishment of a central authority brought the abuses and arbitrariness of a reckless military oligarchy to a speedy end. Mohamed Aly also founded a standing army and navy, supported education, introduced measures of social hygiene, organized great public works (for instance, the digging of the Mahmoudieh Canal), and, above all, he reorganized the whole irrigation system. The traditional system of water supply by means of "basins" was gradually replaced by a permanent water supply which made it possible to grow cotton. The economic prosperity of Egypt is closely dependent on a reliable water supply. From ancient times down to the present the basins, canals, reservoirs and dams which regulate the flow of the Nile have been an integral system so that the necessity of uniform control arose quite naturally, and demanded the existence of a centralized political power. Thus it was inevitable that in times of political anarchy Egypt's economic prosperity suffered.

Mohamed Aly also assisted Egyptian agriculture to greater

¹ Extracts from a lecture delivered by the author to the Faculty of Law at the University of Alexandria, published in the journal *Al Quanon wal Iktisad*, Cairo, 1939, under the title "Une expérience d'économie dirigée : Le système économique de Mohamed Aly".

prosperity by introducing numerous new kinds of crops, including the most important of all, cotton, which produced something like a revolution in the country's economic life. Cotton became Egypt's chief product and one of the biggest sources of her revenue. As almost the entire cotton harvest was exported—as it still is to-day—Egypt's economic system, which had been closed to the outside world for centuries, now came into direct touch with the world economic system. At the same time it became subject to the fluctuations of the world market, and it prospered or suffered according to whether the world-market price of cotton rose or fell.

Mohamed Aly was also anxious to turn Egypt into an industrial country, since he believed that the existence of large reserves of cheap labour-power and of numerous deposits of raw materials created favourable conditions for such a development. However, in this respect his efforts did not meet with success.

Let me now describe briefly the system of economic planning which he built up.

After the confiscation of all land in the hands of the Mamelukes, the "Mutezim" and religious institutions, Mohamed Aly, who had become a sort of Viceroy of Egypt, found himself in possession of the greater part of Egypt's land, for the ancient principle that the land is the property of the ruler still existed. A general registration of all arable land was ordered. In the villages the land was divided up amongst the "fellah" so that each family received between three and five "feddan". Private property in land later developed from this division. The harvest was the property of the man who had tilled the land. However, the "Mamur" (those in charge of the various districts) determined for each individual village the size of the area to be devoted to each particular crop. They provided the peasants with seed, tools and draught animals. They supervised the condition of the canals and the dams, whose upkeep was the task of the peasants. The "Mamur" also supervised the work in the fields from the sowings to the harvesting and the subsequent deliveries of the harvest. Sometimes, we are told by contemporary reports, they sent their soldiers into the fields to see that the peasants really carried out the instructions of Mohamed Aly.

There was no free trade in agricultural produce. Mohamed Aly created the notorious monopolies which became one of the essential features of his system. The most important agricultural produce was bought by the government at fixed prices, and taxes and advances made to the peasants were deducted. After the harvest the peasants brought their produce to the State warehouses ("sciuna"), where they were weighed and classified. Each peasant had a sort of current account at the *sciuna*—the "collecting depot"

as we should call it to-day—to which he delivered his produce. Certain produce such as cotton and indigo represented a State monopoly. Other produce like grain and vegetables was requisitioned by the State only in certain quantities as required for export or for the personal use of the Viceroy and the members of his retinue and their families.

There was a certain amount of trading freedom, but the government controlled the movement of prices. For instance, in 1837, at a time when prices were high, the government fixed maximum prices for a series of agricultural commodities.

The greater part of the produce bought by the government was then sold to foreign merchants in Alexandria and exported. Prices in these transactions were governed by world-market levels and they were very much higher—often two or three times as high—as the prices paid to the peasants. Mohamed Aly created an effective monopoly of Egypt's foreign trade. In 1836 the commodities sold by him represented 92 per cent of the total exports of the country. Above all, his aim was to make the peasants grow such crops as were suitable for export. The Viceroy decided annually what crops were to be encouraged according to the state of European demand ; sometimes it was cotton, sometimes indigo, or rice or saffron. Mohamed Aly was always in need of " foreign exchange " with which to buy foreign goods : timber for building purposes, war materials for his army and his fleet, and machinery and coal for his industrial undertakings and his public works.

Industry was also controlled by the government. The men who managed many of the industrial undertakings founded by Mohamed Aly were State officials. Even Egypt's artisans were under his control. He provided them with raw materials and they were under an obligation to make the things he required and sell them to him. It is highly instructive to read contemporary criticisms of his system because they are exactly the same as the criticisms which are made to-day of the system of economic planning. Mohamed Aly's critics declared that his numerous State controls paralysed private enterprise. The fellah, compelled to sell their produce at knock-down prices, had no interest in working hard. Their living standards were declining steadily, and burdened with taxes and oppressed by monopolies and often finding themselves unable to produce the quantities required, they abandoned their holdings and fled. The military had then to be brought in to capture them and put them back on their land by force. Owing to ignorance, the officials whose task it was to decide what crops were to be grown on what land often made the grossest errors. The directors of industrial undertakings had no personal interest in organizing them to the best advantage. Costs of production were too high and the quality of production too low. These were

the main causes for the failure of Mohamed Aly's industrial ventures. Even many artisans preferred to abandon their workshops rather than submit to the oppressive control measures under which they had to work.

The question now arises : why was such economic planning introduced, why did a ruler who otherwise did his best to increase the economic prosperity of the country by a series of great reforms, persist in it even after its unfavourable effects on production had become obvious ? The answer is given by Mohamed himself in a letter to one of his Ministers : " I am very well aware that the State monopolies are unfavourable to the development of the country and the prosperity of its inhabitants. It is unnecessary for me to seek to prove that only exceptional circumstances and the urgent necessities of the present situation caused me to introduce such a system."

Thus in Mohamed Aly's system there was also an obvious contradiction between political aims and economic means, a contradiction which bedevils the economic policy of many a country. Mohamed Aly subordinated the economic prosperity of his country to another aim which seemed to him more important, namely, the political independence of Egypt. His whole life was filled with the one idea of making the country sufficiently strong to repel any attempt at invasion. For this it was necessary to create a strong army as a weapon to cast off the onerous yoke of Turkish suzerainty. Up to 1841 the country lived almost permanently in a state of war and all its forces had to be bent on waging the struggle. Oppressive taxation and State monopolies made it possible for Mohamed Aly to obtain the money he needed to finance the country's defence.

Great Britain delivered the death blow to his system when she demanded that the treaty of August 17th 1838, concluded with Turkey, should be extended to Egypt. Its main clause provided for the abolition of all State monopolies on the territory of the Ottoman Empire. Great Britain was anxious to prevent the emergence of a strong power on the route to India and she therefore sought to deprive the Egyptian Pasha of his main source of revenue by destroying the State monopoly. However, it had already been evident for some time that it was no longer possible to maintain it because it imposed too great a burden on the economic system of the country as a whole. The necessities of national production compelled Egypt to introduce a system of economic liberty whose basis was laid by Said Pasha, the son of Mohamed Aly. The new regime involved the recognition of private property in land ; the freedom of the fellaheen to grow what they liked on their holdings and to sell their products at normal market prices ; freedom to transport produce from one place to another ; the

abolition of domestic customs duties ; freedom of foreign trade ; and permission for foreign capital to enter the country to seek favourable possibilities of investment and take part in the development of the national resources. Thanks to this system of economic liberty Egypt was enabled to advance her economic prosperity rapidly in the second half of the nineteenth century and to increase her population from 2·5 millions in 1807 to 16 millions to-day.

CHAPTER IX

MONOPOLY

I

As we have seen in Chapter II, the theory of economic equilibrium is based on the hypothesis of free competition. To-day many people declare that this theory is totally illusory because a free market will be impossible in practice for a long time to come. In its place has come the "monopoly" wielded by industrial interests.

This objection is far from being new. As early as 1864 Proudhon declared that "competition destroys competition."¹ It certainly greatly furthered the development of social riches, but "This wealth is the object of open competition in which the strongest is victorious; the system of free competition can be described as the system of violence."² Competition gradually reduces the number of those competing so that the few large-scale undertakings left enjoy a monopoly which violates the principle of "free competition". A financial and industrial aristocracy forms which falsifies and changes the democratic character of the market. "Competition becomes oligarchy, and oligarchy becomes despotism."³ "Inevitably monopoly must develop from competition."⁴ All economists are in agreement that monopoly has deleterious effects. We can best illustrate this by a comparison of the influence exercised on commodity prices and quantities by free competition on the one hand and monopoly on the other. If AB (Figure 6) represents consumer demand, and CD the development of costs (whereby for the sake of simplicity we will assume that the commodity is produced by a great number of entrepreneurs at uniform fixed costs) then the price under free competition is OC and the quantity produced OM. But if production is in the hands of one single monopolist producer (or an association of producers) he will seek to obtain a special profit apart from the ordinary return for his managerial activity. He will limit production to the point at which, with the increase of price, the difference between total costs and total sales return is greatest (represented in our diagram

¹ *Op. cit.*, I, 1, p. 209.

² *Ibid.*, p. 227. Other contemporary economists also complained of the existence of numerous monopolies, for instance: Pellegrino Rossi (*Cours d'Économie politique*, vol. I, p. 143) and Considérant (quoted by Bastiat in *Harmonie économiques*, p. 49).

³ *Ibid.*, p. 239.

⁴ *Ibid.*, p. 250.

so that the shaded area has the greatest possible extent). As the form of the supply and demand curves cannot be known *a priori*, entrepreneurs will have to proceed experimentally in order to discover the price which yields the greatest possible profit. Whether they succeed in doing this in practice or not is beside the point ; it is sufficient for us to recognize the essential nature of the forces operating under monopoly conditions. An increase in price and a limitation of production are the immediate results. Under a free-market economy the entrepreneur furthers the general interests,

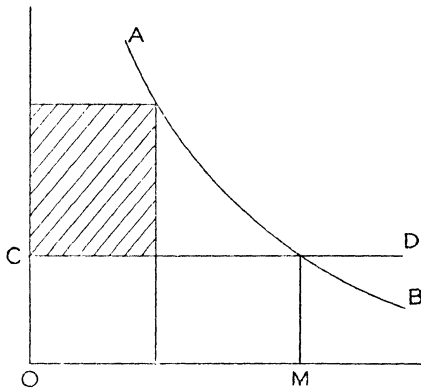


FIG. 6.

although he is primarily concerned with his own. The monopolist, on the other hand, whose aim is to pocket the greatest possible profit, no longer acts as a member of the social order or in its interests. It is in the interests of the community that each commodity should be produced in a quantity consonant with its costs, but the monopolist throttles down production before it has reached this point because his surplus profit is gained precisely from the difference between price and cost. In the case of a free-market economy it is consumer demand which determines not only the trends of production, but also the quantity of the factors used in it. An entrepreneur cannot under such circumstances make any arbitrary change in market prices : on the contrary they are his terms of reference. The monopolist, on the other hand, does alter commodity prices and the quantity of the production factors, and very often the prices of the factors as well. The factors not used by monopoly undertakings—owing to the fact that they restrict production—now flow into other undertakings. Thus monopolies cause a distribution of the production factors among the various branches of production which is different from that which would

have come about under free competition, and from the standpoint of public interest it is a less favourable distribution. The social product is no longer the maximum possible with the available economic resources. Further, the increase in the supply of labour-power which arises because the workmen who are unable to find work owing to the production restrictions in the monopoly undertakings look for work in other undertakings, now brings about a fall in wages. In consequence, monopoly is also the cause of an additional inequality in the distribution of the total social income. As experience shows, it is sometimes true that entrepreneur and workers in a monopoly are in agreement that the consumer should pay higher prices so that the workers should benefit from the monopoly in the form of higher wages. But this advantage derived by a group of workers is more than outweighed by the injury done to numerous other working-class groups, either because the situation on the labour market is worsened or because the price of consumer goods rises.

2

This brief description is the generally accepted theory of monopoly.

We owe to Pantaleoni proof that the typical representative of monopoly, the man who increases prices and throttles production by exploiting both consumer and wage-earner, is becoming less and less frequent.¹ Now the great Italian electrical works are said to be monopolies by those who wish to see them "nationalized". But these power companies have never throttled production; on the contrary, up to the outbreak of the second world war, they were constantly increasing and extending their plant in order to meet the increased demands of the consumer so that the potential generation of power considerably exceeded the actual consumption (by as much as 25 per cent in some years). They were, and still are, subject to constant competition to the extent to which large-scale undertakings which are big users of electric power could build their own generating stations, which, in fact, many of them have done.

It cannot be denied that production is often restricted as a result of the machinations of a raw-material syndicate. However, the point of this measure, usually adopted in times of economic depression, is generally to be found in a desire to prevent surplus

¹ The American press has recently reported cases in which the Department of Justice, proceeding under the Sherman Act, has not made the "classic" complaint, i.e., that having acquired a monopoly a company has arbitrarily increased prices. On the contrary, the Department of Justice has complained that by its purchasing and marketing methods the company has *lowered* prices, thus rendering competition impossible. (Vide *New York Times*, September 23rd 1949).

production. And finally, the fact should not be overlooked that in recent years industrial associations, probably under the pressure of public opinion and the threat of government intervention, have sought to pursue a policy of moderation. This has been true in particular of the American "trusts" whose violent methods were at one time notorious. Statistics provide no evidence to suggest that, all in all, employers' associations have been responsible for restricting production. According to the calculations of the National City Bank in the United States, in the period from 1899 to 1929 production (at deflated prices) increased to an extent represented by 331.4 in 1929 as compared with 100 for 1899. Thus production increased much more rapidly than population figures. Moreover, even at the zenith of the "trusts" no attempt was made to prevent the rise of real wages.

The following is perhaps one of the reasons for this apparent contradiction between theory and practice. A firm may have enjoyed a monopoly position since its inception. It may exploit certain patent rights, or a privilege granted by the State. And from the beginning it may have secured the exclusive production of a raw material. Obviously, therefore, in such circumstances it will organize itself to produce that particular volume of its commodity which promises it the greatest possible profit, and therefore its production may be considerably lower than it would have been under a free-market economy. However, this is not the usual way in which monopolies are formed. Generally a firm has not enjoyed a monopolist position from the beginning. At first there is invariably competition between a larger or smaller number of firms. Gradually the weaker firms are eliminated or they are swallowed up by the stronger, which extend their operations and seek to attain their "optimal" size. Sometimes the number of undertakings still existing and having attained the optimal size is big enough—in the textile industry, for instance—to permit the maintenance of free competition. But it can happen that in certain branches of industry, either because of restricted market conditions or because the "optimal" size of an undertaking is rather large, only a few undertakings continue to exist. If they now seek to limit production in order to exploit to the full the monopoly they have attained they will burden production with the costs of unutilized plant. The effort to use plant to the full in order to reduce costs per unit causes an undertaking to produce various types of commodity, or to vary its prices, in order to extend sales, thus on the whole production is not restricted.

When a number of formerly independent undertakings come together to form an association or "trust", then, generally speaking, they adopt methods to "rationalize" production, i.e., they organize a division of labour amongst themselves or they concentrate

production in those undertakings where conditions are most favourable.¹ Certainly, such an association often makes very large profits, but this is possible only on account of improved technical and economic organization which reduces the costs of production. Sometimes it can come about that, on account of the reduced costs, the price is subsequently lower than before, even when the association fixes the price at a higher level than actual costs.

However, it would be better if this reduction operated to the benefit of the community as a whole, and in addition, all the unfavourable social and political effects of the existence of such big associations and trusts remain : they encourage the development of a plutocracy which, unless it is restrained by the powers of the State, will soon control the press and public opinion, dominate parliament, secure the adoption of legislation in its interests, and finally become almost a State within the State.

3

Economists point out that it is not true to say that the rise of such economic associations (trusts and cartels) has prevented free competition. In an economic system free of State interference there is seldom any absolute monopoly in the sense that an undertaking or an association is able to exercise absolute control over the production of a certain commodity. In agriculture we find a great number of small and medium holdings, but even in industry there is still a considerable number of independent undertakings as recent industrial censuses have shown. Big trusts and cartels have formed primarily where they have succeeded in getting control of raw materials, for instance, in the coal and iron industries. In other branches of industry, such as chemicals and engineering, we find semi-monopolies perhaps consisting of one big, or a number of big undertakings, which dominate the market. But, side by side with them, there is still a certain number of small and medium undertakings. In 1939 in the Italian electrical industry, which the advocates of nationalization regard as one of the most important monopolies in Italy, there were still 9 big associations (cartels), 65 municipal undertakings, 1301 self-producers and mixed producers (i.e., undertakings which produce partly for their own use and partly to sell to others) and many other small undertakings. The big associations produced rather more than 50 per cent of the total power generated, but two of them were already State

¹ "The formation of such associations is often nothing but a search for, or a fulfilment of, the most favourable extent of an undertaking ; in another case it is the creation of a necessary unifying bond between undertakings which is stronger than is ordinarily the case." Pantaloni : "Alcune osservazioni sui sindacati e sulle leghe," vol. II of *Erotenti di Economia*, p. 267, 1925.

undertakings, so that the percentage of privately produced power was thereby reduced to 35 per cent.

It should not be forgotten that there is almost always potential competition present, i.e., if the monopolist undertakings misused their advantages and forced up prices too high then there would always be a danger of new undertakings being formed. And we must remember that there is always a possibility that production costs might sink owing to the discovery of new technical processes and lead to the foundation of new undertakings technically superior to those already in existence.

Experience has shown that it is difficult for an undertaking to secure a monopoly position in any particular branch of industry where normally free competition exists. To attempt to do so means the expenditure of large sums in order to buy up the undertakings and patents of competitors and thus prevent them from continuing to produce. In the words of the American economist, J. M. Clark, who has a thorough knowledge of the economic system of his country, where monopoly has become almost a classic economic form, "competition is always a latent force which continually demonstrates its virility, abolishes abuses and eliminates disturbances of the economic equilibria." Further, as a general rule there is no commodity that cannot, up to a certain point, be replaced by some other commodity or commodities. Thus even when competition has been almost eliminated from one particular industry by the formation of a large-scale undertaking on a monopoly basis, competition continues to make itself felt between industrial undertakings which produce goods or services which can easily replace each other in use. Hydraulic power and oil, for instance, compete with coal in a way which has put an end to the monopoly position of the coal producers. The development of road transport has struck a heavy blow against the monopoly of the railways. Light metals compete vigorously with iron. By producing synthetic substances science is constantly helping to restrict the monopoly position of the producers of certain raw materials. From this we may conclude that even a monopoly is not independent of the market, and that it is also subject to its laws and to the effects of competition, which constantly impel entrepreneurs to improve their methods of production and reduce their prices and costs. The exceptional profits of monopolists are not permanent and their tendency is to decline gradually owing to the competition of undertakings which produce similar goods. Apart from exceptional cases of an undisputed monopoly we can generally say that even in those branches of industry which are controlled by one or two large-scale undertakings there is a situation which could be termed "monopolist competition". Thus the market does set limits to the power of the cartels to fix prices as they please. For instance

thanks to the lively competition of aluminium the time has passed when the producers of copper could arbitrarily increase prices when demand increased, because certain aluminium alloys can be used as a substitute for copper. If the copper producers do not wish to lose all their customers they must adapt their prices to those of aluminium.

4

One view which is gaining more and more ground amongst leading economists¹—and it was a view held also by Pareto—is that on the whole the formation of monopolist groups cannot be considered a “natural” consequence of technical and economic factors, but is rather the result of certain defective legal provisions, for instance, company law, and of certain politico-economic measures which artificially suppress free competition. Industrial tariffs have been amongst the chief causes of the development of monopolies because they eliminate foreign competition. For instance, the German iron syndicate developed and consolidated itself thanks to the high duties on imported iron manufactures. Contemporary “economic planning” with its prohibitions, its licences and its raw-material quotas is the parent of privilege and monopoly. For instance, numerous investigations in the United States have shown that the New Deal undoubtedly encouraged monopolist tendencies amongst both employers and workers.

If one or more undertakings of “optimal” extent are sufficient in any particular branch of industry to satisfy consumer demand (which is not often the case) they can still never establish a monopoly as long as they are constantly subject to foreign competition. International monopolist associations were usually facilitated by the restrictions imposed by the protectionism of many countries.

Thanks to the influence of the historical school it is now widely held in many countries that law is nothing but the result of a given economic and social situation which develops independently of the law, and those who hold it therefore readily sanctioned certain very doubtful methods adopted by the cartels. Such methods were regarded as inevitable in the development of economic relations, and the abuses which accompanied them were, therefore, passed over in silence. The neo-liberal school opposes this concept of law. Its supporters (for instance, Walter Lippman) draw a sharp distinction between an economic system based on the division of

¹ Cf. Professor Robbins's essay, “The Inevitability of Monopoly”, in his book, *The Economic Basis of the Class Conflict*, Macmillan, London, 1939; Einaudi: *Miti e paradossi della giustizia tributaria*, pp. 81–83, 1940; and G. Halm: *Die Konkurrenz*. See also the arguments developed by Professor Vito in his book on mono olies

labour and a free-market economy (which they advocate because they believe that it alone is in a position to increase production and the material well-being of society rapidly), and a highly defective system of institutions and laws which can and must be changed. Professor J. M. Clark rightly contends that "The right to carry on an industry in the form of a company is by no means an absolute and natural right. It is based on a particular State concession and beyond all doubt it is subject to the normal power of the State to impose such restrictions as it feels necessary to prevent abuses."

5

There is already a large mass of literature dealing with government policy towards monopolies, so that here we need only touch upon this important problem. I should like, however, to stress that government measures of this nature can be of three kinds: (a) indirect measures whose aim is to create the most favourable conditions for the development of free competition as the economic factor best calculated to oppose monopoly. This is analogous to the way in which a doctor strives to encourage natural resistant forces in the human organism to overcome sickness; (b) direct measures to control the operations of the monopolies; (c) the taking over of all those key industries in which the gradual establishment of a monopoly appears unavoidable, or the establishment of State undertakings to compete with private undertakings of a monopolist character thus exercising a moderating influence on their operations.

In all those cases where an undertaking has a monopoly position by the nature of the case, for instance, public-utility companies such as gas, electricity and water-supply companies, prices, quantities and services should be subject to control by the authorities in the interests of the community as a whole. Such control measures, often extending to wages, aim at obviating as far as possible the disadvantages caused by a lack of competition.

CHAPTER IX—APPENDIX

THE CONDITIONS FOR MAXIMUM MONOPOLIST PROFITS

1. THE problem of the monopoly can be formulated as follows :

Let x be the quantity of any commodity produced by the monopolist, $p=f(x)$ the price of the quantity unit, $C=\varphi(x)$ the total costs of production, $E=xf(x)$ the total revenue of the

monopolist, i.e., the total value of the commodity quantity sold (which is obviously equal to the product of commodity quantity and the price of the quantity unit).

The aim of the monopolist is to make the difference $E-C$ (namely the net profit), i.e., the function $R=xf(x)-\varphi(x)$ a maximum. The differential calculus teaches us that this function becomes a maximum when :

(a) the first differential coefficient equals zero, i.e.,

$$\frac{d}{dx} (E-C) = 0 ;$$

(b) the second differential coefficient is negative, i.e.,

$$\frac{d^2}{dx^2} (E-C) < 0.$$

From the first condition it follows: $\frac{dE}{dx} = \frac{dC}{dx}$, i.e., marginal revenue must equal marginal cost. It follows from this that the magnitude of the fixed costs does not affect the position of equilibrium. From the second condition $\frac{d^2E}{dx^2} < \frac{d^2C}{dx^2}$ it follows that a state of equilibrium presupposes that the marginal revenue does not increase so rapidly as the marginal costs (or that it decreases less quickly than the marginal costs).

A more detailed treatment can be found in Allen's *Mathematical Analysis for Economists*, p. 197, London, 1908, on which this appendix is based.

2. One or two observations concerning the "Duopol" : Let us assume that a certain commodity is produced by two entrepreneurs only, Primus and Secundus, who are in competition with each other. Each of these entrepreneurs will strive to produce that quantity of goods which ensures him the greatest profit, i.e., Primus and Secundus will do their best to make the appropriate functions a maximum :

$$\begin{aligned} E_1 &= x_1 f(x) - C_1 \\ E_2 &= x_2 f(x) - C_2 \end{aligned}$$

in which E_1 and E_2 are the corresponding total revenues, C_1 and C_2 the total costs ; x_1, x_2 the quantities produced ; $x = x_1 + x_2$ the total quantity, and $f(x) = p$ the price of the commodity.

As both E_1 and E_2 are to be maxima the following two equations result :

$$\begin{aligned} f(x) + x_1 f'(x) \left(1 + \frac{dx_2}{dx_1} \right) &= \frac{dC_1}{dx_1} \\ f(x) + x_2 f'(x) \left(1 + \frac{dx_1}{dx_2} \right) &= \frac{dC_2}{dx_2} \end{aligned} \tag{I}$$

It can be seen clearly that the solution of the problem of the "Duopol" depends on how the differential coefficients $\frac{dx_2}{dx_1}$ and $\frac{dx_1}{dx_2}$ are interpreted. If each entrepreneur assumes that his production is independent of the other's, then the differential coefficients $\frac{dx_1}{dx_2}$ and $\frac{dx_2}{dx_1}$ equal zero, and then, generally speaking, the two equations (I) are sufficient to determine x_1 and x_2 , and therefore \bar{x} and p . The problem of the "Duopol" is solved.

However, if we assume that before he changes the quantity produced each entrepreneur waits to see what the other does, and whether he alters his production, *whilst the law of this change is not known to him*, then the problem is insoluble because the values of $\frac{dx_2}{dx_1}$ and $\frac{dx_1}{dx_2}$ are unknown. But if the laws are known according to which x_2 changes with the alteration of x_1 and, conversely, x_1 changes with the alteration of x_2 , then the problem is determinate. In practice it is a difficult matter for each entrepreneur to know what the other is going to do.

The example given, and the example discussed in the appendix to Chapter II, give some idea of the possibilities and the limits of the mathematical method as applied to economic science. Certainly, mathematics are not in a position to determine whether certain economic magnitudes are to be considered as dependent or independent; whether in reality there is free competition or monopoly; whether the undertakings in question are about to take on their "optimal" extent or not, and so on. All this can be discovered only by direct observation of the facts. But the mathematical method permits the recognition of the implications contained in the assumptions of the economist.

ECONOMIC CRISES AND RECOVERY POLICIES

I

ECONOMIC crises—a clear symptom of grave disturbances of the economic equilibrium—apparently refute the “liberal” economic theory that in a free-market economy the productive system automatically seeks to establish a state of equilibrium. As we have already seen, the impression made by an economic crisis raised doubts in Sismondi’s mind one hundred and twenty years ago, concerning the value of a system based on a free economic order, and the anti-individualistic attitude which has been so obvious of late years is largely due to the grave economic depression of 1929, which persuaded many people that it marked the beginning of the end of a regime which had proved itself incapable of solving the economic and social problems of the age. It is true that economic conditions in many countries, then and in subsequent years, were bad enough to justify the worst fears: catastrophic falls in prices, sweeping restrictions on production, the collapse of international trade, the disorganization of currencies, bank crashes, vast armies of unemployed workers, increasing deficits in State budgets, and a paradoxical situation which would have been highly interesting had it not been so painful: whilst armies of unemployed workers formed on the one hand, ever-increasing stocks of raw materials and foodstuffs piled up on the other, whilst a great volume of productive plant remained unutilized. Thus there was no lack of means to employ the unemployed, and yet on account of what seemed a fatal inner contradiction of the regime they were not used.

Numerous economists have sought to inquire into the manifold causes of “the great economic depression.” This is not the place to summarize the results of their investigations. All I propose to say here is that despite its far-greater magnitude and the presence of certain special phenomena—for economic history does not repeat itself either—the economic depression of 1929 and the subsequent years was not fundamentally different from the depressions which developed in the nineteenth century when periods of great economic progress usually ended in more or less violent crises. In the previous one hundred and fifty years industrial production had increased enormously, but it had been no steady progression. Periods of

great activity were always followed by periods of slump. The two added up to the notorious "trade or business cycles". Such "cycles" are far from regular. Their length varies between seven and eleven years. Economists distinguish various "phases" in a cycle, namely: "revival", "boom", the actual "crisis", the "depression" which follows it and is followed in its turn by the first phase of the next cycle.

Obviously, economic life is "dynamic" in essence, and not "static". Discoveries and inventions which revolutionize technical methods, new methods of organization in production, a change in consumer customs and tastes, population changes in age and number, good, bad and indifferent harvests, politico-economic measures such as protective tariffs and trading agreements, natural catastrophes such as earthquakes, man-made catastrophes such as wars, and a hundred other factors constantly modify given economic conditions. Economic activity is, therefore, more comparable to a storm-tossed ocean than a peaceful lake; like the ocean its waves rise and fall seeking a level they never really find. But such considerations, although they tell us why the point of equilibrium moves now here now there as a result of changes in the given magnitudes, do not assist us to interpret the economic cycles. If economic quantities were able, as theory contends, to adapt themselves rapidly to changes in "given magnitudes", then all fluctuations would necessarily be of short duration and oscillate only around a constantly rising average line, the so-called "trend", as English statisticians term it. Instead, there are in reality often very considerable fluctuations which move in one and the same direction for years on end.

As it is impossible to deal briefly with the phenomenon of economic cycles I will confine myself to pointing out one or two of the essential facts. A general phenomenon to be observed in every period of economic boom is the excessive extension of certain branches of the "investment" industries. Spurred on by the prospect of still further profit these industries extend more and more, and a lively demand for machinery, iron and other metals, building materials and coal is set up. The production of "capital goods", as distinct from "consumer goods", rises visibly. Then, as a result of the excessive development of certain of its parts, the economic organism begins to show signs of degeneration. The various investments of fixed capital increase excessively—then, only too soon, it is seen that a part of the new plant cannot be utilized, and a dead loss ensues.

Now, according to the theory of economic equilibrium, all this should not have happened, because if an industry attempts to extend itself too far it should soon come up against increased costs: it must deflect capital, labour and raw materials from other

branches of industry and be prepared to pay heavily for the privilege. And then, again according to theory, the total extension of plant meets an insuperable obstacle: the amount of savings available at a given moment.

But if we find that excessive investment activity does not generate adequate resistance factors then we are forced to the conclusion that for some reason or the other the braking mechanism is not working properly. Why? On the basis of a great deal of past and present experience most economists agree that the principal reason is "the elasticity of bank credit." The above-mentioned phenomena of degeneration in the economic structure, characterized by an unsound development of certain branches of industry, are to a large extent the consequences of money and credit inflation. Thanks to the extension of credit the increased demand for liquid capital on the part of undertakings wishing to extend can be satisfied without causing a corresponding increase in the rate of interest. Thus this credit removes the hindrance to further investments represented by the limit of savings available. In times of increased economic activity we can, in fact, observe that investments greatly exceed the spontaneous savings of the public. The extension of bank credit results in a general rise in prices because these credits obviously create increased purchasing power, which spreads over suppliers, workers, sales agents, etc. The restricting influences which would have arisen as a result of increased costs, other conditions being equal, are cancelled out by increased sales prices. Thus the whole braking mechanism is put out of action and some industries are enabled to extend their plant excessively.¹ This process is greatly encouraged by psychological factors (cf. Chapter III, 8), and in particular by the excessive optimism which befalls industrialists, big merchants and bankers when business is going well, and tends to falsify their judgments, causing them to underestimate the risk involved in their investments and speculations.

Of course, the extension of bank credit has its limits too, and once they have been reached prices cease to rise. Some firms then find themselves in difficulties and the banks begin to grow cautious. At the same time, the demand for liquid capital continues to be lively amongst those firms which must meet their liabilities. The rate of discount rises and its braking mechanism begins to operate. With the gradual disappearance of unemployment in the boom period the trade unions began to demand repeated wage increases

¹ Strictly speaking, deposit banks should confine themselves to financing current production or short-term transactions such as the replenishing of stocks, export and import trade, transactions with securities, etc., but in reality bank credit has often served to facilitate long-term investments, for instance, the extension of German industry in the years 1924-29 was largely financed by means of short-term foreign credits arranged by German banks.

and obtained them, because, so long as prices continued to rise, thanks to extended bank credits, entrepreneurs were in a position to pay them. However, when this was no longer the case, high wages acted as a heavy drag on the maintenance of production at the previous level. In short, those influences which tend to prevent excessive extensions, but which had been ineffective for a long time, now suddenly begin to make themselves most painfully felt.

The number of firms in difficulties increases rapidly, and here and there one or the other collapses. Optimism now rapidly gives way to pessimism. The high rate of discount causes merchants who have bought on credit to empty their warehouses and in consequence prices fall.

The crisis which now begins can be more or less severe according to circumstances. Above all, it destroys those undertakings which had indulged in excessive expansion thanks to the extension of credit in the boom period. Often the collapse of one or two large-scale undertakings drags down the banks involved. In Germany the collapse of the big wholesalers Lahusen in Hamburg precipitated the "Danatbank" crash (July 13th 1931) which ushered in a tremendous banking crisis.

2

From this necessarily incomplete review we can nevertheless see that the deeper-lying causes of crises and periods of economic depression are to be found in the events of the immediately preceding boom periods ; it is then, and only then, that the seeds are sown which later develop into the evil flowers of economic crisis. The direction of economic policy is thus made clear : it should, under all circumstances, prevent any excessive expansion by eliminating those factors which obstruct the timely intervention of the "natural" braking mechanism.

The fact that excessive extension of money and credit is characteristic of the beginning of the highly complicated interdependence of all the phenomena which make up the economic cycle, has persuaded some economists to believe that the best remedy can be found in a strictly exercised quantitative and qualitative control of bank credit. In so far as the latter has its source in deposits representing not savings but temporarily available balances, bank credit should be returned to its natural function : the facilitation of commodity circulation and the financing of current production. On the other hand, new investments should be financed only by means of savings, and the process should find its natural and inviolable limits in the limits of those savings. And, finally, only special banking institutes should be allowed to organize such operations. In Italy deposit banks financed industry for a long

time (particularly during the first world war), because there were then no suitable finance institutions for the purpose. This resulted in a widespread immobilization of capital, and led directly to a bank crisis. In Italy to-day a careful distinction is made between short-term banking operations—the only sort of banking operations which may be carried out by institutions which accept current or short-term deposits—and credits of medium or long-term maturity.

Banking law in some countries contains a number of such useful provisions as the obligation of the banks to report to a central institute all credits which exceed a certain sum so that control may be exercised. The idea of this is to prevent a firm from obtaining credits or loans from a number of banks simultaneously leaving each in ignorance of the firm's obligations to the others.

In Italy all private banks are under the control of the Banca d'Italia and the Treasury. The granting of credit to any firm to an extent representing more than one-fifth of a bank's resources must first receive the approval of the Banca d'Italia. However, it is by no means certain that the introduction of State measures of control would be sufficient to prevent disturbances of the equilibrium or abuses, and other conditions must also be fulfilled. In Great Britain unwritten laws have proved more successful than the multitude of Federal and State laws in the United States.¹

At the same time, it must not be overlooked that there is a danger of State control being misused for reasons of political expediency in favour of certain undertakings or individuals. Should that happen, all the abuses which State control is supposed in theory to remove would arise in perhaps even worse forms.

In order to prevent the foundation of non-viable undertakings or the excessive expansion of undertakings already in existence, the founding of all new firms and the expansion of existing firms are subject in some countries to the permission of a government department or of a special commission in which entrepreneurs are represented. Einaudi declares in this connection that the public interest can never be served by secrecy and always by publicity, and he has indicated the conditions under which a control of new undertakings could act correctly.²

The indissoluble connection which exists between economic cycles and human nature, which is naturally sometimes optimistic, sometimes pessimistic, compels us to the conclusion that a complete elimination of all fluctuations would still be impossible even if all their causes were fully known. Perhaps their complete elimination

¹ Madden, J. T. and Madler: *The International Money Markets*, p. 115, Pitman, London, 1935.

² Einaudi: "Intorno alla disciplina degli impianti industriali," in the *Giornale degli Economisti*, July-August 1941.

would not even be desirable, because we must not forget that the prospect of big profits in times of economic boom represents a powerful impetus for new technical processes, new combinations of the production factors, and ingenious and daring experiments on the part of business men. Certainly, serious mistakes are made, and there is a great deal of regrettable waste ; production is diverted into false channels and unhealthy speculation takes place resulting in disturbances and excessive expansion, but in the last resort quite a deal survives the ultimate crisis and is incorporated integrally in the main body of economic progress. The outbreak of the crisis, and in particular the fall in prices and the rise in the rate of discount, imperatively demand a revision of costs, an examination of production methods on the score of their efficiency, and reorganization on a rational basis.

When a profit-and-loss account is drawn up it will be impossible to avoid the reasonable conclusion that excessive fluctuations should be avoided as far as possible, particularly when, as was the case in 1929 and the following years, the economic depression makes millions and millions of workers unemployed, with the result that moral and political damage is added to the normal phenomena of economic disturbance. For these reasons there is no doubt whatever about the desirability of preventive measures against excessive economic expansion.

3

Should it prove impossible to take effective preventive measures against the outbreak of economic crises then it must be the task of economic policy to devise means to alleviate and shorten the period of depression when it does come. However, many of the measures taken by various governments during the " Great Depression " merely aggravated it. Those who ascribe the whole responsibility to " the capitalist system " forget that it was no longer an exclusively capitalist system, but a mixed one which, in addition, was disturbed and confused by unsuitable government measures which hampered precisely those spontaneous reactions calculated to re-establish the economic equilibrium.

After the failure of the world economic conference in 1933, when the international situation was becoming increasingly grave and so still further destroying any hope of effective international co-operation, each country set about solving the problems raised by the crisis as best it could with its own resources, and adopted whatever economic and financial policy seemed to serve its own interests best. In addition, policy-making in the various countries during the crisis was bedevilled by a clash of two contradictory view-points. The one regarded the economic system as a living organism which

developed according to its own "laws", whilst the other declared that economics also were the domain of the State, whose duty it was to guide the economic activity of its citizens into positive channels in view of the fact that the free play of economic forces did not adequately serve the public interests. In accordance with the former view a whole group of countries limited State intervention to measures of a general nature calculated to encourage a revival of economic activity and not to interfere with private enterprise, for the latter was regarded as the chosen instrument of economic reconstruction. It was believed that the economic organism itself would naturally develop sufficient vital forces to overcome the state of economic depression; all the State had to do was to encourage these forces without directly interfering with market relations or the process of production.

According to what may be termed the classic theory of economic depression it is essentially a cleansing process. Production drops in those branches of industry, such as iron, steel and engineering, which have experienced excessive expansion in the previous boom period. Excessively inflated undertakings are reduced to their proper proportions as a result of the crisis whilst non-viable undertakings are eliminated altogether. On the other hand, undertakings which are fundamentally sound are strengthened after undergoing an appropriate reorganization, sometimes after severe surgical operations, often painful, but invariably health-giving. High costs are gradually eliminated with the assistance of reductions in the price of raw materials and wages until costs are once again in equilibrium with sales prices. In short, even during the course of the depression the equilibrium is restored both between the various economic magnitudes (costs and prices) and between the individual parts of the economic organism. The most obvious phenomenon in this respect is "deflation": a reduction of prices, wages, profits and State expenditure from their former excessively high levels. Once a new equilibrium has been established on a generally lower level conditions gradually develop which favour the opening of a new phase of revival. When stocks accumulated in the final phase of the previous period of prosperity are exhausted, bank credits again available and the banks themselves again on a sound footing and the general levels of prices and wages accordingly reduced, new money capital begins to form and the rate of discount falls from the high level reached in the crisis. The fall in the rate of interest spreads gradually from the money market to the financial market and thus investments receive new encouragement. A rise in share quotations is one of the first harbingers of the coming end of the period of crisis. The new boom usually shows itself first of all in the building industry, which promptly reacts to changes in the rate of interest, and from there it extends

to a series of other industries which provide the building with raw materials, half-finished goods and machinery.

Accepting this view, some governments adopted a policy of deflation after 1930. In France and in a number of other countries that policy was supplemented by an exchange policy designed to maintain the gold parity of the currency. As the price level of the international market calculated on a gold basis declined, it became necessary to exercise pressure on domestic prices in order to guarantee the stability of the exchange rate.

In Germany, too, the authorities decided on deflation in the crisis year 1931. The parity of the mark was maintained despite the fact that it was not convertible into gold. The Reich's Chancellor of the day, Dr. Brüning, took stern financial measures to balance the Reich's budget. In his notorious emergency decree of December 8th, 1931, he enforced a general reduction in both wages and prices in order to bring domestic prices into line with the world market. The President of the Reichsbank, Luther, resisted vigorously when he was called upon to deviate from the well-worn paths of orthodox currency policy.

Later on an attempt was made to prove that this policy of deflation was a complete failure, and to draw conclusions from it unfavourable to any form of deflation. However, we must not overlook the very exceptional circumstances which existed in Germany at the time. The uncertainty of the domestic political situation—the National Socialists were engaged in a bitter struggle with their enemies—naturally had the gravest effects on the general economic situation. Under such conditions a fall in wages could not have the effect of increasing entrepreneur demand for labour-power as had at first been hoped. Instead the measure threatened to result in a decline in the demand for consumer goods and thus a further restriction of production and an increase in unemployment. In the last resort uncertainty about the future caused entrepreneurs, banks and private persons to hoard money, so that deflation did not produce that "fluidity" on the money and financial market which is one of the conditions for economic recovery. The rate of interest remained as high as before, thus hampering new capital investments. Brüning ordered a reduction in the rate of interest for certain kinds of old debts, but this measure was carried through without appropriate precautions, with the result that the debenture quotations fell and the market was flung into the utmost confusion.

And, finally, when Great Britain abandoned the gold standard, drawing numerous other countries on to the slippery slope of currency depreciation, it was made very difficult for Germany to pursue a policy of deflation. Every new fall in the rate of the pound, and of all currencies pegged to the pound, nullified the

results of Germany's painful and laborious efforts to reduce her domestic price and wage levels, and the only thing she could do was to push on still further along the thorny and painful path of deflation. With progressive deflation and further falls in prices, the value of the goods held in stock also declined, and the pressure of debt became steadily more onerous. This is one of the consequences of a policy of deflation which demands careful consideration.

In order to complete the picture we must remember that in Germany (as in France and other countries) the government adopted contradictory measures, including measures which militated against its own policy of deflation. The high protective tariffs to keep out foreign produce in favour of German agriculture slowed down the reduction in the cost of living and the process of bringing domestic prices into line with the world market. And, finally, Germany made the mistake of paying the unemployed too much support, a circumstance which not only greatly burdened the State budget but indefinitely extended the period of depression, because the unemployed had little incentive to search for work.

Nevertheless, I do not share the poor opinion of the results of Germany's deflation policy which was widely held there at the time, and I believe that all in all the Brüning Government did a thorough job because it started that process of recovery in the economic organism which is the essential condition for a new revival of economic activity. The happenings after 1930 did not shake my conviction that in post-crisis periods those economic forces which seek to set up a health-giving process of deflation should not be obstructed, because it is this process which eliminates the numerous disturbances of the economic equilibrium which have arisen in the previous boom period.¹ This process may be compared to a sort of fever which burns up all the toxic accumulations in the

¹ Even in the United States, where many economists have succumbed to the influence of Keynesian theories, which have on occasions even inspired Government action, acceptance of those theories is by no means general. This was shown in the summer of 1949 when the Presidential plan to check recession aroused criticism in various quarters. The plan aimed at maintaining consumer purchasing power. The report of a leading bank declared: "Its effect might be far different from that envisaged by the Administration. Thus, the avoidance of wage cuts by business firms might lead to greater unemployment and cause additional failures. The recession might be made more severe. Business men can avoid wage cuts in a period of recession only if sharp increases in managerial and labour efficiency bring about such rapid reductions in costs that prices can fall to competitive levels. Unless prices do fall to levels which are competitive and which stimulate buying, production will continue to decline and unemployment to increase. Flexibility in prices and costs is necessary for quick adjustment." According to another bank report: "Federal farm price support, and wage increases, are no substitute for sound readjustment."

economic organism. Brüning reorganized the banking system which had been gravely hit by the financial crisis in July 1931. He increased government revenues by giving the tax screw a further turn, and he did not hesitate to introduce extremely unpopular measures such as the reduction of wages and salaries. In short, he carried out a difficult programme of politico-economic and financial groundwork which alone explains the rapid success which subsequently fell into the lap of the National-Socialist Government, which then, as usual, falsified the facts, and took the credit for bringing about Germany's economic recovery. It was impossible to pursue an active policy of reconstruction without first clearing away the slack which had accumulated in the previous period of crisis. My view is based on positive facts which emerge from Germany's economic statistics, namely: unemployment figures, the index figures for industrial production, import figures for raw materials, industrial orders, share quotations, and the prices of certain commodities which react very sensitively to demand. These data show that the trough of the economic crisis was reached in July 1932, i.e., seven months before the National Socialists came to power. From this month onward all economic curves began to register an improvement. A report on the point, drawn up by Professor Wagemann, who was head of the German Business Research Institute at the time, was published in September 1932, declaring that economic recovery was about to take place. These facts justify the conclusion that the spontaneous forces of the economic organism which had developed during the hard times of the deflation period had gradually created favourable conditions for a revival of economic activity even before the new government was in a position to introduce its economic programme. (The latter will be the subject of our next chapter.)

4

An examination of events after 1930 reveals another interesting thing, namely, that in a number of countries deflation showed a tendency to make itself felt beyond those limits within which it could be regarded as a spontaneous and necessary reaction to the excesses of the previous phase. Professor Röpke has subjected this phenomenon to a special investigation. The same process which had gone on in the boom period was now repeated in reverse. But this only confirms the fact that economic forces do not, so to speak, exercise moderation, but, once let loose in a certain direction, swing beyond the point of equilibrium. The characteristic of a boom period is excessive investment activity, whilst in times of crisis excessive pessimism causes entrepreneurs to avoid long-term investments. Instead of reinvesting the money they receive from

the sale of their commodities they prefer to keep it in liquid reserve or to pay their bank debts with it, and in this way the process of deflation is accentuated.

It is, however, very difficult to discover in each individual case whether the given limit has been exceeded or not. Nevertheless there is no doubt that numerous circumstances contributed to making the economic crisis of 1930 particularly severe, and to delaying the phase of recovery. For this reason it was debated in many countries whether it would be better to let the deflation proceed unhindered or bring it to a halt and pursue an "active" policy of economic recovery (*Konjunkturpolitik*).

After 1931 Great Britain preferred to re-establish an equilibrium between domestic prices and costs on the one hand and world market prices and costs on the other, by means of depreciation rather than by deflation. At the same time, the British Government was able to reduce the rate of interest, thanks to a successful loan-conversion operation, the purchase of securities by the Bank of England ("open-market policy"), and the extension of bank credit. Economic recovery then soon made itself felt in the forms mentioned above, which can be termed classic: the lowered rate of interest first gave a powerful impetus to the building industry, and this had a favourable effect on other branches of economic life. Economic reconstruction in Great Britain was essentially the work of private enterprise encouraged by government measures. But later on the government exercised a greater and more direct influence when it launched its rearmament programme.

On the other hand, another group of countries preferred to combat the economic crisis and unemployment by drawing up and carrying out a big programme of economic reconstruction. This involved the exercise of direct government influence on production and consumption by embarking on big public works, controlling commodity prices, wages and foreign trade, etc. The two most important examples of such a policy were seen in Germany and the United States, though the measures these two countries adopted differed considerably from each other despite the fact that their general intentions were similar. In the United States the recovery programme proceeded from the depreciation of the dollar, but the German Government was very anxious to maintain the stability of the mark. In the United States it was thought that the economic crisis could best be countered by raising wages, whereas in Germany the wage and salary cuts introduced by Brüning were continued. The United States sought to combat the depression by increasing consumption because it was thought that this would result later in an increased demand on the part of entrepreneurs for producer goods. In Germany, too, an attempt was

made to encourage the individual consumption of certain goods, for instance, newly married couples were granted loans to assist them to buy furniture and household goods. But primarily the public funds were used for the creation of certain capital goods such as railways, roads, agricultural amelioration, public buildings, and so on, because it was thought, for certain reasons (cf. Chapter XI), that a big programme of public works would encourage the production of consumer goods. Germany considered this second type of politico-economic intervention as more likely to encourage the normal development of the economic cycle. Experience certainly shows that, generally speaking, the new phase of prosperity is not preceded by an unusual increase in consumption, but rather by a sudden wave of new capital investments. Here it is as well to point out that many American economists bluntly conclude from the experiences in the United States that the effects of a policy of public expenditure designed to stimulate consumption directly are soon fruitlessly dissipated.¹

And, finally, it should be noted that in the United States (unlike Germany) the economic reconstruction plan, the New Deal, was, for the most part, unsuccessful because there was a lack of properly trained officials to implement it, because there was constant interdepartmental disputes and jealousies, because grave defects in the plan were revealed when its provisions came to be implemented, and, finally, because special interests opposed it.

It is very important that the right moment should be chosen to put a big economic reconstruction plan into operation, but opinions as to what is the right moment differ widely. Some economists believe that the plan should be put into operation at the very beginning of the crisis, even before its secondary effects make themselves felt,² whilst others hold that it would be better to wait until the economic sifting process is in full swing.³ I incline to the latter view as the more correct. It would probably be too risky to carry out big public works whilst there was still disparity between production costs and prices. Under such circumstances an increase of public expenditure and credit would probably delay the fall of certain prices and maintain in being non-viable economic and financial institutions which would certainly be better out of existence.

¹ Hansen : "The Consequences of Reducing Expenditure", published in *The Academy of Political Science*, p. 64, 1938.

² Harrod : *The Trade Cycle*, p. 196, Clarendon Press, Oxford, 1936.

³ A. D. Gayer : *Public Works in Prosperity and Depression*, p. 398, National Bureau of Economic Research, New York, 1935 ; Schlichter in the *American Economic Review* of March, p. 209, 1936. Cf. also E. R. Walker : *Unemployment Policy*, p. 251, Angus & Robertson, Sydney, 1936.

5

Experience in the United States, Germany, and elsewhere, after 1930 has led to many discussions on the problem of the best financial policy to pursue in times of economic depression.

During the course of an economic crisis the national income is reduced more or less considerably. One of its consequences is usually a reduction in the main sources of government revenue, such as income tax, turn-over tax, profit tax, company tax and customs duties, whilst government expenditure remains, more or less, at the same level unless special measures are taken to reduce it. In view of the very considerable sums a modern State has to expend for public purposes a budgetary deficit can become enormous and easily develop into a problem of fundamental importance.

The problem has a particularly interesting aspect. The deficit is a result of the economic situation, and in particular of the depression which follows on a period of prosperity. The finance policy pursued during a period of crisis will, for its part, greatly affect the economic situation, either because the government strives to balance its budget as quickly as possible by cutting down its expenses and increasing taxation, or because it prefers to carry the deficit forward and to liquidate it for the moment by short- or long-term loans. In both cases, no matter how much their effects may differ, the demand for goods, prices, the volume and nature of capital investments, and so on, will be materially affected.

Naturally, each government will adopt the finance policy which it believes will most favourably affect the economic situation. Thus it follows that during a period of depression the government's finance policy necessarily forms an integral part of any policy of "economic recovery", and that it must therefore be attuned to the other factors of such a policy.

"Orthodox" economic theory has always regarded the balancing of the budget as essential. However, after 1930 a contrary theory made considerable headway in a number of countries, and it was developed to an exaggerated degree by some economists. It declared that too rigid a finance policy which sought to reduce expenditure to a minimum and correspondingly increase revenues was not the best of all finance policies in view of the effect of such measures on the economic system as a whole in times of crisis.

If, during the course of a boom period, i.e., when all the production factors are being fully utilized and the national income has reached a high level, there is, nevertheless, a budgetary deficit then, according to Professor Fanno, this means in the last resort that private people are spending too much on consumption for their own use, and paying too little for the services rendered to

them by the State.¹ Fanno is quite right to insist on the necessity of an equilibrium between these two kinds of expenditure in order to eliminate the budgetary deficit.

During the course of an economic crisis the situation is much less clear. In such circumstances a reduction in State revenues is not accompanied by an increase in the volume of money used by the public to pay for consumer and capital goods. If that were so then the prices of those goods would rise, during an economic crisis, but instead of that they fall. It is a striking fact that during a crisis the revenues of the State often represent a growing percentage of the total national income despite the fact that in absolute figures they have become smaller.²

In general, all the variously expended sums which make up the national income decline during an economic crisis. On the other hand, stocks of consumer and capital goods increase. Everyone complains of the falling-off in consumer demand—is it wise under such circumstances to depress it still further in order to increase State revenues?

When during the course of a boom period the government reduces certain expenditure (above all for public works) and increases certain taxes (for instance, profits tax) in order to balance its budget then these measures will probably prove successful particularly because they exercise a moderating influence on the economic situation. A turn of the tax screw will compensate in part for the after-effects of the issue of new banknotes or for an unsound credit expansion. However, to pursue such a policy in times of economic depression might retard economic recovery unless certain limits laid down by the special circumstances of the time were respected.

Of course, a balanced budget is always a fundamental consideration for a sound finance policy. But how long must the period be within which revenue and expenditure balance each other? Generally speaking, it has been regarded as innocuous when for a short period expenditure exceeds revenue, provided there are no unfavourable effects on ultimate budgetary stability: the deficit is temporarily met by the issue of Treasury Bonds, thus discounting future revenue. By extending the conception of a "short period" some economists recommend an elastic finance policy permitting a budgetary deficit in times of crisis to be cancelled out by a surplus in times of prosperity. For this policy the period within which

¹ "Economia e finanza di pace e di guerra", in *Problemi di finanza*, p. 107, Bologna, 1937.

² During the years 1929-30, 1930-31 and 1931-32 the revenues of the Reich, the German States and the municipalities sank from 20.9 milliard marks to 16.7 milliard, whilst in the same period their percentage relation to the national income increased from 27.5 to 31.9.

revenue and expenditure must balance is not a single budgetary year but a whole economic cycle.

That is a daring, but at the same time an interesting and perhaps a fruitful suggestion. In any case it is a new theory which deserves further investigation on the part of financial experts.

On the other hand, consideration must be given to the possibility that a budgetary deficit over a long period might have unfavourable psychological effects and shake the confidence of both entrepreneurs and savers. This actually happened in the United States and in France in the years before the second world war. Even in Germany the unbalanced financial situation before 1933 was one of the chief reasons for the economic crisis because it undermined business confidence. Everything depends on the particular circumstances in which the deficitary policy is carried out, and particularly on that sense of moderation which cannot be learned from any economic text-book or expressed in any economic formula, but which is wholly the result of the insight and ability of the financial authority or authorities, who should be in a position to judge the psychological results of any particular policy with a high degree of accuracy.¹

One or two big Powers, and in particular Germany and the United States, considered it desirable at a certain stage of the "Great Depression" not only not to reduce public expenditure, but actually to increase it considerably by expending large sums on a big economic-reconstruction programme. On the other hand, revenue was at first not correspondingly increased—on the contrary, in Germany numerous taxes were reduced or abolished altogether.

Whoever wishes to understand a policy like this, which is apparently very far removed from all the classic principles of sound finance, must constantly keep one basic fact in mind: when this policy was first put into operation *a considerable part of the productive factors was lying idle*. In the following chapter we shall better understand the significance of this fact.

6

A number of economists recommend that the exceptional expenditure incurred by the State during a period of depression to encourage the process of economic recovery should be met from a "reserve fund" formed from budget surpluses obtained during periods of prosperity. A question of minor importance is whether one single reserve fund should be formed from which all government departments could draw, or whether it would be better to form a

¹ The theory of the "compensatory budget" has become popular in certain circles in the United States in recent years, but it has also met with strong opposition, as can be seen from an article published in *The New York Times*, September 26th 1949.

number of separate reserve funds. One of the most interesting examples of such a fund was the very considerable reserve laid up by the Egyptian Government in the prosperity period.

However, to put such a proposal into practice would not be without its disadvantages and might produce effects quite contrary to the intentions of the organizers of "economic recovery", if, for instance, the funds were invested in securities. The absurd situation would then arise that in a period of depression the government would have to sell a large number of securities in order to provide itself with funds to finance its public expenditure whilst exactly the opposite procedure would normally be called for in order to revive the economic organism. These reserve funds accumulated in times of prosperity would have to be held in some readily available form (gold or deposit money with the Central Bank or with private credit institutions).

7

Although the effectiveness of public works as a means of encouraging economic activity can vary considerably according to circumstances, particularly in view of the manifold psychological reactions they can produce (cf. Chapter XI, 4), nevertheless, a suitably executed policy of public works can contribute to diminishing the fluctuations of the economic cycles. The advice which has been given to many governments for some time now that they should restrict public works as far as possible during periods of prosperity and carrying them out to the full in periods of depression is worthy of serious consideration. In that way public expenditure would play the role of a compensatory pendulum: the State would restrict its investments when private capital investments tended to exceed a reasonable extent, and it would extend them when private entrepreneurs began to restrict their own investments.

An example of a totally false policy is offered by the investment policy of the German Government and other public authorities in the years 1924-29. At a time of great economic activity when, as is known, private enterprise was being vigorously encouraged by foreign loans, the authorities allowed public investments for gas-works, water-works, electric-power stations, railway lines, sports arenas, hospitals and various other public works to swallow up enormous sums. In contradiction to natural economic tendencies according to which building operations decline in periods of economic prosperity and are greatly encouraged in periods of economic depression, the authorities were anxious to encourage new housing operations artificially at a time of boom by spending the quite considerable sums which had been accumulated by means of a special house-rent tax (*Hauszinssteuer*). The only result was that

an "investment reserve" was dissipated which, had it been used at the right moment, would have helped to alleviate the severity of the economic crisis.

The "compensatory" activity which the State is able to exercise by means of a cleverly directed policy of public expenditure is a form of State intervention which, unlike many other forms, not only does not transgress economic laws, but actually takes them into consideration.¹

¹ One or two of the themes superficially touched upon here have been more thoroughly treated in my article, "La politica finanziaria durante la depressione", published in *Studio in onore di A. Andreadès*, Athens, 1939.

CHAPTER XI

PUBLIC WORKS AS A MEANS OF COMBATING UNEMPLOYMENT

I

IN this chapter I propose to deal with an experiment conducted in Germany by the National-Socialist Government whose economic and financial lessons I regard as illuminating. In view of the justifiable resentment which the expression "National Socialism" arouses throughout the civilized world on account of the enormities connected with it I at first decided to cut out this chapter when I was revising the book. Then I came to the conclusion that this resentment—which the author feels in common with every other decent human being—should not be permitted to prevent us from learning anything of advantage from such technical progress as may have been achieved in Germany under that hateful regime. After all, even the United States and Russia are now vigorously competing with each other to secure the services of German engineers, scientists and skilled workers.

The first immediate result of public works, obvious to every observer, is that a certain number of unemployed workers secure paid work. This is not confined to the actual public works themselves, but extends to those industries which provide raw materials and machinery for those works and transport them to the place where they are needed.

Now, does the *general* level of employment rise as a result of the carrying out of public works? Public works mean that a certain quantity of foodstuffs and other goods are consumed by the workers employed in them, and they also consume on their own account certain quantities of raw materials and other goods such as machinery, etc. Now, if these goods are diverted from other possibilities of utilization then the immediately favourable effects of these public works are cancelled out by unfavourable effects on other sectors of the economic system.

If the public works are financed by new taxes which hit the saver particularly hard then the result is a diminution of private investment activity. During the course of an economic crisis it would be neither possible nor advisable to raise the very considerable sums necessary for a big programme of public works by increasing the burden of taxation.

Further : if public-works expenditure is raised by means of an internal loan then it may divert savings activity from the channels in which it previously operated. Total production will not have increased. On the other hand, a foreign loan undoubtedly increases the general level of employment provided that it flows into production. Directly or indirectly the loan brings about the importation of raw materials, machinery, foodstuffs, etc. In Germany in 1932 the Brauns Commission proposed that public works, which it was hoped would prove an effective means to reduce unemployment, should be financed by a foreign loan, but the conditions which existed in Germany in 1933 made it quite impossible to obtain one.

A domestic loan which absorbs established savings deposits which have not been invested and which exist in the form of fluid capital (bank deposits, large quantities of hoarded banknotes, etc.) represents a special case. Money streaming into the market from tapped "hoards" has exactly the same effect as new money issued by the State or money "created" by means of bank credits. There is, therefore, no difference in effect between this case and one in which public works are financed by "inflation", which we propose to examine in detail in this chapter.

During the course of the "Great Economic Crisis" a huge sum in available savings accumulated in France, partly in the form of hoarded banknotes and partly in the form of capital which had gone abroad. The urgent question now arose of how the French savers were to be persuaded to bring back their capital from abroad and to release the capital lying idle in France.

The situation in Germany was quite different. There was no savings amount big enough to finance an economic reconstruction programme such as was planned in 1933. Neither the general investing public, nor the usual credit institutions or savings banks and similar bodies were in a position to take up any very large blocks in a long-term loan. In view of this situation the German Government decided on a daring and unquestionably dangerous experiment which nevertheless, as we shall see, justified itself in the event : the financing of public works by bank credits. The authorities hoped that at a later date an increase in the national income would create new savings deposits sufficient to liquidate short-term credits. What primarily interests us in this experiment is the fact that the natural sequence of events as laid down in the orthodox theory of capital formation was reversed. According to the latter, savings are first accumulated then they are turned into technical capital : factories, machinery, roads, railways, etc. But according to the plan of the German Government technical capital was to be created first by "pre-financing", and savings were to e later. However, as we shall see, the contradiction with accumulat

the classic theory of capital formation was more apparent than real.

The big programme of public works arranged was carried out in less than two years with unusual speed and exactitude. The number of workers unemployed declined visibly, thanks also to direct measures such as the "labour service" scheme and the re-employment of male workers in place of women workers in both private and public undertakings. In addition, military service removed several hundred thousand young men from the labour market.

2

But surely the financing of public works by means of bank credits contradicts the elementary rules of banking policy? Certainly it did, and in my opinion currency stability would be greatly endangered if the Central Banks constantly engaged in such financial operations. The methods adopted by the German Government came in for a good deal of criticism abroad and they were regarded as ordinary inflation phenomena with all the usual results. There were, however, others who proceeded to develop apparently new theories concerning banking and currency on the basis of Germany's experience.

During discussions which I had with competent people, on a visit to Germany in 1935, my attention was drawn to the main fact which explains the success of the German experiment: when the programme of public works was first put into operation not only was unemployment very high *but a great part of the country's resources lay idle*. During the economic crisis big reserves of raw materials, half-finished goods and various kinds of consumer goods accumulated to a total value estimated at approximately 20 milliard marks. There were other available reserves in the shape of foreign exchange in the hands of the Reichsbank (over 1100 million marks), which was almost used up during the course of 1933, and finally the so-called "Russian Bills", which derived from commodity exports to Russia and amounted to several hundred million marks. Germany's resources in cattle and timber, both of which were considerable, could also be used to the full without involving grave consequences. (For instance, the owners of timber were compelled to cut a quantity 50 per cent in excess of normal.) And then there was another important factor: the harvests of 1932 and 1933 were unusually good.

Apart from the accumulation of large quantities of goods, some of the plant erected, or extended and improved, in the years 1924-1930 was not being utilized to capacity in 1933, and so production facilities were available in all branches of industry. Thus the extension of credit did not take place in an economic system whose

material productive forces were already being utilized to the full. Had this been the case then the result would have been a rise in prices and wages which would have upset the whole plan of economic reconstruction. Instead, all the bank credits really did was to make available resources which were lying idle, and in consequence only a moderate volume of inflation was caused. From the standpoint of the community these available resources, the result of already expended labour, were actually "savings", and therefore the classic theory according to which the accumulation of new technical capital is preceded by "savings" was not really refuted by the German experiment at all. The exceptional factor in the situation was merely that the savings were not present in a money form when the programme of public works began. Germany found herself in an unusual situation, because although there were great quantities of labour-power, raw materials, food-stuffs and industrial plant available there was a shortage of money savings which, once in the hands of entrepreneurs, would have enabled them to utilize the production factors. Economic life was thus—apart from other causes—paralysed. The missing savings were temporarily replaced by bank credits and so the mechanism of production was started up again. If downright inflation is to be avoided, then the limits to which bank credits may be extended are quite clear : they are represented by the amount of idle material production factors available.

When by 1937 the available reserves of goods had been exhausted the German Government did decide to change its previous methods of financing exceptional expenditure, and it restricted Reichsbank credits and began to draw to a greater extent on tax revenue and long-term loans instead. In fact, however, this policy could not be successfully pursued because in the meantime German expenditure on armaments had increased enormously.

The idea at the bottom of the German experiment was not in the least new. No less than a hundred years before Rodbertus had described it clearly in a treatise which has since been almost forgotten.¹ Rodbertus was the first economist to point to what we should to-day call the "dynamic" effect of credit in an economic system whose productive forces are to a large extent unutilized.

3

In my previous remarks I have referred to what, in the opinion of a number of contemporary economists, should be the most important indirect consequences of public works, namely, the creation of "secondary" employment as distinct from the

¹ Rodbertus : *Die Preussische Geldkrise*, 1845.

“primary” employment resulting directly from State capital investments. The theory runs approximately as follows: workers employed on public works and those other persons who profit from them expend at least a part of their new-earned income on consumer goods. The increased demand for such goods causes entrepreneurs to increase their production with the result that still further workers find employment, and as the latter on their part also purchase consumer goods with a part of their new wages production is increased still further and the number of workers employed again increases. And so it goes on. In short, the preliminary effects of public works on the level of employment are multiplied visibly.

Kahn has attempted to measure the exact effects which are caused under certain conditions by an increase of investment activity with regard to “secondary” employment. Let S represent the sum which the State expends in the course of a month on public works, for instance, the building of a road. Generally speaking, a smaller sum than this will ultimately be expended on consumer goods and this can be represented by $S_1=KS$, where $K < 1$.

Similarly, the whole sum S_1 will not be expended a second time on consumer goods, but a smaller sum again, which can be represented by $S_2=KS_1$ (Kahn presupposes that throughout the whole of the subsequent reactions K remains constant). Thus the process continues as follows: $S_3=KS_2$; $S_4=KS_3$, and so on. The total expenditure (“primary” plus “secondary”) is therefore:

$$S(I+K+K^2+K^3\dots) = \frac{S}{1-K}$$

The relation between total expenditure and “primary” expenditure, i.e., that which is provided by the State, equals $\frac{1}{1-K}$.

If we assume that individual wages remain the same then the quotient $\frac{1}{1-K}$ (“multiplier”) gives us also the relation between total employment and “primary” employment. If K is 0.666, for instance, then $\frac{1}{1-K}=3$, that is to say if, for instance, 100,000 men are employed in public works then in consequence there is a “secondary” employment of 200,000 men.

The multiplier thus depends on the coefficient K , i.e., it will be greater as the percentage of S expended on consumer goods is greater and continues to remain in circulation. However, if a considerable part of the sum originally expended by the State is hoarded, or if it returns in the form of taxes, or in any other way, to the Treasury, or if it is absorbed by the issue bank, then

both, the coefficient K and the multiplier, are correspondingly low.

The assumption of constant wages despite an increasing demand for labour is absolutely essential for the validity of the multiplier theory, because if wages rose then some employers in those branches of industry which did not benefit either directly or indirectly from the public works would dismiss a certain number of workers and the effectiveness of the "multiplier" would thereby be nullified. During a serious economic crisis characterized by widespread unemployment, the supply of labour-power is very "elastic" so that, in fact, the assumption of constant wages is not far-fetched.

4

A policy of public works can be regarded as completely successful only if it effectively encourages private enterprise with the ultimate result that private capital gradually takes the place of State expenditure so that public works can gradually be tapered off and brought back after a certain period to normal levels. A policy of public works as a means of combating economic depression is particularly attractive when the assumption that it will create considerable "secondary" employment is well founded.

Did Germany's public works have this result? It is not possible to give an exhaustive reply to this question which would permit us to draw general conclusions, because the German experiment was not carried through to the end. There is no doubt that when the big programme of public works was started in 1933 its organizers pinned great hopes to the "secondary" effects they believed it would produce.¹ But later on the government changed its direction in order to concentrate all its resources on rearmament and the Four-Year Plan, and its aim was then to prevent the encouraging effects of State expenditure on private capital investment which did not come within the framework of the Four-Year Plan rather than to extend them.

Nevertheless from what happened during the years 1933-35, i.e., when no obstacles were placed in the way of the development of those industries producing direct consumer goods, certain facts emerge which are of particular interest for the "multiplier" theory. German statistics and numerous reliable reports indicate that all in all the effects of public works on private enterprise and on the industries producing consumer goods were very modest; they did not come up to expectations and they made themselves felt only very slowly. In the summer of 1935 Germany was still "patiently

¹ This can be seen from a memorandum issued by the Reich's Statistical Office in 1933 entitled: *The Effects of Direct Labour Provision*.

waiting for private enterprise to come to life again.”¹ And Professor Stucken declared bluntly that “the preliminary cranking up” by means of public works had not greatly encouraged the spirit of private enterprise in industry.² All German sources stress the slow development of the consumer-goods industry which, according to the theory of the multiplier, should have felt the effects of State investments at once. And although here and there certain branches of industry were able to record an increase in production from the middle of 1933 to the first half of 1935, this was not due, as the above-mentioned sources point out, “to the secondary effects of public works, but to particular and exceptional circumstances such as the manufacture of uniforms for members of various National-Socialist organizations, or the loans granted to newly married couples to assist them to buy furniture and household goods. From the end of 1934 to the end of 1935 the consumer-goods industry not only failed to show any increase in production, but certain important branches of it, for instance, textiles and leather, suffered quite considerable reductions. Statistics for retail trading show that consumer demand increased only very slowly.

The following circumstances largely explain why the “secondary influences” were so feeble. At first the greater part of the money expended on public works went into such things as the building of roads, canals, dams, river-catchment schemes and the draining of marshland. The wages paid to the men working on them were not very much higher than the unemployment support they had previously been paid. This applied even more to those workers who were employed on emergency works (*Notstandsarbeiten*) and to those young men who were enrolled in the “labour service” scheme. The latter were fed and given free lodgings as part of the scheme so that they received only a very small amount in actual cash. Later on, however, the total money income of the working class did increase considerably.

Further, it soon became clear that workers and other employees who were again in employment were using a considerable part of their wages to pay off their debts to shopkeepers and landlords or to the municipalities which had granted them loans when they were unemployed. And, as savings-banks statistics indicated, many of them were using their new income to replenish the savings they had been compelled to draw on so heavily during their period of unemployment. Another indication of savings activity was the sudden increase in 1933 of life-insurance business. A few years later the movement came to a halt. The German authorities gave

¹ *Quarterly Report of the German Business Research Institute, II.A.*, p. 184, 1935.

² In *Zeitschrift für die gesamte Staatswissenschaft*, p. 643, 1936.

contracts to numerous small entrepreneurs and artisans for a part of the public works, i.e., to those people whose "savings urge" is particularly strongly marked. In fact their immediate aim was to replenish their deposits and savings accounts. In addition, the building of roads and the execution of other work of an agricultural character meant that quite large sums of money were paid out to people living in small villages and in rural areas generally where there was little opportunity for personal expenditure and the velocity of circulation of money was low.

In all probability, however, the most important factor responsible for the slowness with which the secondary influences of public works made themselves felt was lack of initiative on the part of entrepreneurs. The carrying out of these public works gave them the opportunity to empty their warehouses, but instead of investing the money they received productively they generally preferred to use it to liquidate their bank debts. Another important factor was that for a long time after 1933 the total sum earmarked for amortization—as shown by company balances—greatly exceeded the total sum of actual investments in new fixed capital or goods. This was also due to the fact that during the course of the so-called rationalization period plant was excessively extended in many branches of industry with the result that subsequently entrepreneurs felt little inclination to replace existing plant by new plant.

In addition, some of the measures adopted by the German Government had the effect of delaying the secondary influences of the programme of public works. This was true in particular of those government measures which increased agricultural prices in 1933 by an average of 25 per cent. In this way quite a considerable body of purchasing power (approximately two milliard marks annually) was shifted from the consuming public to the pockets of farmers and landowners, who expended only a very small part of this sum on the employment of further agricultural workers and the purchase of machinery and other agricultural requirements. The bulk of it was used to pay off their debts and replenish their bank balances. As the Reich's Statistical Office observes: "The increase in the income of farmers and landowners was the most important source of the fillip in savings activity which took place in 1933." These savings were largely deposited with the savings banks which then used them to purchase Treasury bonds.

Thanks to the paying off of debts a great part of this newly circulating money went into the coffers of private banking houses and from there it went back to the central issue banks. This is a phenomenon which has often been observed in other countries too, for instance, in the United States when the Federal Reserve Bank adopted the "open market policy" and brought money back into circulation by buying up securities in the hope that this would

encourage private enterprise and further economic recovery. Instead, however, the sums thus obtained were used to pay off bank debts—from the banks in question the money then returned to the Federal Reserve Bank.

It is quite understandable that industrialists and landowners should use their increased income to pay off their debts and thus consolidate the financial basis of their farms and factories. The astonishing thing is merely the length of time the process took. Even in April 1937 it was still obvious that the new debts of industry were less than the sum which industry was using to pay off old debts. Further, it was also obvious that entrepreneurs were showing a tendency to invest their liquid capital in bills and short-term securities on the money market. It was said that the lack of initiative was partly due to a lack of confidence in the future. There was some doubt about the duration of the economic reconstruction being carried on exclusively by the State. Private enterprise began to stir only when it was encouraged by fiscal measures and big subsidies, or when the State itself agreed to shoulder all the risks involved. In general, business men were chary of investing their capital in new plant which, it was said, would become valueless as soon as Germany decided to abandon her policy of economic self-sufficiency. There was also no interest in the purchase of raw materials because they would decline in value rapidly if import prohibitions were withdrawn.

All these considerations entitle us to conclude that the practical value of mathematical formulae designed to measure the “secondary” effects of public works (or other State investment activity) is very limited. In view of the impossibility of estimating the contrary reactions which such a policy can produce in other parts of the economic system, and having regard to the imponderables of the psychological factor—quite apart from the fact that such reactions can vary considerably according to the neighbourhood, the workers involved and the industries concerned—it seems impracticable to attempt to estimate even approximately the extent to which such “secondary” employment is created.

According to the “multiplier” theory State capital investments in public works bring about an increase in the national income when they favourably affect the consumer-goods industries. A part of this increased income flows back into the coffers of the State. This can come about in a number of ways : by the payment of taxes or various levies or through investments in State loans—or the money returns to the issue bank when private undertakings

liquidate their bank debts (cf. above). All these phenomena can be brought together under the heading of "savings". The multiplier theory as developed by Keynes declares that the sum of new savings equals the sum of State investments thanks to the increase in total income. Let us assume that the expenditure on public works totals 100 million monthly and that savings represent 50 per cent of the increase in income. As in this case K equals 0.50 it follows that the multiplier equals 2, i.e., the total increase of income amounts to 200 millions. As on the basis of the assumption made, half of this sum, i.e., 100 millions, is saved, it is clear that the sum of savings is equal to State expenditure on public works. But this example does not take into consideration the fact that the formation of "secondary" income requires time, and therefore the new savings, with which in the last resort public capital investments are to be financed, cannot accumulate immediately. In the meantime these public capital investments must be financed by means of bank credits or by the issue of new banknotes. One or two interesting problems, which the multiplier theory at first completely ignored, now arise. (Hawtrey pointed out that the theory was essentially static and not dynamic.)

Let us assume that every month the State spends 100 million on public works, and that this sum is transferred wholly into individual income. Further, let K equal 0.50 and let all the subsequent effects make themselves felt uniformly one month later. Secondary income would then arise as in the following table :

Month	I	II	III	IV	V	VI	VII	VIII
Primary Income	100	100	100	100	100	100	100	100
Secondary Income		50	50	50	50	50	50	50
			25	25	25	25	25	25
				12.5	12.5	12.5	12.5	12.5
					6.25	6.25	6.25	6.25
						3.12	3.12	3.12
							1.56	1.56
								0.78

We may therefore conclude: Only during the course of the eighth month does the multiplier come into full swing. In this month direct income created by public works and "induced" income amount to approximately 200 millions. In all the previous months State expenditure is greater than savings, and thus the State must necessarily turn to bank credits to meet the deficit which, all in all, amounts to 100 millions. The stocks of consumer goods, raw materials and half-finished goods, which can easily be turned into consumer goods, diminish by the same amount. If the effects of public works are to be felt on "secondary" employment then it must be possible to draw on commodity stocks in the transitional period, namely in that period from the moment public

works begin until the point where the "multiplier" is in full swing.

In the example we have chosen, the permanent increase in bank credits or currency does not exceed 100 millions because beginning with the eighth month the expenditure on public works is completely met by the sums of money flowing back into the Treasury. The effect of the increased currency on prices is compensated for during the transitional period by the emptying of commodity stocks and later, when the "multiplier" is in full swing, by a corresponding increase in the production of direct consumer goods.

The lower, other things being equal, the "multiplier" is the sooner will the money originally expended by the State emerge from circulation and form new money reserves with which the bank credits can be met. The secondary influences on production and employment are then correspondingly weaker, which was the case in Germany. The higher the "multiplier" is the greater is the volume of derivative income and secondary employment, but then the consolidation of bank credits takes a longer time.

The theoretical formula we have just presented is naturally subject to certain changes according to circumstances. In practice it is hardly possible to avoid a rise in prices within certain limits, and this will be more or less serious according to the elasticity of the supply of individual commodities. Further, the multiplier is not constant and it changes in the course of time. State expenditure is not uniform. There can be no exact concurrence between such expenditure and the volume of savings deposits. And in particular it is a fact that when expenses are constantly rising they invariably show a tendency to go beyond the volume of savings, and the difference has to be met with new bank credits.

6

Once the reserves of idle production factors have been exhausted and if the exceptional expenditure of the State exceeds the voluntary savings of the general public, then there are two ways in which such expenditure can be financed :

(a) Prices are allowed to rise. If money wages do not increase in the same proportion then surplus profits accumulate in the hands of individual undertakings which the State can then absorb by special taxation or by floating loans and in this way meet the bank credits. This really means that side by side with voluntary saving there is also "compulsory" saving at the expense of those whose money income has risen to a lesser extent than prices, and who are therefore compelled to restrict their consumption. In the last resort the investments made by the State are financed partly

by voluntary private savings and partly by "compulsory" savings. But if nominal wages keep pace with the rise in prices then the surplus profits of entrepreneurs show a declining tendency, with the result that the consolidation of bank credits meets with increasing difficulties. Then the newly issued paper money remains in circulation. In 1914 the German Government adopted the method we have just described to finance the prosecution of the war. Einaudi has described the process in a masterly treatise.¹ First of all banknotes were issued, and then an attempt was made to recover them by means of domestic loans, whose chief investors were, according to official German statistics, not small savers but big undertakings making large war profits. Taxation played only a secondary role in the financing of the war. This system, which was first of all successful, broke down when in carrying out the Hindenburg Programme, which aimed at securing an increase in the production of war materials, the German Government considered it necessary to grant considerable wage increases to the workers to raise labour morale and, with it, labour productivity.

(b) The State "freezes" both wages and prices and at the same time imposes a strict system of rationing on consumer goods. Freely available sums of money then accumulate in the hands of private persons. It is quite clear why this must be so. Let us assume that in the beginning a sum of 10 milliards is in circulation in the form of banknotes and bank deposits, and that the level of prices equals 100. When later on the amount of money in circulation increases to 12 milliards as a result of the extension of bank credit to finance public expenditure, whilst price and wage levels still remain at 100, then there are obviously two milliards available which the State can attempt to remove from circulation by the methods mentioned in Chapter VI, 4.

7

Three phases should be distinguished in Germany's programme for financing public works.

Public works were temporarily financed with the aid of special bills known as "Labour-Provision Bills". Entrepreneurs who had been given a State contract, or who had to deliver raw materials or machinery, drew a number of bills on one of the many banks created to finance Germany's public works. Approximately three milliard marks were issued through these institutions. It was the intention of the German Government to establish banking institutions which, although they were dependent on the State, operated like ordinary commercial banks in constant touch with the money

¹ *Riforma Sociale*, 1914.

market. The "Labour Bills" were outwardly drawn up in the form of ordinary bills and could be discounted by the Reichsbank. That was the cardinal point. At first most of the bills flowed to the Reichsbank with the result that paper money to a corresponding amount was issued, or deposit money was created. At the beginning of 1935 the Reichsbank had "Labour Bills" to a total value of 2.5 milliard marks in its keeping. However, the total increase of money in circulation was really not very great during the first years. This was due to very exceptional circumstances. After the bank crisis of July 1931 the Reichsbank had quite considerably extended its issues in order to assist commercial and savings banks. But after 1933, when, thanks to Reichsbank credits, commodity stocks were liquidated, considerable sums flowed back to those institutes, which were then in a position to liquidate their debts with the Reichsbank. The private banks re-purchased the bills which they had discounted with the Reichsbank so that finally the Reichsbank found itself to a great extent with new "Labour Bills" in place of the others. There was an inflation partly offset by deflation. The result of these two opposing movements was an increase of the money in circulation in the years 1933-36 by approximately 750 million marks, i.e., a relatively minor sum. There was a considerable increase in the amount in circulation later as a result of war-time expenditure, which was also largely financed by short-term bank credits.

During the course of the second phase the money market assisted in the financing of public works. When the State finances industry by creating new money, private banks play a subordinate role. This was what happened in Germany after 1933. They took no active part in financing the extension of production because the business world needed no bank credit, but also because of that lack of private enterprise previously mentioned. In fact one of the most significant phenomena of the banking situation in Germany after 1933 was the steady reduction in advances for current account. After the liquidation of debts, the reduction of credits and the increase of deposits, the "liquidity" of the German banking system increased considerably and this made it possible to shift the transitional financing of public works from the Reichsbank to the money market. The banks were in a position to invest considerable sums of available money in the purchase of "Labour Bills" (or Treasury bonds and "Special Bills"). A certain quantity of bills were also bought up by private commercial undertakings as a means of temporary capital investment. The money surplus enjoyed by numerous private undertakings was in part due to an increase in profits, but it was primarily due to the liquidation of commodity stocks and to the decline in fixed-capital investments (cf. the remarks on the point above). In numerous

cases, for instance, in the textile industry, the surplus resulted from the impossibility of replenishing stocks owing to import restrictions.

In 1935 the "Gold Discount Bank" began to issue certain bills (*Solawechsel*) which were gladly bought up by the money market. With the money obtained from the sale of these bills this bank withdrew a corresponding volume of "Labour Bills" from the Reichsbank. In April 1937 the so-called "Sola Bills" in circulation amounted to a sum of approximately 1400 million marks. In this way the money market provided quite considerable sums for the financing of public works. But this, too, was only a transitional stage in the course of the whole process of financing.

8

The third and last phase was the liquidation of bank credits or their consolidation with the assistance of long-term and medium-term loans. The pre-condition for both transactions was a sufficient increase in the available national money income, i.e., that income which was not used for the purchase of consumer goods.

The money income of the German people increased very considerably after 1933 (from 45.2 to 76 milliard marks in the years 1932-38). The tax revenues of the State also increased considerably, thanks also to a very considerable turn of the taxation screw. Before the outbreak of the second world war it was estimated that approximately 25 per cent of the German national income was reabsorbed by taxation. In 1936 taxes imposed on commercial undertakings were very considerably increased in order to divert a part of the profits from public works and the recovery programme into the coffers of the State. The increase in State revenue was used in part for the purchase of "Labour Bills", which the Reich had promised to redeem five years after their issue. There is no doubt that this was the ideal method, because no debts accumulated to burden the State, but for obvious reasons it could be carried out only to a limited extent.

On the other hand, liberal use was made of the other method, namely, the conversion of bank credits into long-term State indebtedness. In practice, however, this was a much more tiresome and complicated transaction than the mechanical theory of the "multiplier" would lead us to expect.

In the beginning the German Government adopted a number of measures with a view to restoring normal conditions on the capital market, which had been completely shattered by the grave financial crisis of 1931. The short-term indebtedness of the municipalities, which represented a particular danger to the stability of the money market, was converted and consolidated. At the same time effective action was taken to reduce the rate of interest, which

was too high for psychological reasons if for no other. This action culminated in the conversion of public debentures and those of the mortgage banks, and in allowing the Reichsbank to pursue an "open market policy", which made it necessary to revise German banking law. Nevertheless these transactions never took on the same volume in Germany as they did in other countries. In the meantime the statistical data of the banks, the savings institutions, the insurance companies and the co-operatives showed that a new stream of savings had begun to pour in, most of which the State requisitioned by forbidding private companies to increase their capital or extend their plant, and mortgage banks to issue new debentures.

After the ground had, so to speak, been appropriately prepared the German Government carried out the consolidation of short-term credits. Two phases can be distinguished in this process. In the first the securities were mostly bought by savings banks and credit institutions. In the second the general public took a big direct part in the floating of the loans. Finally the maturity date was lengthened with every new loan.

The first consolidated loan, which attained the sum of 500 million marks, was floated at the beginning of 1935. It was taken up entirely by the savings banks. Half of the second loan, which was floated in September of the same year, came direct on to the market. Other loans followed at short intervals, including one of 500 million marks, which was issued by the Reich's Railways in order to redeem the bills which had helped to finance the building of the famous motor roads. The total loans floated up to the end of 1936 totalled 4 milliard marks, so that the process of consolidation as far as it affected the "Labour Bills" could be regarded as practically complete. Thus we are justified in declaring that in the last resort Germany's programme of public works was financed with the savings of the general public. However, as we have already seen, these "Labour Bills" were immediately replaced by "Special Bills" (*Sonderwechsel*) which were issued to meet military expenditure, and the issue of consolidating loans then continued. By January 1938 they exceeded a total of 8 milliard marks.

These loans were actually medium-term issues in the form of Treasury bonds with an average maturity period of twelve years, with the exception of the loan of January 1938 which had an eighteen-year term. Approximately a third of these loans were taken up by the savings banks, one or two of which stressed that the necessary means had not been obtained entirely from savings but also from current deposit accounts. Credit institutes, co-operatives, insurance companies and the Social Insurance Institutes also contributed considerable sums to the consolidating loans, a process which was encouraged by the banking law of December 1934,

which facilitated the purchase by commercial and savings banks of State securities available for discount by the Reichsbank. From 1932 to the end of 1937 the total value of all the securities in the hands of credit banks, savings banks and insurance companies rose by approximately 7.5 milliard marks. This figure, together with the purchase of "Labour Bills" and "Special Bills"—as we have seen above—shows what an important role was played in the financing of Germany's public works, and later her rearmament, by the banking system.

All in all the consolidation of the bank credits with which Germany's public works had been temporarily financed met with no serious difficulties, but it demanded the introduction of a number of appropriate measures and the co-operation of the private banks before it could proceed step by step through the phases we have described. In short, the process was by no means "automatic" as an all too simple interpretation of the "multiplier" theory would have us believe.

9

The German Government was not content with temporary measures to diminish economic fluctuations. Its aim was much more ambitious: nothing more nor less than the abolition of the traditional trade cycle and the permanent stabilization of production and employment. There was to be "no place for booms and depressions in the new economic order" the world was told, and a typical and significant gesture was the changing of the name of the well-known institute directed by Professor Wagemann—instead of being called the "Institute for Economic Fluctuations Research" it was now called merely "Institute for Economic (or Business) Research." Some years before the outbreak of war in September 1939 Germany's economic system had already become a war economy. I therefore doubt the possibility of drawing any generally valid conclusions from an experiment which took place under such very exceptional circumstances, for instance, with regard to the possibility of permanently stabilizing a peace-time economy. In any case, it could be achieved only at a very high price, i.e., the total suppression of economic liberty (including the choice of employment) and all those individual liberties, precious achievements of man's culture, which, it is to be hoped, mankind will never consent to abandon for good. At least, it would be an illusion to suppose that they could continue to exist within the framework of a system of economic planning. The failure of the New Deal in the United States was in the last resort due to the contradiction between the requirements of economic planning and the continued existence of liberal institutions which the American

people were unwilling to abandon. Out of all this gigantic plan only a few fragments remained, namely, the measures taken in the interests of agriculture and social insurance.

10

A number of economists attach an importance to the problem of the stabilization of production which extends far beyond the narrower problem complex of the "economic cycle". In their opinion the decrease of capital investments which took place during the course of "the great economic crisis" of 1929-33 and which, amongst other things, caused a great deal of unemployment, was not to be regarded as a temporary phenomenon but as a fact which threatened to become a chronic evil. In other words, it was not a "cyclical" phenomenon, but a "secular" one, according to an expression used by statisticians. During the course of the nineteenth century various factors, such as the important discoveries and inventions which revolutionized technique, the opening up of new countries by European capital, the creation of an enormous apparatus of industrial production, the development of a vast network of transport and communications, the rise of important new industries, and finally an undeniable incentive in the form of increasing population, created the possibility of using savings rapidly and without difficulty. However, in the view of Professor Hansen¹ the coincidence of all these circumstances was a unique phenomenon in world history. He points out that during America's rapid economic expansion in the years 1924-29 the capital investments of private entrepreneurs were not so very considerable compared with those of public bodies, which represented the greater part of the whole. It was unlikely that such large industrial capital investments as were carried out during the course of the nineteenth century would take place again for many long years. And in addition, as a result of the standstill in population, or its slow increase, one of the most persistent incentives for economic expansion would be removed. On the other hand, savings would continue to accumulate. As savers would not feel inclined to invest their savings at the very low rate of interest which would prevail as a result of the decline in economic activity, perhaps not even covering the risk involved, a part of these savings would lie idle. The result would be chronic depression, and to combat it the State would be compelled to undertake more and more public works which it would finance with the available savings. The economic literature of the United States during the war and immediate post-war years also paid particular attention to the problem of a likely

¹ Hansen : *Full Recovery or Stagnation*, A. & C. Black, London, 1938.

surplus of savings by comparison with the opportunities for capital investment.

Many objections can be raised to this theory. It may very well be possible, as many economists have contended, that in the years 1924-29 savings in the United States exceeded investments, but the phenomenon was by no means general. There are many countries where capital is scarce and will remain scarce for many years to come. The restoration of international financial relations would at any time permit the transfer of available surplus capital from one country to another where there was a shortage and thus facilitate the establishment of an equilibrium between savings and capital investments. Those Americans who condemned the economic isolationism of their country and now advocate the granting of liberal credits to countries which need them, realize this very well. And finally it is not easy to see why a slowly increasing population figure should necessarily be unfavourable to private enterprise. Production is increasingly encouraged everywhere by a rise in living standards, by the creation of new needs, by the introduction of larger and larger sections of the population to the enjoyment of material things from which they were previously excluded. Moreover, how can one say that technical progress is now at an end, that no more new industries will arise, and that in the future no discoveries or inventions will offer new and unexpected possibilities of capital investment by lowering production costs and making it easier to exploit natural forces and reserves and create new goods as was the case in the past?

But at least, recent investigations into the relations between capital investments and savings have produced one important result. The problem simply did not exist for the classic school because productive capital investment was regarded as an almost inevitable natural result of saving. "*Épargner c'est dépenser*", wrote Bastiat. To modern economists (their predecessor was Malthus) must go the credit of having pointed out as a result of their study of concrete facts, the possibility of a disparity between savings and capital investments which could not be regarded as a transitional phase of adjustment and which might have grave results because of its duration and extent.

Another conclusion can be drawn from what has been said. Private enterprise hesitates to make any long-term capital investment when the risk involved is great. The fear of constant State intervention and increasingly radical measures such as nationalization of industry, the possibility that the authorities may at any time alter their policy, the prospect that the right of the individual to use his money as he thinks fit will be more and more limited—all these things naturally have an unfavourable effect on the investments market. But once the State confines its intervention to

those limits natural to a peace-time economy, insecurity and risk will diminish and the re-establishment of an equilibrium between savings and capital investments will more readily be obtained.¹

¹ Some of the problems touched upon in this chapter have been dealt with in greater detail in three other articles of mine : “ Les Travaux publics en Allemagne comme moyen de lutte contre le chômage ”, in *Egypte contemporaine*, Cairo, 1937 ; “ The Multiplier in Practice : Some Results of Recent German Experience ”, in the *Review of Economic Statistics*, 1938 ; and “ Osservazioni sulla Teoria del moltiplicatore ”, in *Rivista Bancaria*, 1939.

CHAPTER XII

INTER-STATE ECONOMIC RELATIONS AND "GREAT ECONOMIC AREAS"

I

THE economic theory of international trade declares that free trade between individual countries achieves the maximum possible volume of trade by allowing each country to produce what it is best able to produce. In a world of free trade, that is to say a world in which governments would not try to use international trade as a political weapon and in which there was no constant threat of war, it would be a matter of no importance that raw materials were available in large quantities in some countries whilst they were short in others. The countries which lacked such raw materials would be able to obtain them easily in the ordinary course of trade, because although they need the raw materials, the countries which have them also need to sell them. It happens very rarely that any country has a monopoly of particular raw materials. Even the question of colonial possessions loses much of its importance when the policy of the "open door" for goods, capital and labour is in operation in the colonies. There would be no problem of "living space" then; the whole world would be the living space of every country.

Now the economic theory of international trade ignores politics; but in reality the world is divided up into a variety of independent States, each of which regards its political independence as its most precious possession. If free trade were universal, industries would be concentrated in those countries best fitted to develop them thanks to deposits of coal and iron, geographical situation and other factors, whilst the other countries would confine themselves to agricultural production. Perhaps the latter might be able to develop this or that special industry, but never those large-scale industries which are of such great importance not only for the political strength of a nation, but also for its economic development and the improvement of the material conditions of its people.

And just as after the abolition of domestic trade barriers within the individual countries, those districts which enjoyed a favourable position were able to develop more rapidly than less-favoured districts, which they also deprived of labour and capital, so in all

probability under a system of international free trade capital and labour would flow into those countries which offered the production factors the most favourable possibilities of utilization. Such a situation would undoubtedly be to the advantage of some strong individual nations, but it would involve more or less grave political consequences for economically weaker nations.

The relatively moderate system of industrial protectionism which existed in the years before the first world war was a reaction to trends such as we have just described and may be regarded as a sort of compromise between economic liberalism and political necessities—leaving out of account the private interests involved (cf. Chapter V, 4).

2

The main impression obtained from a review of foreign-trade statistics published in the years immediately preceding the first world war is one of uninterrupted progress, whose benefits accrued not only to one or two favoured States but to all countries. Certainly, the rate of progress was not the same for all countries, and the advantages of foreign trade, which cannot be statistically determined, were also not equally divided. The theory of international trade itself confirms the fact that profit is not uniform, and that it varies according to whether the demand for foreign goods in a country rises or falls, whether the elasticity of this demand is great or small, or whether the country in question enjoys a monopoly in the production of a commodity or not.

Four countries, Great Britain, the United States, Germany and France, played leading roles on the world market in those days. The goods which each of these four countries sold on the markets of the other three represented a big percentage of its total exports. Before the outbreak of the first world war the respective percentages were : Great Britain 33·5, Germany 40·7, France 57·1 and the United States 52·8.

The increase of commodity exchange between the two chief rivals, Great Britain and Germany, is particularly interesting. Great Britain was Germany's best customer, whilst Germany was Great Britain's second-best customer after India. Germany's exports to the British Empire rose from 40·2 million pounds sterling in 1899 to 107 million pounds in 1913. On the other hand, the exports of the British Empire to Germany rose in the same period from 57·3 million pounds to 107·7 million pounds. That figure was exceeded only by the British Empire exports to the United States. Compared with these figures, Germany's trade with her own colonies was of very little account : imports and exports together amounted to less than 1 per cent of her total foreign trade.

3

Industrial countries are not only purchasers of raw materials and foodstuffs. Under the influence of List, the founder of the theory of economic nationalism, and other protectionist economists, a completely erroneous idea of the international division of labour had taken root. According to List it is determined almost exclusively by climatic conditions and other natural circumstances so that two clearly defined groups of countries form. The members of one group, situated in the temperate zone, are destined to become industrial producers, whilst the members of the second group, situated in the tropic and sub-tropic zones, are destined to produce primarily foodstuffs and raw materials. International trade is then made up chiefly of the relationships between these two groups of countries. Apart from this, according to List, the remainder of international trade is, with one or two exceptions, insignificant.

List's views only partly fit the facts, because side by side with the exchange which took place between industrial and agricultural countries there was a visibly increasing trade between these industrial countries themselves and this was the result of a very definite division of industrial production so that close economic relations were established between each industrial country and the rest. The three most important industrial countries in the world, Great Britain, the United States and Germany, were the chief importers of foreign industrial goods. This trade was more important for each of these three countries than it was, for instance, for Russia. Despite Russia's vast extent, large population and primarily agricultural structure—hardly 10 per cent of her population were engaged in industry. The import of foreign industrial goods into Great Britain per capita was nine times as great as the corresponding Russian import trade, and the importation of industrial goods by Switzerland was even greater by comparison with the size of her population. By comparison, agricultural countries such as Austria, Hungary and Spain lagged far behind. Thus we can draw an apparently paradoxical conclusion, namely, that *with the industrial progress of a country its capacity to import industrial goods increases*. In reality this conclusion is not a paradox at all. Technicians know what a large quantity of foreign industrial goods is required by every industry if it is to be built up on a rational basis. For instance, the British engineering industry imported German cast iron ; iron vanadium, which was produced exclusively in the United States ; German porcelain, chemicals, optical glass and boiler tubing ; various kinds of wrought and cast-iron products from Belgium ; German and American measuring apparatus ; German magnets, and so on.¹

¹ *Report on the Engineering Trades*, p. 9, H.M.S.O., 1918, (Cd. 9073).

4

The international division of labour between the industrial countries of Europe took various forms. Each country tried to concentrate its industrial activity on certain branches of production, or specialized in particular qualities and types. Further, industries in one particular country found it advantageous to concentrate exclusively on one special phase of the process of production so that one country would produce half-finished goods and the other finished goods.

An important branch of the British export trade was the export of cotton and woollen goods, and prior to 1914 this export represented approximately one-third of the total British exports, as against only 8 per cent for Germany and 10 per cent for France. German exports, on the other hand, were marked by a preponderance of steel, machinery and chemical products, which together accounted for approximately 32 per cent of Germany's total exports. Germany supplied about nine-tenths of the dyes required by the British textile industry. In addition, thanks to her considerable coal and iron-ore reserves, her system of mass production and her highly efficient technical and commercial organization, Germany was in a position to produce large quantities of second-stage steel products at a relatively low cost, and Great Britain was one of the best customers for this kind of half-finished product.

This inter-State division of labour also developed within the limits of one and the same industry. An example of this is offered by the engineering industry. The three biggest producer countries, Great Britain, Germany and the United States, specialized in the manufacture of certain machine types. Now, although they engaged in fierce competition with each other, not only in Europe but also in South America and in China, they nevertheless exchanged a quite considerable part of their production amongst themselves. Each country with a highly developed engineering industry became an important purchaser of the products of foreign engineering industries.¹ Great Britain took first place in the export of textile machinery and Germany was her best customer. Great Britain also took first place in the export of boilers. The United States exported great quantities of machinery for working metals (most of which was bought by the industrial countries of Europe), and for working timber (most of which was bought by non-European countries with large reserves of timber). Germany, for instance, was very successful in the export of internal-combustion engines, and she succeeded in securing large markets for this type of commodity not only in industrially backward countries but also in

¹ *Ibid.*, p. 27. Cf. also the articles on "L'industria meccanica", published in 1916 and 1917 by the *Comitato Nazionale per le tariffe doganali e i trattati di commercio*.

highly developed industrial countries. The United States took first place in the export of agricultural machinery, chiefly harvesting equipment. Germany also exported considerable quantities of locomotive engines, steam ploughs, and sowing and threshing machines. Further special American export articles were cheap motor-cars, typewriters and certain automatic machines. France and Italy exported luxury motor-cars.

The textile industry¹ offers us another example of the division of labour amongst the industrial countries. As is generally known, Great Britain had specialized in the production of certain fine-quality cottons, and Germany was her chief customer, followed by Holland, the United States, France and Switzerland. The ordinary types of British thread were exported to India, Turkey, the Balkans and Latin-America. At the same time, Germany was the chief buyer of British woollen yarns which, significantly, she used mainly for the manufacture of articles intended for export to Great Britain. On the other hand, Great Britain herself imported large quantities of woollen yarns of a quality not produced at home, particularly from France and Belgium. This type of yarn was specially suited to the manufacture of women's underwear and women's clothing generally.

France was one of the best customers for British woollen goods, but this did not prevent Great Britain, herself a great producer of woollen goods, from importing large quantities of woollen goods from France, chiefly fine-quality ladies' wear manufactured in Lille and Roubaix from yarns which were a speciality of French spinning mills. Great Britain held first place both at home and abroad in the production of all woollen knitted goods, but in the production of woven cotton goods she was unable to compete with Germany, whose goods took first place on the world market. The Germans had developed industries based on large-scale production and a scientifically constructed organization, and in particular they exploited an invention which permitted any woven cotton goods to be dyed black.

The British silk industry specialized in the production of expensive and high-quality men's goods, and in men's fashions, of course, Great Britain dominated the world. France, on the other hand, exported high-quality ladies' clothing and underwear, ribbons, lace, expensive silk material for furnishings, etc. Ordinary clothing for both men and women was produced by Germany, Switzerland and Italy, countries specializing in mass production at relatively low prices.

The British linen trade occupied third place amongst her textile exporting industries. Thanks to her climatic and hydro-

¹ Cf. *Report on the Textile Trades after the War*, H.M.S.O., 1918 (Cd. 9070).

graphic conditions, and also thanks to the skill of her workers, Ireland indisputably occupied first place in all the finer phases of the linen industry. But Great Britain also imported a certain quantity of ordinary goods (yarns and woven materials) from Belgium, fine-quality embroidery from Switzerland and certain mixed linen and cotton goods from Germany and Austria.

Great Britain exported a considerable quantity of lace, but she also imported lace from France and Germany. Silk lace was imported almost exclusively from France, whose manufacturers had reached a particularly high level of perfection in this respect. Great Britain exported fine lace from Nottingham to Germany, but the Germans had also developed a particular lace variety of their own, known as Plauen lace. This type of lace was exported in many artistic patterns and it held a leading position on the world market and in particular in Great Britain, France and the United States.

These few examples should suffice to convey some idea of the international distribution of production in one-time Europe. This distribution, one of the most important factors responsible for the well-being of the peoples of Europe, was not the result of a carefully prepared plan drawn up by economic commissions and government departments; it had developed out of the economic activities of thousands and thousands of separate undertakings, all of which were guided by the reliable compass of their own interests, and it grew up despite the hindrances erected by the protectionism of many countries. But, as I have already pointed out, these hindrances were not insuperable because they did not paralyse the whole "mechanism" of international trade as is the case to-day. The development of international trade presumes the stability of exchange rates, because the insecurity produced by any fluctuations of exchange rates invariably reacts very unfavourably on international trade. Stability can be guaranteed only by means of money with an international value such as gold, and the close of the nineteenth century, in fact, witnessed the almost general adoption of gold currency. Based on the development of an international division of labour, a world economic system grew up as an integration of the various individual national economic systems, whose individual parts were interdependent. And it should not be forgotten that a feeling of security and confidence based on the development of international law contributed a tremendous amount to the development of inter-State economic relations. In addition a spirit of responsibility developed which ensured that financial obligations and agreements generally were respected, at least where the bigger powers were concerned, for governments had not yet reached the stage of regarding agreements as scraps of paper. Other factors were a fundamental agreement amongst all countries

concerning legal standards ; and, finally, the conclusion of long-term trading agreements.

Those people who believe that embittered economic competition between the great powers was one of the chief causes of the first world war apparently regard the " world market " as something like a fixed magnitude, a numerically pre-determined volume of business, so that what any one country succeeds in capturing for itself represents a commensurate loss for all other countries. This view is quite erroneous. It could happen, of course, that the products of one country squeezed the products of another out of a market, but in general the development of the export trade of one country did not proceed at the expense of the others, but thanks to the creation of new markets. On the whole, neither German nor American competition did any serious damage to the British export trade.¹ On the contrary, the more these two countries extended their own activities the more they represented profitable markets for the exports of Great Britain and the whole British Empire.

The rise of new industrial countries merely compelled the older exporting countries to adapt themselves constantly to changing market conditions. When, for instance, numerous countries which had at first produced exclusively agricultural produce began to produce direct consumer goods which they had previously imported, the industries of the older industrial countries had then to produce finer-quality goods than the newly developing industries were able to manufacture. And step by step with the development of the production of direct consumer goods in those countries which were now building up their own industries, went the export of production-goods from the old industrial countries to the newly developing industrial countries which urgently needed them.

5

The Neo-Mercantilism which arose in the years following the first world war and developed rapidly after 1930, partly as a result of the economic crisis and partly on account of the increasing danger of war, introduced high protective tariffs, import prohibitions, quotas, licence systems and various " clearing " arrangements which destroyed that sound network of international economic relations which had been built up by the work of many generations. An additional factor was the destruction as a result of the first world war of one of the world's big economic units, the Austro-Hungarian Empire. In general the so-called succession States adopted protectionist measures, believing that such a policy offered

¹ *Final Report on Commercial and Industrial Policy after the War*, p. 9, H.M.S.O., 1918 (Cd. 9035).

them the best hope of political independence. In the period which led up to the outbreak of the second world war Europe was parcelled up into a great variety of different economic areas, some of them hermetically sealed off against the rest, and a situation was created which in the long run would have proved intolerable. Where was the solution?

During the second world war Germany declared that it was quite impossible to restore the situation which existed in Europe before the first world war when Europe "depended" on overseas countries for the greater part of her raw materials and foodstuffs. On the other hand, it was frankly admitted that no country in Europe, including Germany herself, was in a position to make herself economically self-sufficient. Independent supplies are easier to organize where an extensive area rich in various raw materials is available. The Germans therefore decided that the only possible solution lay in the creation of a "Great European Area" subject to "central control" in which at least all those economic obstacles set up by various States during the course of ten or fifteen years would be abolished. This, they thought, would be a first step towards economic independence which was out of the question for a smaller economic area. Later on steps could be taken to introduce, if not complete, than at least a limited measure of free trade between the various countries of the German "Great Economic Area". A first step in this direction was made when the Bohemian Protectorate and the Netherlands were included in the German customs zone.

Even before the first world war one or two countries had sought to secure markets for themselves which would be closed to foreign competition. France, the country of protectionism *par excellence*, surrounded her colonial empire with high protective tariff walls, with the result that the French Empire developed into an element of disturbance in the international economic relations of the peoples. Forty-five years ago Joseph Chamberlain founded the Tariff Reform movement to revise British foreign trade policy and forge closer economic links between the mother country and the various parts of her empire. Chamberlain's plan was not immediately successful, but the preferential tariffs subsequently arranged with the British Dominions for British goods were only the first step to further protectionism. On her part, Germany sought to dominate the European market by means of long-term trading agreements. The agreements concluded around the year 1890 were renewed during the course of the subsequent ten years. Russia, Sweden, Switzerland, Austria-Hungary, Belgium, Italy, Bulgaria, Serbia, Rumania, Portugal and Greece all joined in what German economists termed the "System of Central-European Trade Agreements." Germany's exports to these countries in the years

1901 to 1913 increased from 1650 million marks to 4059 millions, figures, which speak volumes for the success of her trading policy. In 1913 these same countries took 40 per cent of Germany's total exports. Despite all her efforts to capture the world market, and in particular the Near East and the Mediterranean, Asia Minor, Equatorial Africa, China and Latin-America, Germany fundamentally remained a great continental power, and, in fact, only 25 per cent of her exports went to non-European markets. For Great Britain, on the other hand, overseas markets were of quite exceptional importance, and in 1913 only 35 per cent of her total exports went to Europe.

6

Germany regarded it as her historic mission to reorganize and lead Europe. The thousand-year traditions of the Holy Roman Empire of the German nation had never died out. They were carried forward from generation to generation even during the centuries of deep decay—and various legends concerning the Emperor Barbarossa arose. They differed in various parts of Germany, but they were all imbued with a great longing for the return of the empire.

In 1941 a German named Ganzer wrote an illuminating book setting out Germany's intentions in the event of her victory. Ganzer's ideas were not merely those of the German military caste : they also reflected the mentality of part of the German intelligensia.¹

The vision of a great German Empire lives again in Ganzer's book as it was in the Middle Ages at the time of Heinrich VI, whose realm extended from the North Sea to Cape Passero ; the whole Balkan peninsula, Cyprus and Armenia were subject to the Reich and even Byzantium paid tribute. In Ganzer's view the German people had, during the course of a thousand years of history, proved their political capacity to undertake the organization and political leadership of Europe. The days of decay had been only days of waiting, during which the German people again prepared themselves to found the " Reich " (p. 30). The guidance and leadership of Europe by the German people is " an historic law " (p. 96). Even at the time of the great migrations the German people demonstrated their quality as empire builders. Charlemagne founded a State in the heart of Europe which gave the whole of Europe law and order, and from that time onwards the task of defending Europe clearly devolved on the German people. The " marches ", the most important heritage from the time of the Carolingians—a kind of " iron curtain " against Eastern Europe—extended from the Baltic to the Adriatic and formed a defensive

¹ Ganzer : *Das Reich als europäische Ordnungsmacht*, 1941.

belt for the European mainland. The mediaeval Reich gave Europe a political organization for three hundred years. Its firm core was created by Heinrich I with the amalgamation of five duchies. Later on, after defeating the Magyars, who had threatened the existence of Europe, Otto founded the Reich. The first Reich was an organic growth based on an organizational principle which in Ganzer's opinion is still valid to-day and would prove fruitful in application: the Reich would draw its strength from a central mass solid and powerful enough for other European countries to group themselves around it. They would be attached to it by bonds varying in their nature from complete dependence to less rigid forms and relations of simple affiliation. Western Europe had, generally speaking, remained outside the orbit of the First Reich, whose main attention had been turned to the east, where lived peoples who had, throughout the course of many centuries, revealed their incapacity as empire builders. For a thousand years, therefore, the Reich stretched its hand beyond its ever-open eastern frontiers towards the amorphous East to press its seal upon it.

According to Ganzer, this European hierarchy of States, with its core and centre in the Reich, was no arbitrary formation but organically in accordance with the necessities of present-day Europe (p. 91). The smaller countries were not destined to be independent States and therefore they needed leadership—which did not, however, preclude a certain measure of autonomy in their own domestic affairs. But political sovereignty belonged exclusively to the master race. A thousand years of history clearly demonstrated that the order best suited to Europe was that desired and imposed by the Reich, namely: in the centre of the European mainland the master race; under its sovereignty and responsibility a system of small peoples living in accordance with their organic functions within the framework of the order created by the Reich; then in the more or less immediate neighbourhood of the Reich countries attracted by the strength of the Reich and thus desirous of throwing in their lot with that of the Reich (p. 24).

The Reich had the traditional historic right to take the leadership of Europe into its hands because it had always been prepared to accept the responsibility deriving from that leadership, namely, the duty of defending Europe. Ganzer reproaches the power ideology of Hohenzollern Germany with having ignored the fact that the exercise of power presupposes two things: the determination to exercise a protectorate and the courage to shoulder the appropriate responsibility (p. 107). Charlemagne defeated the Avars and Otto the Great defeated the Huns. Later the Reich saved Europe from the Turks. Prince Eugen then continued the glorious traditions of Charlemagne, Heinrich I and Otto I. Ganzer

entirely ignores whatever does not suit his picture, for instance, the fact that Venice was also a strong bastion of Europe against the invading Turks. According to him, only the people of the Reich have shown throughout the course of history that they are capable of creating order in Europe, and only within the Reich can the common affairs of all the countries of Europe find their solution (p. 53). It is a common principle of continental Europe that it needs the Reich as its most important instrument of defence.

However, Great Britain pursued a European policy which was diametrically opposed to the Reich's idea of European order and therefore grave conflicts inevitably arose when the Reich resolutely began to carry out its immanent task. But, wrote Ganzer, at the present time the reality of a thousand years has arisen again, and the German people are once again conscious that their predestined sphere of operations is all Europe (p. 132).

And the *Frankfurter Zeitung* declared: "It is a law of history, which desires it so, that immediately after establishing her own national unity Germany should extend beyond her own narrow frontiers and found a Reich. The day in March 1939 that the Hakenkreuz banner was hoisted over the Hradschin in Prague symbolized a turning-point in the course of history, because on that day Germany replaced the nationality principle as a regulating principle of European political life by the principle of Pan-Europa (*Grossraum Europa*) formed by the Reich."¹

7

The idea of a Pan-European "economic unit" dominated by Germany did not originate during the course of the second world war. Friedrich List himself proposed a coalition of European States against England in order to destroy her industrial and commercial predominance.² List, too, had not much consideration for the smaller peoples of Europe. For him they were only political "fragments". Holland, for example, was "a maritime province" of Germany.

From the year 1890 the idea of a "Great Economic Area" was developed by numerous German economists. According to them economic development was leading to the formation of "economic aggregates", for instance, the British Empire, the United States and Russia. They occupied a great part of the

¹ "Das Reich in der Bewahrung", *Frankfurter Zeitung*, December 25th 1942.

² But List made a very illuminating observation. Why, he asked, did the European States oppose Napoleon, who desired to shake off the yoke of English hegemony? And he answered his own question by declaring that although they did not willingly bear the English yoke they nevertheless regarded it as less dangerous to their political independence than the predominance of a continental European power.

world and possessed enormous economic resources which they were exploiting in a more and more selfish fashion to the detriment of the interests of other countries. Germany, whose narrow territorial basis was becoming less and less capable of bearing the weight of her powerful industrial superstructure, would be condemned to sink into the role of second-class power, helpless, at the tender mercies of the big empires, unless she formed such a "Great Economic Area" in Europe which, if possible, should be self-sufficing. This is also the gist of Friedrich Naumann's famous book, *Mitteleuropa*, published during the first world war.¹

Even in Germany protesting voices were raised, and before the first world war two distinguished economists, Dietzel and Eulenburg, declared that this theory of a "self-sufficient economic empire" was in blatant contradiction to the facts, which clearly indicated that the tendency to economic isolation, expressing itself above all in agricultural and industrial protectionism, would be overcome by much stronger economic forces which were already at work creating ever-closer conditions of mutual dependence and solidarity between the various peoples. Although its "place in the sun" was modest, Germany's economic system was far from being restricted; on the contrary, it was experiencing a period of tremendous progress. The prosperity of the German people was increasing; riches were piling up in Germany's splendid ports and in her industrial areas, and the pessimistic outlook of certain German economists lacked all factual basis.

Even during the first world war, and in particular in the post-war period, a movement arose in favour of creating so-called "Great Economic Areas"² which would cut themselves off from the rest of the world by high tariff walls, agreements with "most-favoured nation" clauses between the countries belonging to them, and a uniform currency. The genesis of this idea was not economic but political; it was not the result of spontaneously operating economic forces, but of State intervention with primarily political motives. Following on the conclusion of the Ottawa Agreement, Great Britain began to concentrate on strengthening her bonds with the various countries of her Empire. These agreements, together with the high American tariffs of 1930, were one of the causes of the profound disturbance of the world economic system. In 1938 British exports to all parts of the Empire amounted to 49.9 per cent of total British exports, whilst the British imports

¹ The history of the idea of the "Great Economic Area" has been described in my article "The Idea of World Empire in the Writings of German Economists," in *Riforma Sociale*, 1918.

² I stressed this tendency in my book, *Mitteleuropa, l'impero economico dell'Europa centrale*, Rome, 2nd edition, 1919. Cf. in particular the chapter entitled "The Struggle between the Empires in the Post-War Period."

from all parts of the Empire amounted to 41.9 per cent of total British imports. These figures are much higher than the corresponding figures for the years before the first world war. Only 10 per cent of France's total foreign trade took place with her colonies prior to 1914, but before the second world war the percentage had risen to 30 per cent for exports and 27 per cent for imports. The same tendency, though to a lesser extent, was observable in the foreign trade of other countries with colonial possessions.¹ From 1934 onwards Germany established the strictest control over her foreign trade, chiefly with the political aim of changing the course of its natural development.

With this a phenomenon was repeated, though on a much bigger scale, which had made itself evident several centuries before at the beginning of the Renaissance. Recent investigations into economic history have revealed the fact that towards the end of the Middle Ages a quite considerable volume of foreign trade had developed in Europe which tended to bind the various European countries more and more closely together. Now this developing European economic order was violently broken up when the big national States arose and sought to turn themselves economically into closed-market units. In the same way the world economic system which was developing in the period before the first world war will be finally destroyed—not for economic reasons, but chiefly for political reasons—if the tendency towards the creation of self-sufficient “Great Economic Areas” persists.

8

During the second world war when they were cut off from all overseas sources, the various countries on the European mainland were compelled to obtain goods in Europe which they had previously obtained by importing them from overseas, and at the same time to seek European markets for their own products.

However, it would not be possible to establish complete European economic self-sufficiency as a permanent post-war economic order without radically lowering the living standards of the European peoples. Europe requires enormous quantities of foodstuffs, fodder, raw materials, metals, etc., which are produced overseas. In a keen criticism of the “Great Economic Area” theory, Demaria² points out that “the whole infra-structure of European industrialism, even the whole economic development of Europe, is overwhelmingly based on non-European trade.”

¹ Cf. the statistical investigations of E. Fossati in *La situazione economica internazionale. Commercio Estero, Università Bocconi, Milan, 1940.*

² “Il problema industriale italiano,” published in the *Giornale degli Economisti* and in its *Annali di Economia*, p. 34, September–October 1941.

From investigations and discussions in Germany in connection with the construction of the future European "Great Economic Area" it is clear that if Germany had emerged triumphant from the second world war she would have subjected all the conquered countries to an iron economic discipline. International commissions were envisaged to distribute production amongst the individual countries. Long-term agreements would have been imposed in order to guide each national economic system in the desired direction. "Distribution of production" means that countries within the "Living Space" of the dominant State would have to agree not to undertake or develop certain branches of production, because, so the argument went, if the dominant State undertook to purchase the products of the satellite States and thus ensure their economic stability, then it would have to have a guarantee that no competing industries developed in those States which would make it difficult to pay for purchases with its own products.

This would certainly not have been the best possible method of increasing the prosperity of Europe as a whole. The system proposed would have replaced the elastic and spontaneously operating organization built up in free-market conditions by a rigid artificial structure complete with bureaucratic officials, more or less onerous control measures and officially fixed prices and production quotas. Many countries would have found themselves no longer able to establish new branches of production when favourable opportunities arose, or to purchase the raw materials they required in the most advantageous market. And by the same token they would no longer have been able to sell their goods in the most advantageous market. Belgium, Holland and Denmark imported large quantities of raw materials from overseas countries and were thus enabled to build up their economic systems on a rational basis. These relations had suddenly to be broken off during the second world war owing to the German occupation. The economic consequences were necessarily extremely unfavourable. A typical case was that of Denmark, where the production of butter was greatly reduced during the war owing to the lack of imported fodder.

The idea of a "Great Economic Area", or "Living Space", presupposes the existence of "a hierarchy of States"¹ and subordinates the principle of nationality to the requirements of the dominant State, and it hardly offers a satisfactory basis for a permanent international order. The latter can develop only from the spontaneous collaboration of the individual countries, and this

¹ Professor Carl Schmitt makes a distinction between "Empires" and "States". Only the former, *i.e.*, *das Reich*, the German Empire, are to enjoy full sovereignty, thanks to their large population and the vast economic resources which provide them with the means to wage modern warfare.

in its turn supposes that all countries are in a position to decide their own fate, whilst at the same time being prepared to accept such limitations of their sovereignty as are demanded by their membership of the concert of Europe.

9

In recent years Fascist and National-Socialist propaganda has spread completely erroneous views concerning the nature of economic relations. As they appealed to the patriotic feelings which no decent citizen lacks they found an echo amongst many members of the general public who believed them blindly. Every citizen naturally regards the political independence of his country as a precious possession and no sacrifice should seem too great to him in order to preserve it. Moved by such ideals, noble men even sacrificed their lives in the struggle. Now, this propaganda argued, no country can be politically independent unless it is at the same time economically independent, i.e., unless within its own orbit it is in a position to provide the necessary foodstuffs for its population and the most important raw materials for its industries. This is how the myth of "autarchy" or "economic self-sufficiency", developed. A country like Italy, poor in natural resources, could hope to create its own "Living Space" only with the aid of conquered colonies and by forcing onerous agreements on smaller and weaker countries. Such victim countries would then be compelled to take the products of the dominant State and supply it with raw materials in return.

Did those Italians, who harboured the fond illusion of acquiring a "Living Space" ever ask themselves whether such a dream could be realized? Did they ever consider that economic policy above all cannot afford to indulge in idle dreams and that it must at all times resolutely look the naked facts in the face? Did it never occur to them that in order to attain the state of economic independence she so greatly desired, Italy would have to secure part of the coal deposits of South Wales, the iron ores of Lorraine, the copper deposits of the Congo, the plantations of Texas, the forests of Canada or Norway, the pastures of South Africa or Australia, together with the flocks of sheep which graze on them, and, finally, a part of the fertile soil of the Ukraine? Italy produces little or no coal, iron, cotton, wool, copper, timber and many other raw materials, and, in addition, she is dependent on the importation of large quantities of food. The creation of a "Great Mediterranean Economic Area", deficient in raw materials, cattle and other foodstuffs, would not have done a great deal to alleviate her economic difficulties.

The victory of the Axis Powers would therefore not have

enabled Italy to obtain economic independence ; on the contrary, it would have made her dependence still more marked, because instead of being able to buy her raw materials and foodstuffs where conditions were most favourable, and to offer her goods for sale on the markets which offered her the best terms, she would have been compelled to subordinate her economy to the economic order of the dominant State on the basis of a plan whose aim was to give Germany the economic and political control of all the countries of Europe. The latter would have been obliged to suit their production to the requirements of Germany just as Rumania, Bulgaria, Holland, Norway, etc., had to do during the war. The Germans would have insisted on playing the leading role even in the " Great Mediterranean Economic Area " if the Axis Powers had emerged victorious from the conflict.

Even apart from the impracticability of establishing national economic independence, because all countries, even the richest, are necessarily dependent on other countries, thanks to certain gaps in their production—even the United States, so rich in natural resources, has to import many important raw materials from abroad and, in addition, needs foreign markets in order to sell her own commodities—economic liberalism opposes the establishment of " autarchy " and all attempts to create " Great Economic Areas " for nobler reasons. Liberal doctrine is firmly convinced that a policy of " autarchy " or the creation of " Living Spaces " can only lead to constant conflicts between the peoples, and, in addition, it is unjust towards smaller States who find themselves, willy-nilly, part of the " Living Space " of bigger and more powerful States. On the other hand, the system of free trade which could, of course, be reintroduced only step by step, beginning with the gradual dismantling of tariff walls, quota systems, import and export prohibitions, preferential duties, price-control and exchange control, would provide powerful support to the political organization of peace which the nations are now striving to achieve.

To oppose the ideas connected with the " Living Space " concept does not mean to ignore the fact that in Italy, for instance, there is a painful discrepancy between the size of the population and her natural resources which raises grave social and economic problems. The fatal error of Fascism was to attempt to solve these problems by force instead of by peaceable means in negotiation with the Great Powers which control the world markets and the great trade routes. It is to be hoped that these powers will now show more understanding for the difficulties of Italy's demographic and economic situation.

In this respect the question of raw-material supplies, which has caused such grave anxiety in Italy in recent years, is particularly important. Nationalistic propaganda has never ceased to

insist that countries like Italy which are poor in natural resources have been most unfairly treated by the close-fisted policy of those countries which hold a monopoly of these raw materials. Individual governments and big monopolist undertakings have employed export levies, the division of markets, preferential treatment for some countries as against others, price increases, and so on. Even in the past these matters were the subject of repeated investigations and discussions at international conferences and many differences of opinion arose. However, the view gained ground that, all in all, the restrictions imposed by countries rich in raw materials were never a very serious hindrance to the acquisition of these raw materials by such other countries as needed them. Generally speaking, such restrictive measures were adopted in periods of depression to adapt production, which had expanded too much in the previous boom years, to decreased demand. Thus such restrictions could not truly be said to have caused an artificial shortage of raw materials.

We may assume that the problem of raw materials, which for some countries has been a very difficult one as part of the aftermath of war, will cease to be critical as soon as the policy of "autarchy" is abandoned and a reasonable amount of freedom restored to the international commodity, credit and exchange markets. It should also not be forgotten that the Atlantic Charter expressly guarantees all countries free access to the raw material resources of the world on a basis of equality.

CHAPTER XIII

THE GOLD STANDARD AND THE CLEARING SYSTEM

I

THE aversion to gold currency, which was a marked characteristic of Fascist and National-Socialist doctrine, is not a new phenomenon by any means. Pareto mentions¹ it and writes: "Plato surrendered to the prejudice which regards gold and money as the source of the gravest evils. He forbade citizens to have these evil metals in their houses and he allowed them to have only money which was valid in the interior but without value abroad."

Fascist and National-Socialist ideologies were fond of using "gold" and "blood" as an antithesis. The former was the symbol of selfishness, which dominated a world now regarded as outlived, an instrument of international plutocracy for the exploitation of poorer countries. "Blood" on the other hand, was a symbol of race, of national solidarity and national idealism. Gold was therefore placed under an interdict, and "Labour" was to take its place—and guarantee the stability of the currency. The currency could be backed, so the argument went, with a less material but more important thing than gold, namely, the labour-power of a whole working people, which represented a more solid foundation than any gold backing.

In discussions on gold currency one can often find even educated people ascribing views to economists which the latter would not even dream of uttering. Economists are supposed to say that gold is "The centre of the economic system," denying that in reality labour is the centre. Such people show themselves ignorant of the fact that it was precisely the economists of the classic school who dethroned "gold" and severely criticized the views of those who upheld the "Mercantile Theory". Incidentally, their criticism even overshot the mark occasionally. For them gold had much the same function as oil in machinery, namely, in the graphic phrase of John Stuart Mill, "as a means of diminishing friction". Mill also wrote: "There cannot, in short, be intrinsically a more insignificant thing in the economy of society than money. . . . It is a machine for doing quickly and commodiously what would be

¹ *Systèmes Socialistes*, vol. II, p. 10.

done, though less quickly, and commodiously, without it.”¹ Still, it is a highly important means for the normal operations of production and exchange.

I should also like to recall that it was Adam Smith, the “father of liberal economic doctrine”, who regarded “Labour” as the central value of every system of economy and who, at the beginning of his famous work, pronounced the following principle: “The annual labour of every nation is the fund which originally supplies it with all the necessaries and conveniences of life.”

Finally, the classic “quantity theory of money” represents a heavy blow at the prestige of gold, because with the contention that, other things being equal, the value of money is in inverse proportion to the quantity available, the fact is implicitly expressed that it is useless for any country to accumulate gold. The result of an increased quantity of gold is simply a proportionate rise in the prices of all other commodities when the gold comes into circulation.

To-day we often hear it said that recent experience has shown that despite all economic theories a precious metal backing is not necessary for currency stability. Such people forget that Ricardo wrote one hundred and twenty years ago: “In order to guarantee the value of paper money it is not at all necessary that it should be convertible into coin money; it is sufficient to regulate its quantity.”² In an example which has become famous, Ricardo showed that the value of money would remain unchanged even if every gold piece in circulation lost its gold content and was replaced by a token, provided that a certain number of gold pieces were in circulation in a closed market under otherwise constant other conditions, and that the quantity of money remained the same, i.e., provided that the number of tokens equalled the number of gold pieces and the former retained the same face value.

Thus according to Ricardo quantitative limitation is the fundamental condition for the stability of a paper currency. It would be an illusion to suppose that this stability could be guaranteed purely and simply by the volume of labour performance and by the other resources a country has at its command. Even a country with a large population and rich in natural resources will inevitably find that an increase in the currency volume not in accordance with the volume of production necessarily causes depreciation. Those unhappy speculators who reckoned with a rise in the rate of the German mark after 1918 fell victim to the same illusion. They glued their eyes on the great natural resources of the country, on

¹ John Stuart Mill: *Principles of Political Economy*, vol. II, p. 9, Longmans, Green, London, 1886.

² Ricardo: *On the Principles of Political Economy and Taxation*, p. 342, Gonnar, London, 1932.

the industriousness of its population and on the prospects of economic reconstruction (which was, in fact, carried out), and they concluded from all this that the value of the German mark must rise again. But they failed to understand the relationship between the value of money and its quantity. The constant issue of new paper marks reduced the value of German money practically to nil.

Some people believe that the State fixes the value of its own money. But only on certain conditions : only in a closed market and provided that the quantity of money and the volume of credit are kept under constant control. If the market is open to world-trade influences then the question of currency stability is much more complicated.

2

In dealing with the criticism of a gold currency I will take an article written by Professor Hohlfeldt,¹ not because I agree with his views, but because his article sums up clearly and conveniently everything which has been written or said against the gold standard. The most important points of the indictment are as follows :

(1) Gold is not a stable measure of value. The instability of gold has caused more than one disturbance in the development of the world economic system ; the quantity of gold available for currency purposes in the past has, in fact, suffered fluctuations.

(a) Thanks to the discovery of new gold deposits or to increases in gold production by countries which had not previously been important gold producers ;

(b) Thanks to technical improvements which encouraged the gold production by changing the relation between costs and yield in the gold-mining industries ;

(c) Thanks to material changes in the use of gold for industrial purposes and to the fact that gold hoarded in large quantities by private persons was released suddenly and allowed to flow back into circulation in great streams.

The facts enumerated by Professor Hohlfeldt can certainly not be treated lightly. Gold is not, in fact, "an ideal money whose value remains constant. But did the paper money created by various governments in the past prove any more stable than gold ? Price fluctuations due to the instability of gold were really unimportant compared with those sudden price rises which seriously

¹ Professor Hohlfeldt : " Sterbende Goldwahrung " published in *Weltwirtschaftlichen Archiv*, November 1940. Readers who desire to make themselves acquainted with all the questions relating to gold should consult L. Federici's *La moneta e l'oro*, Milan, 1942.

damaged the whole economic and social system as a result of fluctuations in the value of paper money. Germany could a tale unfold. . . .

(2) Gold currencies can no longer fulfil their purpose in the world to-day owing to the unequal distribution of the world's gold amongst the various countries. At the moment the United States holds the greater part of the world's gold. Thus the value of the fabulous yellow metal depends on the policy of the American Treasury and the Federal Reserve Board.

This objection is valid enough, and yet the present involved situation is not the result of the gold standard. One or two preliminary conditions must be fulfilled before the latter can operate properly, namely, a certain freedom in international trade; flexibility of commodity prices and wages; and the absence of sudden and considerable shifts of capital from country to country, described by the well-known Italian economist, Fanno,¹ in a book which has since become classic, as "abnormal", because they are political in origin, the result of panics arising first in one country and then in another. But, above all, it is the task of governments and central banking institutions to adopt a policy calculated to facilitate the operations of the gold standard. Instead of that a contrary policy has been too often pursued. The present maldistribution of gold in the world is the most eloquent symptom of the profound economic disturbance from which the world is suffering.

The gold standard is one of the most wonderful economic instruments man has ever devised. With its assistance it is possible to eliminate disturbing phenomena rapidly and almost automatically. The description of its mechanism given by economic theorists has been fully confirmed by statistical fact. But just as a bridge is reliable only so long as its capacity is not overtaxed, so the gold standard can exercise its equalizing influences only when the burden placed upon it is not excessive or too sudden (cf. Chapter III, 16). At least, when disturbances are violent, the elasticity of the whole system, i.e., its ability to react quickly, should increase proportionately. Instead of that the contrary was the case: whilst on the one hand the disturbances which arose immediately after the restoration of the gold standard (after the first world war) were unusually violent, the various methods adopted by individual governments actually diminished the possibility of an appropriate reaction within the system.

(3) The value of gold depends on forces over which certain governments are unable to exercise any influence. Thus such governments would have to see their economic systems governed

¹ Fanno : *I trasferimenti anormali dei capitali e le crisi*, Einaudi, Turin, 1935.

by forces operating abroad and subjected to influences which might not be at all in accordance with their policy. A government wishing to pursue an independent economic policy would adopt currency measures designed to keep the level of employment at the height best suited to the maximum utilization of the productive forces of the country. One argument in particular is used against any return to the gold standard : the irreconcilability of a gold currency with an autonomous currency policy and any " economic recovery " policy.

Now the gold standard is an international system and once countries adopt it and wish to see it function effectively they certainly create conditions of interdependence amongst themselves. For instance, if one such country proposed nevertheless to pursue a policy of cheaper credit and therefore reduced the rate of interest below the level determined by the international situation then the subsequent disequilibrium in its balance of trade and the outflow of gold would immediately compel it either to abandon the gold standard or to step back into line again and do what the other gold-standard countries were doing. But when Professor Hohlfeldt adopts the view that a government can make itself independent of foreign influences by creating a paper currency to which it fixes a certain value, he overlooks the fact that full currency independence can be attained only under conditions of a completely closed market. If foreign trade continues, even to a limited degree, then there are definite limits to currency independence irrespective of its form : whether gold or paper. It is significant that, from time to time, Germany had to abandon the principle of monetary independence in her trading relations with many European countries even after 1933, by accepting various coefficients of depreciation in respect of the mark. Whoever pleads for a one-hundred-per-cent currency independence and in the same breath advocates an extension of foreign trade is involving himself in the grossest of contradictions.

In addition it is doubtful whether an " active " policy of economic planning can be reconciled with currency stability, though the planners declare that it must be maintained at all costs. The policy of credit extension, a low rate of interest and the carrying out of big public works such as was pursued in Germany after 1933 in order to stimulate economic recovery, caused an increase in domestic prices with the result that a disparity developed between them and world-market prices, and, in consequence, both the domestic and the foreign value of the mark suffered.

(4) Hohlfeldt declares that the collapse of the gold standard was not due to the absence of the essential conditions on which the system was built, but was due rather to inherent weaknesses and contradictions in the system itself. Let us assume, he says, that

prices are elastic enough to permit the gold-standard mechanism to operate effectively ; the question then arises whether the system can function at all without creating grave trouble, since the drop in domestic prices consequent on the outflow of gold from the country whose balance of payments would once again be in a state of equilibrium would involve considerable sacrifices, quite apart from the fact that the expected result, namely, an increase in commodity demand abroad, would remain highly problematical. The answer to this is simple : certainly the country must shoulder some burdens, but they are not due to the gold standard but to the fact that the country's foreign obligations have increased, either because its demand for foreign goods has risen or because it has to pay interest, reparations, etc. Thus the country must, willy-nilly, offer its commodities at a lower price if it wishes to increase its export trade and so be in a position to fulfil its obligations. In other words, the exchange relation between inland and foreign goods must change to the detriment of the country in question. However, in view of the assumptions which have been made this would happen no matter what the currency system, as I shall have an opportunity of showing in detail later on. Further, we must not forget that in a highly developed industrial country with a very varied production engaged in competition with other industrial countries, both the demand for foreign goods and the demand of foreign buyers, possess a high degree of elasticity (as Marshall shows)—provided sufficient trading freedom is guaranteed and there are no currency manipulations—so that within the framework of a gold-standard system all price fluctuations would normally remain within narrow limits. The greater the number of countries adhering to the gold-standard system the less violent would be the price fluctuations caused by changes in international commodity demand or by financial transactions. Let us assume that Country A has a greater demand for foreign goods than before. It will then have to offer its own goods at lower prices. If it maintains trading relations only with country B then it will probably have to accept a very considerably lower price, but if countries C, D, etc., also enter the market then we may assume that the demand in countries C, D, etc., for the goods of country A will be stimulated by the fall of prices so that the fall will come to an end.¹

The situation is different when " abnormal " capital movements are involved. Such movements did much to undermine the gold-standard system. They also brought about the following unusual situation : a country's currency position, the rate of discount,

¹ For various questions relating to the effect of the gold standard, cf. the important observations of Jannaccone : " Il problema dell'oro ", in *Atti della Società italiana per il progresso delle scienze*, October 1932 meeting.

price levels and their corresponding effect on the conditions of production became dependent not on commodity demand expressing itself on the world market, but on totally unregulated gold movements caused by political and psychological phenomena abroad. However, this is not enough to justify the total condemnation of the gold standard. Great Britain found an ingenious solution with the establishment of the "Exchange Equalization Account" (cf. Chapter V, 8).¹

(5) Hohlfeldt professes to see an "obvious contradiction" in the gold-standard system in the fact that the rate of discount comes into operation immediately gold begins to flow out of the country—but before this outflow of gold has begun to affect domestic prices. The rate of discount rises and stops the outflow of gold at once by simultaneously attracting foreign capital so that the balance of payments is righted. Here is a typical example: when the Dawes Plan came into operation in Germany in 1924 the high rate of interest attracted a large amount of foreign capital so that the mechanism of the gold-standard system which the reparations payments should have started up did not work. Professor Hohlfeldt characterizes the alleged contradiction with the phrase, "the rate of interest as the opponent of prices."

It is not difficult to show that, far from being a serious criticism of the gold-standard system, Hohlfeldt's observations are the best proof of its adaptability, elasticity and sensitiveness. Here is an example: in consequence of a bad harvest country A urgently requires foreign grain and therefore it increases its imports. The country must make up its mind to the loss of a good part of its gold and allow its own market prices to fall considerably in order to obtain a large quantity of exports in a short space of time. But perhaps all this would have serious reactions. What happens instead? The rate of interest rises in A. Other countries hurry to move their capital there. The price and income situation does not change considerably in A. All preliminary difficulties are overcome and later A will gradually pay off its debts. Thanks to the fact that A belongs to a community of countries based on the gold standard the blows to be borne by it as a result of the economic disturbance are lightened.

Certainly, it can happen, too, that A suffers difficulties and disadvantages owing to this international interdependence. If, for instance, the price of gold falls abroad then A must make up its mind to a fall in price levels which, if it is large and sudden, can

¹ A. Cabiati: *Il sistema aureo. Il fondo di conguaglio dei cambi*, Turin, Einaudi, 1940. It might be recalled in this connection that according to the Articles of Agreement of the International Monetary Fund member countries may exercise such controls as are necessary to regulate international capital movements provided these controls do not restrict payments for current transactions.

have grave consequences, as was the case for a number of countries in 1930. A might, of course, consider whether to depreciate its currency in order to maintain price levels, as the Egyptian Government did when it let its currency share the fate of the British pound in 1931, when the latter left the gold standard. In this way the fall in the price of Egyptian cotton (expressed in Egyptian currency) was stopped to the advantage of the growers for whom the deflation of prices represented a serious danger because they would have found it difficult to reduce the costs of production to the same extent. But merely to decide against a policy of deflation does not necessarily mean an abandonment of the gold standard. In *exceptional circumstances* it is enough to alter gold parities, as Italy and other countries did in 1936 when they "adjusted" their currencies to each other.

(6) According to Professor Hohlfeldt the independence of gold movements from those of real capital (commodities) is a further eccentricity and contradiction of the gold standard because it can open the door wide to abnormal movements of money capital from country to country, which, as experience shows, involve serious economic disturbances. This objection is valid enough, too, but as I have already pointed out in connection with the "Exchange Equalization Account", corrective measures can be devised without giving up the whole system on that account. Professor Hohlfeldt attaches insufficient importance to the fact that this separation of money from goods is precisely the factor which lends international trade an unusual degree of elasticity. An example: country A needs a loan which only country B is in a position to grant because it possesses cheap capital in abundance. At the same time A cannot obtain the goods in B which country C could supply. C, however, is not in a position to supply goods on credit. A therefore borrows the necessary money from B in order to buy the required goods in C. In the past the advantages of such a system have greatly outweighed the disadvantages.

At the same time it should not be forgotten that a country often raises a loan not to purchase foreign goods but to spend on its own market where there is a shortage of capital and money is thus dear, creating a hindrance for the normal course of production. Such transactions would be quite impossible under a system which established a direct relation between money and commodities.

(7) Finally, Professor Hohlfeldt finds a further contradiction of the gold standard in the fact that some banking institutions keep a larger gold reserve available than the law provides for, in order to avoid having to restrict money circulation too suddenly and too severely in the event of an outflow of gold. The consequences are: a battle for gold and measures to retain gold which violate the spirit of the system. This objection seems trivial to me because a return to the gold standard does not mean that the former rigid

rules for specie backing need be adopted again; in fact, the development of the gold-standard system in recent years has shown in particular that more elastic methods are preferable. The system adopted at Bretton Woods is a gold-standard system of great elasticity.

3

In a gold-currency country domestic price levels change according to the international demand for commodities and as a result of financial transactions (loans, the payment of interest, reparations, etc. (cf. Chapter III, 16). At the same time, rates of exchange with other gold-currency countries remain unchanged—or, more accurately, rates of exchange alter within the narrow margin represented by the “gold points”. With a paper currency—where gold plays no role either on the domestic money market or in international exchange rates—domestic price-levels expressed in domestic currency will depend entirely on the country’s currency and finance policy. One may assume, at least theoretically, that on the whole it will succeed in keeping domestic price levels stable (though this would not, of course, rule out minor fluctuations in the prices of individual commodities) thanks to a strict control of the amount of money in circulation and of the volume of credit.

But if countries with paper currencies trade with each other, then their governments are not in a position to determine arbitrarily the value of their money in foreign currency if they intend to keep their trade balances in a state of equilibrium, or, more generally, their payment balances. For each country, the “foreign” value of its paper money is determined by (a) the relation between its domestic price-levels and those of other countries, each price-level being expressed in its own currency; in other words, foreign-exchange rates depend, other things being equal, on the “purchasing-power parity”, to use an expression of Cassels, of the currencies; and (b) the international commodity demand and the state of international financial transactions.¹ For instance, if price-levels in country A expressed in its own currency rise, then, other things being equal, naturally the value of A’s currency expressed in foreign currency will sink proportionately. If individual price-levels remain the same, and A increases its demand for foreign

¹ In their treatment of the foreign-exchange rates of paper-money currencies, some economists take account of factor (a) only and neglect factor (b). In order to demonstrate the idea expressed in our text more clearly on the basis of an example let us suppose that country A exchanges a quantity of M “commodity bales” against N “bales” of country B (whereby the term “bales” is used in Marshall’s sense), P and Q are the unit price of a “bale” expressed in the domestic currency in question. P and Q are regarded as given magnitudes, as they depend on the currency policy of the individual countries. R is the price of the money of B expressed in terms of A’s money. In a state of equilibrium the value of the

goods (starting from a position of equilibrium), then the value of A's currency will depreciate in relation to the foreign goods. The difference between a paper-money currency and a gold currency is clear: with the latter, exchange rates remain stable whilst domestic prices change, whereas with the former, exchange rates change whilst general domestic price-levels remain the same or almost the same (which does not rule out the possibility of minor fluctuations in the prices of exported or imported goods).¹

The mechanism which brings about a new state of equilibrium is different in a paper-currency system, compared with the gold-standard system, but the result is the same. In any case, if A desires to increase its imports of foreign goods it will have to export more. Thus A will have to reduce the prices of its export goods. Under a gold-standard system A's exports will be encouraged by a fall in gold prices, whilst in a paper-money system the same result is achieved by a corresponding depreciation of A's currency, which is obviously synonymous with a fall in the prices of A's goods expressed in foreign currency. On the other hand, the depreciation of A's currency increases the prices of foreign goods as far as A is concerned so that A's import trade suffers. Within the framework of a paper-money system, just as under a gold currency, an increase in the demand for foreign goods in A causes a change in the "terms of trade" between domestic goods and foreign goods to the detriment of A.

Certainly, those in charge of the currency policy of A can, at least theoretically, prevent the depreciation of A's currency when it arises from a change in international commodity demand to A's detriment (or as the result of finance transactions such as, for

exported goods for each country must be equal to the value of the imported goods (irrespective of non-commercial transactions). Thus for country A we have $MP=NQR$. Thus $R=\frac{P}{Q}\cdot\frac{M}{N}$.

The first factor is the relation between the two price-levels. The second factor represents the "terms of trade" between the goods of A and B. If they change to the detriment of A, the ratio $\frac{P}{Q}$ remaining constant, thus if the quotient $\frac{M}{N}$ increases, because the demand for foreign goods increases in A, then R also increases, i.e., the money of A depreciates in value and the new rate of exchange will be maintained as long as its cause persists. For a more detailed discussion of this point see my article, "The Purchasing-Power Parity Doctrine", published in *Egypte contemporaine*, Cairo, 1934.

¹ As Jannaccone rightly observes, the changes in the foreign value of paper money, which result in changes in the prices of all imported goods, cause corresponding changes in the costs and prices of domestic production. However, on the whole, we can assume with Taussig that general domestic price-levels remain stable provided that the money income of the population remains unchanged. Cf. Taussig: *International Trade*, p. 350, 1937.

instance, an obligation on the part of A to pay interest on past loans, or to pay reparations). A can pursue a policy of deflation, i.e., depress its price-levels until the former exchange parity is reached again, but with this the principle of domestic price stability is sacrificed. From these considerations it clearly emerges that there are definite limits to currency independence even in the case of a paper currency whose value is fixed by the State. Either general domestic price-levels are kept stable, in which case exchange rates will have to be allowed to change (if the balance of payments is to be maintained), or stable exchange rates are preserved, in which case general price-levels must change, because stable exchange rates and stable prices are logically irreconcilable postulates, except perhaps within short periods of time during which those in charge of currency policy in A, provided they are in possession of the necessary reserves of foreign exchange, are able to neutralize the effects of temporary changes in international commodity demand, for instance, when the latter are of a seasonal nature. But even very considerable reserves would be inadequate to deal with more persistent changes demanding corresponding equalizations of foreign exchange rates or domestic prices.

4

The gold standard is attacked because the countries adopting it are subjected constantly to inflation and deflation crises as a result of the international gold movements necessary to equalize their balances of payments. There is no doubt that under given conditions these changes in domestic price-levels cause certain inconveniences¹ when, in exceptional circumstances, they manifest themselves too violently. It can be of advantage to keep domestic price-levels relatively stable, but then exchange rates must change. Without a mechanism operating to equalize price-levels in the individual countries with each other no equalization of the individual balances of payments is possible.

Countries which simultaneously adopted the principle of domestic price stability and the principle of foreign-exchange rate stability were finally compelled to adopt measures which, fundamentally speaking, admitted the impossibility of maintaining both principles at once. The example of Germany is again typical. In order to neutralize the disparity between German prices and those of other countries which arose after 1933 (which was also a result of currency depreciation elsewhere), incidentally a disparity

¹ In order to avoid these inconveniences the Bretton Woods agreement provides that in special circumstances and within definite limits the countries adhering to it shall have the right to change the original currency parity. See Appendix I to the present chapter.

which would have resulted in a corresponding depreciation of the mark in a free foreign-exchange market, the German Government had to devise a complicated system of bonuses for German exporters in order to make it possible for them to sell their goods abroad at lower prices than those obtaining on the domestic market. We do not propose to investigate the individual measures adopted in any detail here, for instance, the right given to exporters to purchase German private loan stock abroad at low prices and sell it in Germany at higher prices; the "scrip" system; the possibility offered to importers to buy at very low rates a particular sort of mark credited to foreigners in German blocked accounts; and, finally, premiums paid directly to exporters. On the other hand, importers, who could buy abroad at relatively low prices, had to pay the difference between the lower foreign price and the higher German price of one and the same commodity into a special account, which amounted in practice to an increase in import prices for the German consumer. In addition, Germany had to suffer a considerable premium on foreign exchange in her trading relations with a number of countries to which she was anxious to export her goods. The result of all these measures was a reduction in export prices and an increase in import prices. Thus the practical result was the same as would have been obtained through the automatic mechanism of the gold standard, but without the assistance of cumbrous control systems, and the payment of premiums and subsidies.

A still more striking proof of the existence of economic inevitability—which is in reality a logical necessity because economic laws are merely the expression of certain logical relations—is the rise of so-called "compensation premiums", when the authorities permit the development of such private arrangements. When imports at officially fixed prices and exchange rates begin to overtake exports then a merchant anxious to import but unable to find the corresponding counterpart agrees to pay a premium to an exporting firm, which is then in a position to offer its goods at more favourable prices abroad, thus creating a new demand on the foreign market. Naturally, the importer will sell his imports on the home market at a price which includes the premium he has had to pay. This system, which has so often been attacked by commercial experts, appears as a quite normal phenomenon (apart from possible abuses) to economists. It is an imperfect instrument adopted by the economic organism to restore the balance between imports and exports whenever an automatically operating currency system no longer exists. When an importer buying dollars has to pay a premium of, for instance, 20 per cent, over and above the official rate of exchange¹ then that means nothing more or less

¹ This was the case in Italy before 1936.

than that the currency of his country is depreciated to the extent of the premium and that the official rate of exchange must be regarded as purely nominal. *Naturam expelles furca, tamen usque recurret.* If economic laws are ejected by the door they will return through the window. The State may declare that it is not prepared to recognize the automatically operating laws of the market, but very often it acts precisely as these laws demand.

The rise of this system of "compensation premiums" in Italy prior to 1936 proves that the official value of the lira was too high; it was not in accordance with the relation between Italy's domestic prices and world-market levels. With the official "equalization" of the lira in October 1936 the authorities sought to re-establish a state of equilibrium. As a consequence the system of "compensation premiums" came to a logical end.

5

The clearing system was the upshot of the grave disturbances in international exchange rates which accompanied the great economic crisis. It was generally alleged that the spread of this system in Europe was chiefly due to Germany, but Germany replied that her commercial policy was nothing but an inevitable reaction to the measures taken by other countries, and in particular to those of a number of countries with which Germany's trade balance was active. But, whatever the truth, the simple fact that Germany adopted and developed the clearing system could not but influence the trading policy of other countries in view of Germany's powerful European trade position. In addition, by a very ingenious manipulation of the system she turned it into an important instrument for the attainment of her political aims. In 1938 approximately four-fifths of her foreign trade (to be precise, 77.6 per cent of her total imports and 84 per cent of her total exports) took place with countries with which she had clearing arrangements or a "payments agreement", which in effect was much the same.

When a bilateral clearing arrangement exists between two countries A and B then all direct payments between the citizens of the two countries are prohibited, i.e., the official clearing process is obligatory. Both the importers of A who buy in B, and the importers of B who buy in A, pay the value of their imports into their country's compensation account in their own currency. Exporters in each country are then paid out of the accounts thus created. I do not propose to discuss the technical details of the process, as here we are primarily interested in its economic side. The aim of the process is to secure an equalization of imports and exports, and in a rigid clearing system the payment of a possible difference in gold or foreign exchange is out of the question (though very often clearing

agreements do provide for payments which do not derive from commodity transactions).

The disadvantages of bilateral clearing are well known. During the second world war the Vice-President of the Reichsbank stressed them repeatedly, pointing out, amongst other things, that the clearing system cut the ground from under the banks because it tried to turn all commercial operations into purely cash transactions, so that all the advantages normally accruing to international trade by the mediation of the banks were lost. The view of a German writer, Kroymann, on the clearing system strikes me as particularly interesting. Far from regarding it as a more highly developed form of international trading he describes it simply as a device born of the needs of the moment. Thus it would be wrong to believe that with suitable improvements the clearing system could be developed into a new and better system to replace the traditional system of international payments.¹

The system of bilateral clearing means that the trade balance (or quite generally the balance of payments) of a country which subordinates all its commercial relations with other countries to this system, must express itself not only in the equalization of total imports with total exports, but also in a series of particular relations, i.e., the import and export of each individual country with which that country maintains trading relations must balance. In brief, the clearing system should result in a bilateral equalization of trade balances as between various countries. Is this logically possible if the other conditions of international economic equilibrium are to be fulfilled?

In this inquiry I will follow the lines laid down by Cournot in the memorable chapter of his book *Recherches sur les principes mathématiques de la théorie des richesses* (cf. Chapter II, 3) on exchange rates.²

Let m be the number of countries trading with each other, and n be the number of goods which are imported and exported (to simplify the problem purely financial transactions are ignored). It is assumed that each country has its own paper money and a fixed "internal value" in accordance with the price-level in the particular country concerned, but that no definite rate of exchange has been fixed with other currencies. We thus assume the existence of a certain general level of prices in each country dependent in each case on the currency policy of that country—however, the authorities allow the prices of imported or exported goods to fluctuate according to market conditions within the framework o

¹ Kroymann: *Clearing und Kompensation im Aussenhandel*, p. 10, 2nd edition, Hamburg, 1935.

² I was also greatly assisted by the work of Yntema: *Mathematical Re-Formulation of the Theory of International Trade*, Chicago, 1932.

general price-levels. In equilibrium the value of the total imports of each country must be equal to the value of the total exports (both values expressed in the currency of the particular country). Now let us express this state of affairs in an equation :

$$X_{i,r} \quad (i=1, 2, 3\dots m) ; \quad (r=1, 2, 3\dots n)$$

represents the quantity of any imported or exported good (the first suffix indicates the country, the second the commodity. x will be positive when goods are exported, and negative when goods are imported).

$$P_{i,r} \quad (i=1, 2, 3\dots m) ; \quad (r=1, 2, 3\dots n)$$

represents the price, where every price appears in the currency of the country concerned. Thus we can now construct the following system of m equations :

$$\begin{array}{cccccccccccc} x_{1,1} & P_{1,1} & + & x_{1,2} & P_{1,2} & + & x_{1,3} & P_{1,3} & + & \dots & + & x_{1,n} & P_{1,n} & = & 0 \\ x_{2,1} & P_{2,1} & + & x_{2,2} & P_{2,2} & + & x_{2,3} & P_{2,3} & + & \dots & + & x_{2,n} & P_{2,n} & = & 0 \\ \cdot & \cdot & & \cdot & \cdot & & \cdot & \cdot & & \cdot & & \cdot & \cdot & & \cdot \\ \cdot & \cdot & & \cdot & \cdot & & \cdot & \cdot & & \cdot & & \cdot & \cdot & & \cdot \\ \cdot & \cdot & & \cdot & \cdot & & \cdot & \cdot & & \cdot & & \cdot & \cdot & & \cdot \\ x_{m,1} & P_{m,1} & + & x_{m,2} & P_{m,2} & + & x_{m,3} & P_{m,3} & + & \dots & + & x_{m,n} & P_{m,n} & = & 0 \end{array}$$

Now let us find the "unknowns" of the problem on the assumption that the markets are free from any form of governmental interference and that they operate under a system of free competition. For each country n quantities of goods at n prices must be fixed, so that for m countries there will be $2mn$ unknowns. The other unknowns are the rates of exchange. As the currency of each country may be exchanged against $m-1$ currencies of the $m-1$ other countries, it would seem as though the number of exchange rates were $\frac{m(m-1)}{2}$. However, it is easy to see—as Cournot shows

—that not all these rates of exchange are independent, because if the $m-1$ rates of any particular country are given then all the other rates can easily be discovered on the assumption of a general equilibrium of exchange rates. If, for example, one monetary unit of country A exchanges against ten monetary units of country B, or five of country C, we conclude that two units of B are equal to one of C. Thus we have only $m-1$ exchange rates, and the total of unknowns is therefore $2mn+m-1$.

The conditions under which equilibrium will be attained in international trade are as follows :

(a) Above all, m conditions mentioned above, according to which the value of imports must be equal to the value of exports for each country ;

(b) In addition, for each commodity there must be an equality between the total export of the export countries and the total import of the import countries, i.e., in the system of equations given above the sum of all x in each column must equal zero. With this we have n conditions.

(c) If $C_{b>a}$ is the price of country 1's money expressed in the currency of country 2, then in an equilibrium $P_{2>1} = P_{1>1} C_{b>a}$. Similarly (if $C_{a>a}$ represents the price of money of country 1 expressed in the currency of country 3) : $P_{3>1} = P_{1>1} C_{a>a}$, and so on. From these equations follows :

$$P_{1>1} = P_{2>1} \frac{1}{C_{b>a}} ; P_{3>1} = P_{2>1} \frac{C_{a>a}}{C_{b>a}} \text{ etc.}$$

This simply means that in equilibrium the price of any product expressed in any currency must be the same in all countries (apart from transport costs, customs duties, etc.). Thus we have $m-1$ conditions for each commodity, making $n(m-1)$ conditions for n commodities.

(d) Every $X_{i>r}$ quantity of commodities which is imported or exported can be considered as a function of the price $P_{i>r}$ in the country concerned. Instead of $X_{i>r}$ we could therefore put a function $f(P_{i>r})$ which is the equation of supply in the case of commodity export and the equation of demand in the case of commodity import.¹ If equilibrium is to obtain then the imported and exported quantities of commodities must satisfy the equation $X_{i>r} = f(P_{i>r})$. If, for example, the demand curve for a commodity which is imported indicates that a price of 10 is in accordance with a demand of 1000 then there can be no equilibrium if importers are not permitted to buy more than 600. The conditions of this group give nm equations.

All in all we have then $2mn+m$ equations, but it should be noted that the conditions a , b and c are not all independent as one may be deduced from the other. If, for example, we have before us the trade balances of all countries except one, and all of them are balanced, then, in view of conditions b and c , we may conclude that the missing balance is also balanced.² Thus the number of conditions is $2mn+m-1$. The number of previously mentioned conditions is thus equal to the number of unknowns and the problem is determinate, i.e., all the conditions can be simultaneously satisfied.

However, where bilateral clearing is concerned the condition of a bilateral equilibrium of the trade balances is added. Thus in group a we have no longer m but $\frac{m(m-1)}{2}$ conditions. The number

¹ Cf. in this respect one or two observations made by Yntema, *op. cit.*, p. 9.

² This observation also comes from Cournot.

of conditions is now greater than the number of unknowns so that not all the conditions can be simultaneously satisfied.

In practice governments strive to obtain a bilateral equalization of trade balances by various restrictions on trade. In this case some of the above-mentioned conditions remain unsatisfied. In short, bilateral clearing necessarily causes a disturbance of the equilibrium, i.e., under such a system it is logically impossible to maintain an international economic equilibrium. (See Appendix II.)

6

From what we have just discussed it is obvious that economists like Hohlfeldt are over-optimistic when they believe that "the trade balances of the two countries must in the last resort attain an equilibrium because in bilateral trading each partner strives only to buy what he is in a position to sell." This is a view which, incidentally, is not shared by influential circles, which, on the contrary, have repeatedly pointed to the difficult problem of "equalizing accounts", because in bilateral clearing "clearing surpluses" arise and form an obstacle to the rapid development of international trade. A report of the Institute for Business Research in Berlin declared: "Previous experience has shown that a one-hundred-per-cent operation of a system of bilateral payments is impossible."

In order to prevent the formation of these "surpluses" or "residues", i.e., the difference between imports and exports, the governments concerned are compelled to intervene again. Tedious and difficult negotiations then take place between their commercial representatives. Prices, quotas, rates of exchange and so on are altered. More or less serious losses have to be accepted in order to render credit "liquid" again. Commodities are imported which are not urgently required, or which could have been obtained under more favourable conditions elsewhere. And in the meantime exporters have to wait a long time before they get their money. Economists regard all these arduous negotiations as a hopeless attempt to solve a problem which *involves too many conditions by comparison with its unknowns*. Attempts to equalize the "clearing residues" often lead to a reduction of the total volume of transactions, because every country which finds itself with a passive balance of trade always strives to remedy the situation by cutting down its imports. But in this way the equations of demand for foreign goods are no longer satisfied so that the reduction of imports requires a series of internal control measures in respect of the distribution of commodities which are imported in smaller quantities than the demand for them.

As experience has shown the impossibility of eliminating "clearing residues" in a system of bilateral compensation the governments concerned have often had to resort to payments in "free foreign-exchange" even in trading relations with countries with which they have a clearing agreement. Germany was in the happy situation of possessing a certain amount of "free foreign-exchange" as her balance of trade with those countries (Great Britain, France, Switzerland and Holland) which had not introduced exchange control was active. The necessity of maintaining a limited "three-cornered trade" caused Germany to reserve the right in her clearing agreements to do as she liked with a certain part of her active balance ("Free Reichsbank balance").¹ The free balance which had formed in one country could be used there for payments to third parties from whom Germany had imported goods. This represents an interesting exception to the normal operation of bilateral trading which arose under the pressure of economic necessity.

The German Institute for Business Research also pointed out that the clearing system created grave difficulties whenever a country was for some reason or the other unexpectedly called upon to import more than the normal quantity of commodities. Such a sudden requirement threatens the whole structure of the clearing system which in its essence presupposes stability and continuity in trading relations and strives to regulate the volume of imports in each country according to the volume of its exports. In such an exceptional case there is nothing else to be done but to pay for the unusual quantity of imports in "free foreign-exchange"—unless the importing country is in a position to obtain a loan. These observations of the German Institute for Business Research, whose objectivity and reliability were generally recognized, only confirm a repeatedly observed fact, namely, that a controlled sector of economic life manages to exist somehow or other only in so far as there are other free sectors still in existence.

7

One of the most illuminating phenomena resulting from all attempts to obtain a bilateral equalization of trading balances is the existence of varying rates of exchange for one and the same currency. This problem is dealt with in Appendix II.

The theoretical conclusions reached in Appendix II do not lack confirmation in practice. A characteristic example was offered

¹ In a number of clearing agreements signed with those countries with which Germany had an active trade balance, she succeeded in obtaining agreement that the previous relationship between imports and exports should be maintained even after the conclusion of the compensation agreement.

by the disagio of the mark in Germany's trade with the countries of South-East Europe. In view of the big purchases of goods by Germany in these countries considerable balances accumulated to their credit in Berlin. In order to give exports from Germany a fillip and so eliminate "clearing residues" the Central Banks of the countries concerned assigned the mark accounts in Berlin at a rate of exchange lower than the official rate. But the interesting fact was that the difference between the rate of this so-called "clearing mark" and the official mark rate differed considerably in various countries. In 1939 the rate of the "clearing mark" in Yugoslavia was 14.8 dinar, whilst the rate of the official mark was 17.82 dinar. Now as the free dollar rate was higher than the official dollar rate (a dollar cost 55 dinars in the free foreign-exchange market, whilst the official rate was only 45 dinar) the mark parity was 22 dinar reckoned at the free dollar rate, which meant that the clearing mark was 32.4 per cent cheaper. On the basis of the free foreign-exchange market there was a mark depreciation of 22.8 per cent in Hungary in December 1940. In Rumania the depreciation was even greater, being 42 per cent, whilst in Greece and Bulgaria it was 23 and 20 per cent respectively. At the same time the mark depreciation in Germany's trade with Spain, Portugal and Italy was 15.6, 3.4 and 3.65 per cent respectively. These figures are a proof of the impossibility of maintaining a uniform rate of exchange within the framework of compensation trade. After an investigation of the disagio rates of the mark, Dr. Sarow came to the conclusion that "the 'clearing mark' had a special rate of exchange in almost every country."¹

Another interesting phenomenon caused by the variety of exchange rates was that the system of compensatory trading relations was often applied not only to the total complex of the trading relations of one country with another, but also to the various individual commodities, for instance, the condition was made that the value of a certain commodity export should be equal to the value of the imported quantity of raw materials.² With this the number of conditions to which the problem of international trading was subject was increased: if they were to be satisfied then the exchange rates of a country's currency must vary according to the particular commodity in question. With this the variety of exchange rates is increased. This is also what actually happened. For instance, in Italy there was a so-called "cotton rate of exchange" and in a number of Balkan countries the disagio of the mark varied according to the type of commodity. In 1939 the National Bank

¹ "Verrechnungszentrum Berlin", published in the *Wirtschaftskurve* of the *Frankfurter Zeitung*, p. 187, in November 1940.

² Little progress has been made up to now (1949) in Europe towards the re-establishment of a multilateral payments system. C.B.-T.

of Yugoslavia quoted eight different exchange rates for the pound sterling according to the type of commodity.

8

The theoretical scheme which we have set out above shows that in order to establish an equilibrium in international trading the three following groups of economic magnitudes : commodity prices, import and export volumes, and exchange rates must be permitted to change freely in order to take on those values which are in accordance with equilibrium conditions. But the strait-jacket of bilateral clearing is reinforced by the official fixing of exchange rates—indeed, it is difficult to see how the exchange rates could develop automatically under a system of bilateral compensation, which expressly eliminates the free foreign-exchange market. Further, the volume of imports and exports is determined by a whole system of licences and quotas, and in addition prices are often officially fixed. As we know, all this sort of thing led to the general disintegration of international trade even before the outbreak of the second world war. Political factors played a dominant role and international trade was treated as nothing but a means to a political end. One of the effects of bilateral clearing is a tendency to alter the economic structure of the two countries engaged in it until they mutually complement each other. If one of these countries is strong and the other weak then the economic system of the latter will come under the influence of the former and tend to become “complementary”. An example of this can be seen in the economic relations which existed between Germany and the Balkan States during the second world war. Thus the clearing system is an effective political instrument for the formation of “Great Economic Areas” dominated by big States.

9

For a long time economists had pointed out the grave inconveniences of the bilateral clearing system and various measures were introduced to obviate them and alleviate the rigidity of the system. During the course of the war there were tendencies even in Germany to replace bilateral by multilateral clearing. The annual report of the Banca d'Italia for 1940 declares : “By setting up a system of multilateral compensations the clearing system has already succeeded in overcoming numerous difficulties which beset the functioning of the system of bilateral compensations.” Economists welcome the fact that after long and vain attempts to establish a logically impossible bilateral equalization of trade balances the practical men of affairs have at last come to the conclusion that an

international equilibrium must necessarily be multilateral just as the science of economics insists.

Under a system of multilateral compensations, the sums credited by country A to country B can be used by the latter not merely in order to pay for its imports from A, but also to pay for its imports from countries C, D, E, and so on. Thus the principle of "triangular combination" is admitted into international trading. Exporters from B to A no longer have to wait to be paid until the coffers of B fill up with money paid in by buyers of goods in A; they can be paid from the money accumulated from imports from C, D, E, etc.

As the idea of a multilateral compensation system between the European States is beginning to come to the fore again, for instance, in 1943 it formed the basis of a plan drawn up by J. M. Keynes in opposition to White's project,¹ it is perhaps appropriate to add a few observations concerning the multilateral clearing system.

It should be noted in particular that it is not at all essential in the interests of the smooth running of the multilateral clearing system that inter-State payments should be made through a central account in the currency of a country forming the core of the system. It is quite sufficient for importers to pay the value of their imports into a domestic account in domestic currency irrespective of the country from which they are importing. The money which accumulates in this fashion is used to pay exporters irrespective of the country to which they export. Naturally, individual exchange rates must be fixed in advance in agreement with the other countries involved.

Germany's idea of a multilateral clearing system, however, was that the payments of individual countries should be made through a central account in Berlin—and within the framework of her plans to dominate Europe she succeeded to some extent in carrying it out. The Vice-President of the Reichsbank² has described the system as follows:

Payments having to be made, say, between Sweden and Holland, or between Belgium and Yugoslavia, would merely involve transfers from one clearing account in Berlin to the other. This was, after all, only what happened before when, for instance, a firm opened an account in London to pay its suppliers. The only difference was that the mark had taken the place of the pound in that part of Europe under German influence, whilst the lira had done the same where Italy was dominant. Technically speaking, the system was no great innovation. Before the war, when

¹ Cf. in this respect Demaria: *Cambi e clearings nella politica autarchica*, A. A. Editoriale del Commercio, Rome, p. 29, *et seq.*

² "Kontinentales Clearing", published in the journal of the *Deutsches Institut für Bankwissenschaft und Bankwesen*, Berlin, vol. I, p. 16.

a country wanted English pounds to pay to some other country all that happened was the appropriate clearing transfer. The same thing now took place at the Berlin clearing centre where almost all European issuing houses and the individual clearing funds kept accounts. The only difference was that whereas formerly the individual foreign merchant had his own private account with a London bank, the accounting was now done officially by the authorities.

Multilateral clearing originated when Germany took certain measures to regulate her trading relations with the countries she had occupied. According to the Reichsbank report for 1940 the overwhelming volume of payments made between firms or individual persons in Germany (including the Protectorate and the Polish *Gouvernement*), Holland, Belgium and Norway on the one hand and firms and individuals in Italy, Finland, Sweden, Switzerland, Yugoslavia, Bulgaria, Greece, Hungary, Denmark, France and Rumania on the other were carried out on the basis of inter-State agreement through the Berlin clearing centre. The same was true of payments between Belgium and Holland. But this was only the first step on the way to the establishment of a multilateral European clearing system because Germany, Italy and the other countries using the Berlin clearing centre did not cancel out their "clearing residues" multilaterally. For instance, an active balance to Switzerland's credit with Germany was not set off against an active balance to Germany's credit with, say, Sweden. However, attempts began to be made in this direction. For instance, in the autumn of 1940 Sweden had a passive balance of trade with Germany, whilst Denmark had an active balance, thereupon Sweden was authorized to deliver goods to Denmark to a total sum of thirty million crowns to the debit of Denmark's active balance.

10

Now what principles are involved when rates of exchange are agreed on within the framework of a multilateral clearing system? Above all, rates of exchange must be brought into line with the purchasing power of the individual currencies on their domestic markets. This is one of the many "economic laws", i.e., logical requirements, which no economic policy is in a position to ignore if it seeks to establish an equilibrium in its international trading relations. However, it is very difficult to reckon out the purchasing power of the individual currencies involved. It cannot be based on the absolute price of commodities, for in this case the negotiators would have to confine themselves to the prices of those few goods which are produced everywhere, and the result would not be very

helpful. When we have two countries for which we desire to calculate the exchange parity in a state of equilibrium then, first of all, we must take a definite year for comparison, or some other period of time, in which we can assume an equilibrium and then represent the level of prices in each country by 100. If, during the course of the next few years, a change takes place in price relations between the two then this gives us information on which we can base their currency parity. However, our results will be far from absolutely valid (even if they are the result of very accurate calculation, which is practically impossible) in view of the fluctuations caused by changing transport costs, customs duties and, above all, international commodity demand. For instance, if the ratio between the price level of A and that of B has risen 20 per cent in relation to the comparison year this does not mean, say, that the currency of A expressed in currency B has now depreciated to exactly this extent. The depreciation can be more or less if in the meantime there has been a permanent change in the reciprocal commodity demand of the two countries to the benefit or detriment of A (cf. footnote on page 224). It should further be noted that exchange parities cannot be fixed separately for each pair of States, and, in fact, all the exchange rates of the individual countries concerned must be brought into relation with each other, if the present currency chaos is to be brought to an end. In other words, the $\frac{m(m-1)}{2}$ rates of exchange which result with a group of m countries when each pair is treated separately must be reconcilable amongst themselves, so that fundamentally there are only $m-1$ parities. To set up "realistic" parities through official agencies is a tremendous task. As we have seen, foreign exchange rates are the "roots" of a complicated system of equations which is solved by free international trade in a process of trial and error. The best that can be done is to fix approximate temporary parities and then leave it to the market forces to re-establish the equilibrium by changing these parities, or by changing import and export volumes and price levels in the individual countries.

II

With this we come to the fundamental problem of multilateral clearing. Some advocates of this system insist that not only rates of exchange but also prices and quantities must be fixed, which would be to the great advantage of all exporting countries, which would thus have a guarantee that they could sell certain quantities of commodities at certain fixed prices and buy in the same way.

But what happens when the total exports and total imports of the individual countries which belong to this hypothetical European

clearing system do not balance neatly, as would in all probability be the case? How are the "clearing residues" to be liquidated? One can look in vain in the writings and speeches of those who advocate multilateral clearing for a satisfactory answer. Most of them have not yet become aware of the existence of the problem, whilst others display unjustified optimism when they declare that the system is calculated to bring about an equilibrium of the individual trade balances involved. Others express the hope that the probability of an equilibrium between the various active and passive residues will increase in a European multilateral clearing system as more and more countries of diverse economic structure take part in it. And, finally, there are some who suggest that the creditor countries should grant long-term credits to the debtor countries, or that in order to liquidate the clearing residues the latter should transfer foreign exchange or gold to be obtained by them in the free foreign-exchange market. It is easy to see that such temporary measures cannot solve the problem. For instance, the granting of long-term credits raises the question of how the interest and the amortization quotas are subsequently to be transferred.

The problem of the clearing residues is insoluble in this case for the same reason that it is insoluble, as we have seen, in bilateral clearing. When exchange rates, commodity prices and commodity quantities are officially fixed, although those concerned desire to satisfy the conditions of international equilibrium, the result is a greater number of conditions than unknowns, and therefore all the conditions cannot be simultaneously satisfied. Disturbances of the equilibrium would, we may assume, continue under a system of multilateral clearing, and the main bugbear of bilateral clearing, namely, the difficulty of avoiding "frozen" residues, would still exist though it might be somewhat alleviated. The individual governments concerned would have to intervene again and again in order to deal with the thorny problem of "clearing residues".

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The analogy between the multilateral clearing system which the Reichsbank devised during the war, and the system of international compensations which developed before the 1914-18 war on the pound sterling basis, i.e., on a currency which was freely convertible into gold, conceals a fundamental difference behind the apparent similarity of the technical process. In the pre-war world compensations were of a private nature, whereas in the clearing system they are carried out through official bodies. In the former case trade in foreign exchange was free and commodity prices and quantities could change equally freely. Thanks to

private transactions the payments balances of the individual countries were equalized with the assistance of quite moderate gold transfers. But multilateral clearing, as it has been advocated recently, lacks all automatically operating equalization mechanism.

Theoretically, of course, it is possible to think out a mechanical operation which would make it possible to hold trade balances in an equilibrium under a multilateral clearing system. Let us assume that after careful consideration of the given facts the authorities officially fix parities for the various currencies concerned. Now when imports into country A actually exceed exports at these rates then part of the payments made by importers into the clearing account will be withdrawn from circulation. Unless this restriction is not cancelled out by a corresponding increase in the amount of money in circulation or by an extension of credit in other sectors of the economic system the passive balance of trade will have a deflationist effect: general price levels will fall, exports will be encouraged and imports discouraged. Such forces strive to re-establish the equilibrium of the trade balance. If, on the other hand, A has an active trade balance, then the money paid by importers into the domestic clearing account is not sufficient to pay exporters in full. In this event the banks or the clearing account may spring into the breach and pay exporters in domestic currency for the credit which has been created by them abroad. Thus an active trade balance will result in a money or credit inflation. General price-levels will rise, imports will be encouraged, exports will be discouraged and in this way the balance of trade will right itself again. A point to be noted in this connection is that banks in some countries have begun to pay exporters for the credit they have created abroad without waiting for the domestic clearing account to accumulate the necessary funds from the payments of importers. As these bank credits must, if they are at all considerable, necessarily affect prices, perhaps they represent the first indication that an automatically operating equalization process is developing within the framework of the clearing system.

In the theoretical example described in Section 5 we assumed that exchange rates represented one of the unknowns of the problem. Now let us assume instead that exchange parities are fixed officially, the result is that the unknowns are reduced by $m-1$. On the other hand, let us now abandon the assumption that domestic price-levels in the m countries are stable, and we have $m-1$ new unknowns, i.e., the $m-1$ price-level relations from country to country (only the relative level of prices and not their absolute level may be determined by the equilibrium conditions of Section 5, as can readily be appreciated).

The above considerations show that in the last resort it is

possible in various ways under any system of payments—whether the gold standard in its various degrees, paper money, or multi-lateral clearing—to have balances of payments in a state of equilibrium provided that one fundamental condition is satisfied, namely, *that relative freedom exists in international trade* and bilateral clearing is abandoned. As experience in the years before the first world war showed, customs duties do not prevent the operation of the mechanical process which restores the economic equilibrium even though they retard and hinder it. But if commodity prices and the quantities of goods to be imported and exported are officially fixed then this whole mechanism is paralysed.

And now one final remark. In any discussion of the future of gold currency we must ignore the various ideologies and refrain from dressing up a purely technical question in the mantle of political beliefs. Gold currency, which has taken on a superstitious terror for many people, must be regarded as a means to an end. As John Stuart Mill has pointed out, money “is a machine”, and it has all the advantages and disadvantages of a machine. But it has no more to do with the ideological concepts on which socio-political institutions are based than have the other tools and machinery of production.

13

Immediately after the second world war an interesting and to some extent a new question was raised in several European countries, namely, whether the old banknotes in circulation should be replaced by exchanging them with others. In all countries where such an exchange was ordered immediately after the war, or after the evacuation of the country by the enemy, the aim of the authorities was to prevent the return of such banknotes as had been taken abroad illegally or carried off by the Germans. This was the chief argument put forward in Italy in 1945 in favour of replacement, but it has since become pointless because the greater part of the banknotes circulating abroad at the time of the liberation has undoubtedly flowed back into Italy since.

In many countries such replacement, or the withdrawal of a part of the issued money, could be regarded as a technical measure, but in others its objects were fiscal. It is important to draw a distinction between these objects because as one or the other predominated so different measures were adopted. In addition, the authorities were anxious to discover just how much currency was in circulation after the grave disturbances brought about by the war.

A case where the objects were mainly technical, though not exclusively so, arose in Belgium with the currency reforms decreed

on October 6th 1944. It was the intention of the Belgian Government to bring about currency deflation in order to fix the exchange rate of the franc at a level which was not much different from pre-war (20 per cent) and to put a stop to domestic price increases which, apart from the inflation, had resulted from the great scarcity of goods in a country whose national production had been thoroughly exhausted in years of occupation by a foreign enemy. A part of Belgium's banknotes was immediately exchanged for new ones. Another part was temporarily withdrawn from circulation and restored gradually later on when an increasing volume of business demanded supplementary means of payment. The remainder was withdrawn from circulation permanently and, according to circumstances, converted into public indebtedness or confiscated under the law against illegal profits. Bank accounts were subjected to the same process. The technical nature of these measures can be clearly seen from the fact that the Belgian Government applied them only to various forms of money, namely, banknotes, current bank accounts, and finally (liberally extending the interpretation of the word "money") to bank and savings deposits on less than two years call, because they represented purchasing power which, though temporarily unutilized, could enter into circulation again before a currency equilibrium could be re-established.

Despite many unfavourable prophecies, Belgium's economic system managed to survive this sudden hard deflationary jolt unharmed, and to-day, several years later, we can say that, after overcoming preliminary difficulties and uncertainties, Belgian currency reform has been a success. This was due primarily to the special circumstances which existed in Belgium at the time. When the reform was first introduced the enemy had only just been driven off Belgian territory and fighting was still going on near the frontiers. Almost the whole of Belgium's industrial and economic activity was at a standstill so that the greater part of the purchasing power created in Belgium during the war in the form of banknotes did not appear on the market. Thus a considerable part of the total money could be withdrawn without provoking a grave economic crisis. The measures taken by the Belgian Government made it impossible for this great quantity of unused money to swamp the market later on and bring about a sharp rise in prices.

In France, on the other hand, it was not the intention of the government, as the Finance Minister of the day declared, to bring about a sudden and compulsory diminution of the amount of money in circulation. The paper money in circulation was therefore exchanged at par and the whole measure was purely of a fiscal nature. With this and the exchanging or restamping of short-term and medium-term public securities, the French Government

aimed at discovering the amount of liquid capital assets in the possession of each French citizen.

In Italy the discussions in the matter went on for two years. Practical technical difficulties, including in particular the impossibility of getting new banknotes printed in a short space of time, and the parlous state of public security, prevented the carrying out of a currency reform at a time when it would have been useful, namely, in 1945, when large quantities of banknotes were still being hoarded. To-day any exchange of banknotes which exceeded purely statistical objects would involve the gravest consequences for the whole economic system of the country, so that it is a good thing that it is not to be done.

CHAPTER XIII—APPENDIX I

INTERNATIONAL FINANCIAL CO-OPERATION

BEFORE 1914 international trading relations enjoyed conditions of relative freedom and those problems which cropped up later when international trade was systematically controlled, simply did not exist. There was also no necessity for any international organization to concern itself with the equilibrium of exchange rates and balances of payment. The general mechanism of the commodity markets, the rates of exchange themselves, short-term loans—the spontaneous result of the experience of generations—were sufficient either to prevent disturbances or to correct them if they did arise.

Gold currency was the solid bond which united all the individual economies. An advantage of this system, and one which was particularly important from a political standpoint, was that once a country had adopted it that country was obliged to recognize certain rules of international co-operation. It had to refrain from all restrictions of the foreign-exchange market and of the movement of gold from land to land without subscribing to any special agreements placing it under such obligations, agreements which it would perhaps have been unwilling to sign for fear of compromising its own sovereignty.

The first world war fundamentally upset international trading relations. In the post-war years attempts were made to restore the old economic structure, and by 1927 almost all countries had returned to the gold standard. The years from 1927 to 1930 witnessed a rapid improvement in international trade, whose volume, making allowances for increased prices, became 30 per cent greater than before the war. However, this most promising development

was abruptly ended by the outbreak of the economic crisis. The subsequent years witnessed the rapid growth of State intervention in the form of exchange controls, clearing agreements, import prohibitions, licences, quotas, the fixing of prices, and so on, which hacked the world market to pieces and left in its place a variety of separate compartments almost hermetically sealed off from each other and experiencing great difficulty in establishing any sort of trading relations with each other. Clearing agreements made multilateral trade impossible and caused a tremendous drop in international trade. Or to be more accurate : perhaps it is a moot point whether the bilateral agreements which came about after the economic crisis of 1929, upset the whole world economic system and led to a general currency collapse, or were, in fact, an unavoidable emergency measure designed to maintain at least a limited volume of trade. But at least there should be no doubt whatever that such agreements represent no permanent trading system because their continued existence is a most grievous hindrance for the development of international trade. We must return to a multilateral system of trade and payments so that the currency of any one country can be exchanged at any time with the currency of any other country.

When the international market broke up, special trading and currency " zones " began to form for the pound sterling, the dollar, the German mark and the Japanese yen. During the first few years of the second world war the two latter increased very greatly in extent. The situation of such countries as did not belong definitely either to one or the other of these zones was made very difficult. Switzerland is an interesting example of this. Switzerland's balance of payments had to be divided up (and still is to a certain extent) into various compartments in accordance with the various currency zones, because the possibility of using an active balance in one zone to meet a passive balance in another was very limited. According to a report of the Bank for International Payments there were at least seven such more or less hermetically sealed compartments : 1. Germany, Italy and the greater part of occupied Europe ; 2. the Balkans ; 3. France, with which country Switzerland had a special clearing agreement ; 4. Portugal, Spain and Sweden ; 5. the dollar zone ; 6. the sterling zone ; and 7, the Argentine and Brazil.

Clearing agreements created in times of crisis to meet urgent economic necessities, only too readily became weapons in the economic and political struggle. In this way international trade was diverted from its proper channels, and U.S. reports often cite the example of cotton. Following on an agreement with Brazil Germany imported Brazilian cotton instead of U.S. cotton, naturally to the great disadvantage of U.S. growers. On the other hand the

increased German demand for Brazilian cotton brought Brazil no real advantage because she was either unable to use the active balance which accumulated in her trade with Germany or compelled to use it for the purchase of German goods of doubtful usefulness.

The continuation of the circumstances we have just briefly described makes it impossible for the individual countries to utilize available resources in a rational fashion, and if it is to be changed then international co-operation must be encouraged. Such co-operation must not be temporary and stop as soon as a certain measure of equilibrium is once again attained. On the contrary, it must be permanent so that if new crises arise to threaten the stability of international economic relations each separate country shall not feel inclined to take measures on its own account which, though they seem to be in self-defence, actually aggravate the crisis to the detriment of the international community as a whole. Let us remember what happened in the first few years after the first world war. It is no exaggeration to say that one of the chief causes of the serious economic disturbances which arose (particularly in the currency sphere), with short respites only, during the period between the two world wars, was the lack of international agreements for the solution of financial and economic problems. In those years each country tried to stabilize its own currency without regard to what was being done elsewhere. The result was that currencies were either overvalued (for instance, the lira) or undervalued. The lack of international monetary co-operation had disastrous results during the course of the 1929 world economic crisis. No government bothered its head about the results its currency measures might have for other countries, so that the abandonment of the gold standard and currency depreciation took place without co-ordination, though a general agreement would in all probability have lessened the effects of the crisis. Depreciation actually took place in some countries in 1929. Their example was followed in 1931 by Great Britain. The United States waited until 1933, and France and the members of the so-called gold bloc until 1936. The result was that many countries found themselves left to face the crisis with their own resources, and without the assistance of any international organization. In self-defence they sought to balance their foreign trade by establishing a strict control chiefly with a view to reducing their own imports.

The currency agreements concluded between the Allied Powers during the second world war were an indication of their awareness that international economic co-operation was necessary. They also documented a highly important principle, namely, that if currency measures envisaged by one government were likely to affect the interests of other countries, the governments of those

countries should be consulted beforehand, or at least informed in good time. The payments agreement signed, on October 21st 1943 in London, between the exiled governments of Belgium and Luxemburg on the one hand and the exiled government of Holland on the other went even further, and provided that the Belgo-Dutch rate of exchange should not be altered without the previous consent of both governments; *ex parte* decisions were declared invalid.

The principles adumbrated in this agreement were more fully developed at Bretton Woods. Now that the traditional notion of unlimited sovereignty is fast becoming outmoded even in economic affairs, it is to be hoped that this will result in the establishment of a general rule governing the economic policy of all countries.

For over ten years U.S. policy has worked for the stability of exchange rates. To this end the U.S. Government has entered into bilateral agreements for the creation of a "fund for the stabilization of exchange rates" to provide financial assistance in an emergency. And the agreement of 1936 between the United States, Great Britain and France, which was joined later by Belgium, Holland and Switzerland, should not be forgotten. Experience showed that these agreements were inadequate, and U.S. circles came to the conclusion that if any permanent stabilization of currencies was to be attained there would have to be international co-operation on a broader basis by multilateral agreement.

The success of any politico-economic measures taken by individual countries will, in fact, depend largely on the possibility of ending the present currency chaos with the assistance of international agreements and at the same time encouraging the development of international trade.

Even during the late war the United States took the initiative to secure such agreements. The reasons for this are readily appreciable. The Director of the Export-Import Bank, Wayne C. Taylor, speaking on the point before a Congressional Committee of Inquiry, said that the position of the United States was fundamentally different from that of other countries which were largely dependent for their own support on foreign markets or sources of supply, or on countries which were themselves indebted to yet another country from which they were, in addition expecting further investment of capital and which had no sufficient reserves to satisfy their present and future needs. While the countries in such a position had little freedom of action and often had to consider their own safety before other things, the United States were able to take the initiative in paving the way for an expansion of world trade, and so in the same breath of their own trade, without incurring too great a risk in doing so. Viewed from this aspect, the international trade relationships of the post-war period would be

considerably influenced by the initiative and the line adopted by those in charge of foreign trade policy in the States.¹

The United States has a clear interest in expanding her exports, which were of great importance for her economy even before the war. This importance did not find adequate expression in their mid-values compared with the total production of the country as a whole (approximately 10 per cent in 1939). Actually this mid-value was far outdistanced in numerous sections of America's economy, for instance, cotton (44 per cent), copper (32 per cent), lubricating oils (31 per cent), sewing machines (35 per cent), mining machinery (23 per cent), aero-engines (27 per cent), tractors (19 per cent), etc. In this connection the importance of European markets for the U.S.A. is particularly marked, for they take approximately 47 per cent of U.S. exports, compared with that part of South America where the U.S.A. has liberally expended energy and capital, which takes only 9 per cent, or a little more (North America 17 per cent, Asia 12 per cent, Australasia 4 per cent and Africa about 2 per cent).

Thanks to enormous efforts made in the economic sphere, something happened in the United States during the war, which is unprecedented in the annals of war finance, namely, a 75 per cent increase in the national product. Many U.S. experts are of the opinion that part of this great increase in production—provided it continues, which it will have to if large-scale unemployment is to be avoided—will have to be diverted to foreign markets in the shape of exports. These exports will have to be encouraged by the granting of loans to foreign countries. Further, still in American eyes, the American people will, in view of the present level of their income, be in a position to put aside a very considerable sum each year in the form of savings: something between 25 and 30 milliard dollars it is estimated. It is doubtful whether it will be possible to find investments at home at a reasonable rate of interest for such large sums. Should this, in fact, prove to be the case, then savings will exceed investments, a phenomenon which, as we know, has been, and still is, the object of very thorough investigations by British and American economists. The latter regard this phenomenon as one of the chief causes of economic crisis and, in consequence, also of unemployment. Loans to foreign countries offer an opportunity of investing these surplus savings usefully, and at the

¹ These observations, and others quoted later, are to be found in the *Bretton Woods Agreements Act*. Hearings before the Committee on Banking and Currency. House of Representatives 79th Congress, First Session on H.R. 2211—A Bill to provide for the participation of the United States in the International Monetary Fund and the International Bank for Reconstruction and Development, vol I, United States Government Printing Office, Washington, 1945.

same time they would result in an increased demand for American goods.

The necessity of abandoning the policy of economic isolationism (the high protective tariffs of 1930, which unfavourably affected the interests of Italy, for example, were an expression of this policy) has been admitted in recent years in the United States not only by leading politicians and officials but also by industrialists and financiers. It is now frankly agreed that everything which tends to increase the trade, production, national product and standard of living of foreign countries is also advantageous to the United States, which is thereby able to increase cotton, tobacco, copper, machinery, steel and other exports. In this connection Mr. White presented a diagram to the committee in question, showing the reciprocal dependence of export changes and the total U.S. product. The speaker also pointed out that despite its strength the dollar was not invulnerable, and Americans were now convinced that in assisting foreign countries to consolidate their economies and stabilize their currencies, they were serving the cause of dollar stability itself.

Mr. Acheson added: "Like other countries, we should suffer even more if the currency system of the world broke up."

Others are of the opinion that the permanent division of the world into economic blocks separated from each other by exchange controls, government intervention and various other discriminatory practices, would greatly weaken the position of the United States. The situation might arise in which even the United States might have to abandon the principle of economic liberty and free enterprise within its own borders. If other countries then suffered collapse the foundation of America's own economic order would be shaken.

These opinions were certainly confirmed by experience between the two wars, which showed the great risks run and the damage suffered by U.S. trade in many countries as a result of currency instability and restrictive measures affecting foreign exchange and international trade. However, at the same time it is realized that individual countries will not be prepared to abandon the multifarious defensive measures of the past, some of which are still in force, such as measures for economic self-sufficiency, or autarchy, bilateral and regional agreements, exchange controls, varying exchange rates and so on, unless they have an assurance that in case of need they can rely on financial assistance from the United States, which on its part will have to take care to avoid disturbances in its own economy which could unfavourably affect other countries, as was often the case after the first world war.

These brief considerations are sufficient to explain the motives which have caused the United States to favour the creation of a

world economic organization, whose basis was then laid after exhaustive preliminary study and discussion at Dumbarton Oaks and at the currency and finance conference at Bretton Woods, and followed by the measures of July 22nd 1944. It should also be remembered that the above-mentioned agreements largely reflect a far-reaching political programme, and proceed from the basic principle that the economic side of peace is no less important than its political side ; unless they are given a sound economic basis it is doubtful whether the political agreements can be carried out, i.e., whether they will, in fact, lead to the establishment of permanent peace, which demands more than the mere creation of a political instrument for the prevention of aggression. As the most frequent and closest relations between individual countries usually develop precisely within the sphere of international trade, the spirit of the latter is beginning more and more to affect the political sphere as well. It is, therefore, desirable that the disputes and resentments caused so often in the past by commercial or currency discriminatory practices, *ex parte* currency depreciations and bilateral agreements, should be avoided as far as possible. Whilst not succumbing to that great-hearted optimism which imbued J. S. Mill and other economists who believed that the increase of trade between the peoples would make the outbreak of war between them impossible, we should nevertheless always do our utmost as a matter of good policy to free the economic sphere from all causes of friction between the peoples.

The details of the agreements made at Bretton Woods are now known, and we therefore propose to confine ourselves to a brief survey of the basic ideas of the system. The permanent and close co-operation of the United Nations is regarded as the essential condition for the economic reconstruction of the individual countries. In particular it is felt to be out of the question that any country will succeed in stabilizing its currency for long unless there is effective international co-operation. *To this end every country must be prepared to agree to certain limitations of its freedom of action in currency matters.* International trade and international payments are regarded as unquestionably "multilateral" in their nature, and this amounts to a condemnation of all bilateral agreements. With this the counter-proposal so often brought forward, particularly by Great Britain (with her suggestion of so-called Key Currencies) according to which there should, first of all, be currency agreements between the most important countries (United States and Great Britain), after which the other countries might be expected to fall into line gradually as their circumstances permitted, falls to the ground. The United States preferred a "multilateral" solution.

It is proposed with the assistance of the contributions of the

individual member countries to form a "Monetary Fund" for the stabilization of exchange rates, and to found a "Bank for Reconstruction and Economic Development".

These funds are to be used, above all, (a) to prevent the economic damage caused by differing exchange rates; (b) to prevent the use of currency depreciation as a competitive trade weapon; (c) to prevent currency machinations for political ends. Despite the apparent complexity of its technical structure, the operations of the Fund are quite simple. In agreement with the Fund each country fixes an "initial par value" for its currency, either in dollars or gold. The parity must reflect existing market relations. Every country must undertake to keep its currency stable within a one-per-cent margin of parity above and below. Each country makes a certain contribution (partly in gold and partly in its own currency) to the Fund, and each country has the right to call on the Fund for assistance in order to overcome any temporary disequilibrium of its own balance of payments, without having resort to protective measures which might deleteriously affect international trade. The country which has sold its money to the Fund must repurchase within a definite period according to an agreed procedure.

Any country can alter its initial par value by a maximum of 10 per cent without previously consulting the Fund, but the permission of the Fund must first be obtained for any change which, together with any previous changes, represents a variation of more than 10 per cent from the initial par value. The significance of this rule, which prevents arbitrary action on the part of individual countries, is obvious.

By a majority vote and with the agreement of each member entitled to 10 per cent or more of the total resources of the Fund, the latter may alter the parity of all the member States proportionately in relation to gold.

This latter provision represents a compromise between those who desire quite simply a return to the gold standard of blessed memory, and those who, like Keynes, for example, want a systematically "controlled" currency independent of gold. The solution adopted at Bretton Woods still regards gold as the basis of the currencies of all the member States, but it avoids the rigidity of the former gold standard, which is now⁴ replaced by a more elastic system. In accordance with the spirit of the Bretton Woods Agreement changes in parity in excess of 10 per cent must always represent an exception and be justified by a change in the "fundamental factors" on which the rate of exchange depends. But even in this case the country in question will have to do its best to adapt its own economy to the changed international situation by subjecting its prices and costs to revision.

The Fund will not agree to the use of its reserves to maintain a

rate of exchange which is not in accordance with existing market conditions. Generally speaking, each member will be able to make only a limited use of the Fund. In no circumstances will a member be able to call upon the Fund to overcome a persistent disequilibrium in its balance of payments, because the aim of the Fund is precisely to assist its members to overcome only temporary difficulties caused perhaps by bad harvests, by the country being unexpectedly cut off from its foreign markets, etc. From this it follows that even before its acceptance as a member of the Fund, each country must do its best to bring its balance of payments and its budget into a state of equilibrium ; otherwise it will risk being unable to live up to its obligations to the Fund, with the subsequent danger of expulsion.

The members of the Fund undertake to abandon all currency restrictions on "current transactions", by which are understood, generally speaking, all business relating to imports and exports, including payments for services such as freightage and commission ; visitors' travelling expenses, etc. ; the payment of dividends and interest ; the transfer of money by emigrants where it does not represent camouflaged capital transfer. Where international capital transfers are concerned individual States have the right of control in order to prevent the sudden transfer of considerable sums of money from one country to the other, thus endangering currency stability, such as often took place after the first world war either as a result of panic or of unhealthy speculation.

Countries in which there are still restrictions on current transactions in force at the time they become members of the Fund may maintain them during a transitional period. Member States whose territory has been occupied by the enemy are empowered to introduce new control measures in case of need. However, members are expected under all circumstances to take the objective of the Fund into consideration in their currency policy and to conclude commercial and financial agreements calculated to facilitate the functioning of international payments and to maintain currency stability. They must abolish all restrictions as soon as they are in a position to equalize their own balance of payments without the assistance of such restrictive measures. Paragraph 4 of Article XIV of the Currency Agreement provides that three years from the commencement of its activity the Fund shall draw up a report concerning such restrictive measures as may at that time be still in force in any of the member States. After the passage of five years any member State which still maintains restrictive measures must consult the Fund with regard to the desirability of their retention. The Fund can then demand that any particular restrictive measure, or, indeed, the whole system of restrictive measures, shall be abolished. In its decisions the Fund will always

bear in mind that the post-war transitional period necessarily involves protracted reconstruction work, and it will show "a wide understanding" for the situation of any member State which feels itself compelled to plead for the retention of restrictive measures.

The main objective of the Fund is to establish an orderly and stable system of exchange in co-operation with the member countries. To this end its first task was to establish the "initial par values", as they are called in the Articles of Agreement, in consultation with the various governments concerned. These initial par values are not definitive parities because they are subject to change in accordance with possible developments, nevertheless they represent the first step towards the establishment of a permanent system. This task was carried out in the summer of 1946 when the Fund made exhaustive investigations and discussed each case on its merits.

Theoretically a country's foreign-exchange rate is in equilibrium when payments made abroad at this rate equal the inflow of foreign money. In order that the rate shall be realistic, i.e., that it shall reflect the given situation, it should develop freely on the market. In other words, transactions in both goods and currency should be free of control.

Prior to the last world war exchange rates were generally equilibrium rates except for temporary fluctuations. It is obvious that in the situation created by the war the Fund could not hope to establish equilibrium rates in this sense. But as the President of the Fund declared in a speech at Harvard on February 18th 1948, the Fund limited itself to an investigation of whether the par values proposed by individual governments would, under prevailing price conditions, be calculated to promote a certain flow of exports from the countries in question and at the same time exercise a certain pressure on imports. In the beginning these efforts proved successful, though later on difficulties arose in certain countries owing to rising domestic prices.

From the outset the Fund recognized the impossibility of establishing parities for the various national currencies at rates which would reduce imports sufficiently to equal exports.

This policy was frequently criticized in the United States. Some of the critics maintained that the disequilibrium in the balance of payments of European countries and the resulting shortage of dollars were simply the result of an excessively feeble financial policy which, by overvaluing the various national currencies, limited export possibilities and at the same time failed to secure a sufficient reduction in imports. Their solution is to let European currencies depreciate sufficiently in terms of the dollar when, they say, export and import equilibrium will be restored.

It is true that if we analyse the balance-of-payments situation

we are driven to the conclusion that as a whole European currencies were overvalued, but it is very doubtful whether a general and drastic devaluation in terms of the dollar would have made for economic and social equilibrium. The fact is that European imports are not generally luxury goods whose volume could easily be limited by increased prices, but staple products. It is, of course, quite true that a considerable increase in the price of these products on the European markets as a result of currency devaluation would have enforced a reduction in their consumption, but the consequence might well have been fatal for millions of people. Thus economic equilibrium might well have been gained at the expense of social disaster. However, it is unlikely that even economic equilibrium would have been attained in this way, because owing to the important role played in the economies of Europe by goods imported from abroad any considerable increase in their price would have had immediate repercussions on domestic prices, on the cost of living, on wages, and thus on production costs, thereby creating financial chaos in European countries. Furthermore, the reasoning of these American critics overlooks the close connection between imports and exports. The latter depend largely on the possibility of importing large quantities of raw materials.

However, by 1948 and 1949 the situation which existed in the early post-war years had materially changed. European production has risen considerably, together with living standards. Exports have become more elastic now that production is no longer largely absorbed by internal consumption, and they might well be stimulated by a devaluation of European currencies. In addition, another important factor is now operating, namely, the recent (1949) fall in American prices. It might therefore be argued that devaluation, if kept within definite limits, would not lead to a rise in domestic prices in Europe, but would merely prevent a fall.

The Bretton Woods currency agreement is certainly a significant step on the way to international co-operation, and it is calculated to diminish the enormous difficulties which now bar the way to a solution of vital economic problems for all countries. However, it should not be forgotten that the attainment of the chief objective of the agreement, namely, the all-round stabilization of exchange rates, depends on the presence of certain fundamental conditions. The Fund is not in a position to give effective support to the work of reconstruction and the process of recovery, which both present great difficulties for those countries which suffered war damage. At the same time these countries can have no very well-founded hope of permanently stabilizing their currencies so long as their war wounds have not healed at least in part. Secondly, the international currency system agreed upon at Bretton Woods, which is, despite its elasticity, nevertheless based on gold, presupposes

the abolition of all those obstacles to international trade in the form of bilateral agreements, prohibitions, quotas and so on, which prevent the automatically functioning forces of the market from establishing an equilibrium in the balance of payments.

Now the objective of the Bretton Woods Agreement is solely to abolish all *currency* discrimination and controls. If this agreement is to be effective then it must be supplemented by commercial agreements, that is to say, quite generally by agreements on international trade calculated to assist in the restoration of a liberal economic system. Incidentally, this was immediately recognized in effect at Bretton Woods. In fact, the Third Committee (the First Committee dealt with currency agreement, and the Second with the creation of the World Bank) adopted a motion recommending the various governments to come to an agreement as quickly as possible with a view to reducing the hindrances to international trade and facilitating in every possible way the opening up of favourable trading relations for all countries. Articles IX and X of the statutes of the United Nations Organization adopted later at the San Francisco Conference (April 5th to May 26th 1945) deal with international trade. On the basis of the principles adopted here the United States and Great Britain agreed—as a result of the negotiations between the two countries on the U.S. loan of 4,400 million dollars—to propose the convening of an international trade conference. The result was the Havana Charter for an International Trade Organization.

In 1948 the Fund announced that the countries listed in the European Recovery Plan could hope to receive dollars only at infrequent intervals during its existence. In this way the Fund hopes—thanks to the Marshall Plan—to extricate itself from a delicate situation in which it is expected to advance dollars to meet deficits in the balance of payments of some countries when such deficits are not of the temporary nature provided for in the Fund Articles. By husbanding its resources in the transition period the Fund hopes to be able to accumulate sufficient reserves to meet the subsequent requirements of its members.

The Fund, even more than the Bank, is often the target of lively criticism, particularly in the American press. However, it should not be forgotten that the difficult situation in which it found itself was largely caused by the absence of those very conditions of economic stability which are the premises for the success of the Fund. There can be no doubt as to the usefulness of its activities so far, a fact which the American Advisory Council has unreservedly recognized.

The agreement on the Bank for Reconstruction and Economic Development supplements the currency agreement by creating an international credit institute. It has already been made very clear

that the currency fund can grant financial assistance only for a time and within certain limits in order to overcome temporary disturbances in the balance of payments of the member countries.

The supporters of the Bank are anxious to take advantage of the experiences with foreign loans after the first world war, which suggest that international capital investment is also a problem which should be investigated and dealt with by an international body. The unsystematic and irregular granting of foreign loans after the last war led to serious trouble because no attempt was made to examine the financial situation of the debtor country or to ensure that the loan was used for productive purposes. This was partly due to unhealthy competition between U.S. banking institutions. Grave errors were made: from 1924 on a veritable flood of capital poured from the United States to Europe, and in particular to Germany. This flood continued for several years. From 1929 onwards the United States suddenly stopped all capital exports, and this action shook world economy to its foundations because it found itself unexpectedly deprived of essential means of existence. Everyone will remember the German finance crisis in 1931, which was brought about largely because American short-term loans were abruptly cancelled. The irregularity of American capital movements caused the economic and, above all, currency instability which was a characteristic feature of the troublous period between the two world wars. In addition came the effects of the new American tariffs which were introduced just at a time of economic depression throughout the world, and thus aggravated the situation either by closing the American market altogether to other countries or making it very difficult for them to enter it. The U.S. Department of Overseas Trade has published some highly instructive figures concerning the payments made by the United States to foreign countries in the years 1929 and 1932.

Payments (in million dollars) for—

	1929	1932
Commodity Imports	4,399	1,323
Money spent abroad by U.S. visitors, and Freightage	1,962	999
Long-term Loans	1,037	87
	<hr/>	<hr/>
	7,398	2,409

It is now generally accepted amongst American economic experts that in the future sudden great changes such as those visible in the above figures should be avoided as far as possible.

As we have indicated above, foreign loans are regarded in the

United States as the most effective way of encouraging exports. However, it is quite clear that the debtor countries can pay interest and amortization on such loans only in one way, namely, by the export of commodities and services. Thus the United States must pursue a liberal policy with regard to imports from abroad. It is satisfactory to observe that this view is rapidly gaining ground amongst leading U.S. figures, though it is still vigorously opposed by the representatives of certain sectional interests. It is recognized that loans cannot themselves represent a permanent solution of the burning problem of exports, and that at the same time measures must be taken to facilitate the import of foreign goods. In the view of Wayne C. Taylor, the United States must be careful to maintain their purchases in foreign markets at a high and as stable a level as possible. In those conditions, it would be possible to attain stability of exchange rates and that free interchangeability of individual currencies such as there had been in the best days of the old gold standard. Revision of American tariff rates was an important prerequisite for the success of a policy of loans to foreign countries. If foreign countries were to be in a position to meet the constantly growing service of their loans, imports into the States would have to be increased as far as possible so that in that way the individual foreign countries acquired as large a quantity of dollars as was at all possible. If those in the U.S.A. took the view that it was advantageous to be a creditor country, then they must also take the necessary measures to be able to defend that position. Mr. H. White said that an unwise policy on the part of the United States, which would make it difficult or impossible for other countries to sell them their goods, would hit the United States own exports just as badly. Mr. Brown added that if the customs policy of the United States were not radically altered, it was impossible to see how Great Britain would be able to repay her debts. America, he said, must recognize the fundamental economic truth that in the last resort a creditor country can only obtain payment from goods and services. Under-Secretary Clayton opposed the view of those who contend that to create or greatly improve foreign industrial equipment by means of American loans means only to create dangerous rivals : experience has shown, he said, that our most profitable foreign trade has always been with countries whose industry is highly developed.

The establishment of the World Bank gave rise to great hopes. The authorized capital of the Bank amounts to the very considerable sum of ten milliard dollars, of which 8225 million dollars had been subscribed by December 31st 1947. The word "milliard" no longer inspires us with the same sense of reverence it inspired in our fathers. Nevertheless, ten milliard dollars is no mean sum.

But what the general public does not know is that 80 per cent of it is not available for lending, but represents a guarantee fund available only to meet the Bank's own obligations. It is in effect a guarantee for the bonds issued by the Bank. As far as the remaining 20 per cent is concerned, only 2 per cent need be paid in gold or dollars, and this is the amount actually available for loan operations. The other 18 per cent is paid up in the currency of the member countries, and this can be used for loans only with the permission of the countries concerned. The United States has already given this permission with regard to its entire quota. For some time to come requests for loans will always be requests for dollar loans. Up to the present there have been only very few instances of a loan granted in part in a currency other than dollars. One instance was that of the loan to Luxemburg, and in this case the Belgian Government agreed to lend an amount in Belgian francs equal to two million dollars. Another interesting instance was when the Bank lent seventeen million Swiss francs to Holland—the proceeds of the purchase of the Bank's own bonds by the B.I.P. at Basel—to enable her to buy machinery in Switzerland.

The nominal capital of the World Bank sets a limit to the granting of loans, because the Articles of the Bank provide that the total of direct loans, loan participations and guarantees of private loans shall not exceed the subscribed capital.

Thus, when the Bank began its operations the funds available for loan purposes were :

(a) the 2 per cent of the capital paid up in gold or dollars, or 159 million dollars ; and

(b) Eighteen per cent of the U.S. quota, to which the two million dollars given by Belgium were subsequently added : 574 million dollars, or a grand total of 735 million dollars.

The situation on June 15th 1949 was : loan commitment (nine loans) 651·1 million dollars, of which, however, only 522·5 million dollars had actually been disbursed ; bonds issued 25 million dollars. Thus only 462 million dollars remained as funds actually available for loans. This is certainly a very modest sum compared with the figures for assistance given by the U.S. after the war, or for the Marshall Plan. Must we conclude from these modest figures that the criticisms of those who say that the Bank is of very little importance are well founded ? Not at all.

It was, in fact, explicitly recognized at Bretton Woods that economic reconstruction and development in the various countries must essentially be the work of private capital, but it was believed, and not without reason, that for a number of years excessive risks would deter large-scale international investment by private capital, and therefore it was thought desirable to create an organization to encourage private investment by assuming part of these risks and

acting as a medium between potential investors and countries in need of foreign capital. The Bank is thus an intermediary. Its task is to clear the way for private capital. This rather than the making of loans from its own resources, which are obviously quite inadequate for such a purpose, is its main aim. The Bank performs its function as intermediary in two chief ways :

(a) The issue of bonds. The first issue, amounting to 250 million dollars, was made in July 1947 in two sections : one for 100 million dollars bearing $2\frac{1}{4}$ per cent interest maturing in ten years, and the other for 150 million dollars bearing 3 per cent interest and maturing in twenty-five years. It was a complete success. Let me sketch briefly the technical details of the operation.

The Bank went to some trouble to extend the market for its bonds, and it succeeded in persuading the individual States of the Union to modify existing legislation in order to permit savings banks to buy the bonds and to authorize life-insurance companies to invest their legal reserves in them. The Bank's bonds now represent a legal investment for insurance companies located in those States where 88 per cent of the total business of all U.S. insurance companies is concentrated, for savings banks located in those States where 95 per cent of all deposits are concentrated, and for commercial banks located in States where 91 per cent of all bank deposits are concentrated. The Bank is also examining the possibility of marketing its bonds in Europe.

(b) The guaranteeing of loans made by private investors to private enterprise. The Bank has received various inquiries from private U.S. banks concerning the possibility of lending money to European business concerns with the Bank's guarantee. The Bank looks favourably on such proposals, but it insists as a preliminary condition that the government or Central Bank, or some analogous institution, in the country of the debtor concern shall fully guarantee the repayment of both principal and interest.

It must be admitted that this condition involves many difficulties. Before a government is prepared to guarantee a private loan it will want to exercise some control over the debtor undertaking, and the latter is unlikely to look kindly on such control unless it is already in some way or the other responsible to the government, e.g., the I.R.I. concerns in Italy. We must remember, however, that by the mere fact of granting a loan to this or that country the Bank will indirectly encourage the flow of private investment. In fact, as we shall see from the strict criteria set up by the Bank before granting a loan, the very granting is an official and authoritative recognition of the essentially sound position of the debtor country, which will still further improve as a result of the loan.

The World Bank has worked out a policy and a procedure in connection with its loans which, in my opinion, present unusual

and interesting aspects. It is the first attempt in financial history to regulate the flow of private international investment. The loan system adopted by the Bank aroused the interest of the Senate Committee on Foreign Relations when it was studying the Marshall Plan, and some of its features were adopted.

The first task of the Bank was to secure first-class personnel, expert in economic and financial matters. Its personnel is recruited from twenty-three different countries, and by the very nature of their work they develop a spirit of objectivity and an understanding for the special requirements of the various countries, in short, their outlook is international and peculiarly fits them to judge conditions in the various countries and to conduct the involved and delicate negotiations preceding the granting of loans.

The Loan Department represents the backbone of the Bank, and it is divided into various sections, each dealing with a certain number of countries. In co-operation with the Research Department it carries out economic and statistical investigations in individual countries and individual industrial sectors with a view to determining the most suitable areas for the Bank's operations. In this way a great volume of information is accumulated concerning countries applying for loans. This, however, represents only a preliminary basis. When a country applies to the Bank for a loan, preliminary conversations take place and the Bank then despatches a mission to the country in question to make an on-the-spot investigation of its financial and economic conditions. On its return to Washington the mission makes its report to the Loan Department, which then makes a detailed and exhaustive analysis of the application, and submits definite proposals to the Executive Board.

The basic principles behind the Bank's policy may be summarized as follows :

1. A country requesting a loan must first submit a sound economic plan. Part One, the general section, must show what the country proposes to do to restore the equilibrium of its national budget, consolidate its currency, combat inflation and improve the position of its balance of payments. Part Two, the special section, must outline what specific technical projects for reconstruction and development are proposed. The Bank grants loans for productive purposes only. This is its guiding principle, and its maintenance is the best guarantee the Bank can offer to those who purchase its bonds.

Since the loan of 250 million dollars to France the Bank has increasingly stressed its reluctance to grant large loans to finance general reconstruction plans ; it prefers to select specific projects of limited scope and to concentrate its attention on so-called strategic sectors whose development is likely to exercise wide

influence on the entire national economy, thereby multiplying the initial beneficial effects of the loan. This does not mean that the Bank will on no account change its policy in the future, though a change in Europe is unlikely during the existence of the Marshall Plan.

The loans granted to Europe so far bear interest at the rate of $3\frac{1}{4}$ per cent plus a commission of 1 per cent. In order to avoid excessively burdening debtor countries, repayment conditions are in accordance with their specific situation. For a certain number of years a debtor country makes no amortization payments; after that moderate payments are made, which then gradually increase. The Chilean loan is divided into two sections: one bearing $3\frac{1}{2}$ per cent interest for twenty years, the other bearing interest at the rate of $2\frac{3}{4}$ per cent for six and a half years.

2. The Bank is reluctant to commit itself to the loan of any large sum at the outset and it prefers to see first what the effects of a loan are likely to be. It is therefore inclined to grant funds sufficient only for a limited period, but at the end of that period it is prepared to consider requests for further funds, which are then examined in the light of the results already obtained.

3. The Bank lends to both governments and private undertakings, but it first satisfies itself that the would-be borrower is not in a position to obtain the required sum on reasonable terms from other sources. The object of this provision is to demonstrate the Bank's disinclination to play the role properly due to the free enterprise of private capital.

4. So far the Bank has financed only purchases made by the borrower abroad (though unlike the Export-Import Bank it does not require that the loan shall be spent exclusively in the United States).

This circumstance has caused some difficulties for borrower countries because expenditure for imported materials often represents only a small part, sometimes between 10 and 15 per cent, of the total costs of a project the remainder being domestic costs which have to be financed by borrowing at home. Very often, however, the would-be borrower has not sufficient domestic savings available to finance the internal costs of reconstruction. The Directorial Board of the Bank has recently considered this problem, and the President has announced that in the future the Bank may also be willing to finance part of the internal costs involved. However, for the present, it seems unlikely that there will be any change in the Bank's attitude towards Europe, because the internal financing of projects in conjunction with loans from the Bank can be provided from the sums which European governments must gradually set aside in their own currencies as the Marshall Plan is carried out—"Counterpart Funds".

5. The Bank pays particular attention to the use to which any loan is put. It never places an aggregate sum at the disposal of a borrower to be used as he pleases. A loan may be used only for the purposes for which it has been granted. The money lent may be expended only on a list of goods drawn up and approved by both parties, though the list may subsequently be modified by agreement between the Bank and the borrower. The use of the loan is strictly controlled by the Bank. For this purpose an agent of the Treasurer's Department of the Bank resides in the borrowing country, which is under an obligation to provide him with all the information he requires.

I do not think borrowing countries can raise any very serious objections to this control, because it is being exercised not by a foreign State, but by an international economic organization operating according to private criteria.

The Bank's loan policy has frequently been criticized on the ground that it is too rigid, but it should be remembered that its caution is a result of the unfavourable experiences of the United States with foreign loans in the period between the two wars, when they were granted over-lavishly, particularly to Germany. The attitude now adopted is that loans should be granted for productive purposes only and that their use should be carefully controlled. It should always be remembered that the World Bank is acting with a lively sense of its responsibilities towards the governments which have contributed its capital, the investors who have purchased its bonds, and, in the last resort, the borrowing countries themselves. Debtor countries which are members of the Bank have a keen interest in the proper utilization of all loans granted by the Bank because later they are themselves liable to be called upon to meet the Bank's obligations.

The Bank maintains, quite reasonably in my opinion, that a clear distinction should be made between gifts and loans. Whilst the Bank applies the criteria of ordinary commercial transactions to its operations with moderation and understanding, it nevertheless insists on a reasonable expectation that the money it lends will be repaid. The Bank does not consider it conducive to the restoration of sound international financial relations that debtor countries should accept loans with mental reservations, or that when the loan agreement is signed the creditor should surreptitiously give the debtor to understand that its terms are not intended to be taken seriously. It is far better, it holds, to call a spade a spade, and, if circumstances warrant it, make an outright gift. Past experience shows that dishonoured obligations leave a long trail of bad faith on the one hand and resentment on the other which is not conducive to the resumption of private international investment. The recent U.S. loan to Great Britain is by way of being

an example: the British complain bitterly of its harsh terms, whilst the Americans suspect that the loan itself is not being put to the wisest use.

In 1946 and 1947 one of the most troublesome of economic phenomena in Europe was the deterioration in the balance of payments. It soon became increasingly evident that on account of its structure the World Bank was not in a position to render adequate assistance. The result was the Marshall Plan, whose particular objective is to remedy this deficiency.

A very important problem which has been widely discussed not only by the Bank but also by Congressional committees and in the press, is the relationship of the Bank to the Marshall Plan. Public opinion generally believes that the Marshall Plan has put the World Bank in the shade.

In considering the influence of the Marshall Plan on the relation of the Bank to Europe we must distinguish between short-term and long-term effects. As to the former, there is no doubt that the advent of the Marshall Plan has caused the Bank to mark time in Europe whilst awaiting the approval of the Plan and the appearance of its first effects. Countries requiring foreign capital have also felt inclined to wait before deciding the purposes of a loan, and to see first what materials were likely to be obtainable through the Marshall Plan either in the form of direct gifts or of loans through the Export-Import Bank.

On the other hand, the long-term effects of the Marshall Plan can hardly be anything but favourable to the Bank if the project proves successful, which we all devoutly hope. In particular, the Marshall Plan should create precisely those conditions of economic stability in Western Europe, which are essential for successful operations on the part of the Bank.

One of the biggest difficulties confronting the Bank when discussing an application for a loan from a country whose balance of payments is seriously upset is the natural uncertainty concerning the country's prospects of obtaining sufficient foreign exchange to service the loan. There is now good reason to hope that by assisting European countries to restore their trade balances from 1952 onwards, the Marshall Plan will remove one of the most serious obstacles to the granting of loans.

It is true, of course, that the Bank's ability to grant loans will be limited by the amounts derived from the sale of its bonds, but it may be hoped that the restoration of normal conditions in Europe will encourage the U.S. financial market, and the markets of other countries with available capital, to invest more and more of their resources in the Bank's bonds, which are certainly destined to become an international instrument of the highest rank by virtue of the solid guarantee which backs them. In fact, the results

of the European Recovery Programme will largely determine the Bank's capacity to make loans to Europe.

In the meantime the Bank has been concentrating its attention on the "under-developed" countries, thus anticipating President Truman's Point Four. Towards the end of March 1948 approval was given to a loan to Chile. Much was made of its significance both as an illustration of the attention paid by the Bank to South America, and because it was the first loan granted for development purposes and not merely for reconstruction, as was the case with European loans.

The Chilean loan was followed by loans to Brazil and Mexico. Negotiations were also entered into with other Central and South American countries, and Bank missions were despatched to most of them. The President of the Bank and other high officials, including some of the Directors, visited the Latin-American capitals in April 1948. In a speech at Bogota Mr. McCloy declared that the Republics of Latin-America represented an area of particular interest to the Bank at the present time.

Latin-America is an area which is rich in natural resources which have not so far been fully utilized. Their development requires the investment of large capital sums, and the United States is now preparing to furnish them. The countries of Central and South America also lack an adequate labour force. Italian labour could spring into the breach here, and perhaps favourable opportunities may arise in this respect for collaboration between U.S. capital and Italian labour.

Investigations made by the Bank indicate that amongst the causes impeding a flow of migrant labour are lack of housing, food shortages and the high cost of transport, and it is now studying the possibility of overcoming or diminishing these difficulties by means of loans either to emigrants, or to immigrant countries, in order to further reconstruction and development projects.

CHAPTER XIII—APPENDIX II

THE PROBLEM OF CROSS-RATES OF EXCHANGE ¹

I

THE expression "cross-rate" is now often used to indicate the exchange relation of two foreign currencies which results in any given country from the quotation of each currency in the currency

¹ Reprinted from *Review of Economic Conditions in Italy*, issued by the Banco di Roma, vol. II, No. 3, May, 1948.

of the country in question. For instance, on April 22nd 1948 the export dollar was quoted at 574 lira in Milan, whilst the corresponding quotation for the pound sterling was only 1861 lira. Thus the cross-rate of the dollar was 3.24 to the pound sterling at a time when the official rate fixed by the International Monetary Fund was 4.03 dollars to the pound sterling.

Such discrepancies between the official parity of a currency and its cross-rate as established in countries where there is a free market are undoubtedly a sign that exchange rates are not in equilibrium. The phenomenon is symptomatic of the present state of international trade which is very far removed from the multi-lateral-exchange system which it was hoped would be established again after the second world war.

I propose to quote one simple example to show the connection between the disequilibrium of exchange rates and the vast network of bilateral agreements which has come into existence. Let us take three countries, A, B and C, each of which trades with the other two bilaterally. Let us further suppose that each of these countries has a currency system consisting of paper money not convertible into gold ; that they have all a certain domestic price-level untroubled by inflation or deflation ; and that both the quantity and the type of goods imported and exported, and the exchange rates of the various currencies, are the result of transactions effected freely on the markets.

With these suppositions we thus have three quite separate markets : AB, AC and BC, on each of which, if the bilateral trade is free, a balanced exchange of the various currencies will come into being, i.e., an exchange at which the bilateral trade balances are in equilibrium. Let us suppose, for instance, that trade relations between B and C form an equilibrium exchange of 7 units of B's currency to one unit of C's currency. Let us further suppose that the equilibrium of A's balance of trade with B results in an exchange of 50 units of A's currency to one unit of B's currency, and that an exchange of 250 units of A's currency for one unit of C's represents a corresponding equilibrium in the trade relations of A and C. This being so it is easy to see that the cross-rate in A resulting from the ratio between the quotation of C's currency and the quotation of B's currency (250 : 5) is different from the exchange rate of 7 deriving from trade relations between B and C.

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Let us now suppose that a change takes place in the situation, that the three currencies become reciprocally convertible and arbitrage is possible. What happens then is that if A requires B's currency to pay for imports from B it will find it more advantageous

to buy C's currency first and then buy B's currency with it in C. This means that the value of C's currency will rise in A whilst the value of B's currency will fall. The reverse will occur in C. The arbitrage transactions taking place not only in A, but also in the two other countries will continue, modifying the exchange rates previously established by bilateral trading, until a general balance of exchange rates is reached, namely, until the ratio between the value of C's currency and B's currency is the same everywhere, whether it results directly from trading operations between C and B, or indirectly from quotations of the currencies of C and B in A's currency. For example, in A one unit of B's currency and one unit of C's currency are equal to 45 and 270 units of A's currency respectively; in B and C one unit of C's currency is equal to 6 units of B's currency. Obviously, this shifting of exchange rates cannot fail to affect trading transactions between the three countries. In fact, whereas the equilibrium of the balance of trade in previous relations between B and C established an exchange rate of 7 units of B's currency to one of C's, the rate is now 6 so that C's imports from B will be lower than C's exports to B, and B will have a deficitary trade balance with C. On the other hand, at an exchange rate of 45 units of A's currency for one unit of B's currency (instead of 50 as before) exports from B to A will be stimulated, whilst B's imports from A will be reduced, i.e., there will be a credit balance in favour of B. At an exchange rate of 270 (instead of 250) units of A's currency for one unit of C's currency A will export more to C than it imports. The overall picture will be :

- A : debit balance with B, credit balance with C ;
- B : credit balance with A, debit balance with C ;
- C : debit balance with A, credit balance with B.

Thus, in a state of general equilibrium of exchange rates and multilateral trading relations, the bilateral trade balances of the various countries are not in equilibrium, and each country compensates for its deficit with one country by a credit balance with another (or several others if more than three countries are concerned). *If an equilibrium of bilateral balances is assumed as a condition then a general equilibrium of exchange rates becomes impossible if the other conditions of international economic equilibrium are to be satisfied.* In other words, it is possible for a government to obtain by means of controls an artificial equilibrium of its bilateral balances at rates of exchange which do not reflect the market situation (though experience teaches us that the performance is attended with enormous difficulties) but only at the cost of a disequilibrium in other sectors. Returning to our previous example, let us suppose that at a rate of exchange of 45 units of A's currency for one unit of B's currency, A is prepared to purchase goods in the sum of 100 million from B. Then let us suppose that in order to avoid

excessive imports A's government cuts down the figure to 50 millions. The result will be an unsatisfied demand for B's goods in A, which means that exceptional profits will be made by importers, who are able to sell the insufficient quantities of B's goods at high prices.

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From this example we may also conclude : (a) that in a situation of general balance in exchange rates the exchange rate between the currencies of any two countries results not only from the trading transactions between them, but from the sum total of their trading operations with all other countries ; and (b) *that in order to establish a general equilibrium of exchange rates all-round reciprocal convertibility is not alone sufficient ; multilateral trading must also be possible.* In fact, in the example used above, at an exchange rate of 45 units of A's currency for one of B's, A has a deficitary balance with B. Unless A were able to meet this deficit by an active balance with C, it would prove impossible for A to maintain the convertibility of its currency. The disorder at present prevailing in exchange rates is undoubtedly a consequence of a lack of currency convertibility, but the ultimate reason is that the world is still far from having re-established multilateral trading.

The real reason why a general equilibrium of exchange rates is incompatible with a bilateral trading system and an equilibrium of bilateral trade balances is that *a set of conditions arises that cannot simultaneously be satisfied because their number is greater than that of the quantities (exchange rates) to be determined.* We have seen that in the case of three countries and a general balance of exchange rates there are two rates for the three countries. For a simultaneous equilibrium of the three bilateral trade balances three conditions are necessary which cannot simultaneously be fulfilled if the market is free.

Let us now examine the problem on more general lines. Given a general equilibrium of exchange rates throughout the world and m countries, there are then $m-1$ independent rates of exchange between their currencies. Further, given the equilibrium of all balances of payment of the m countries together, there are $m-1$ equations or sufficient to determine the $m-1$ unknown quantities. Equilibrium rates of exchange are precisely those at which there is a simultaneous equilibrium of all balances of payment. The coincidence of the number of exchange rates and the number of conditions indicates logically that a general equilibrium of exchange rates is quite possible on a free market.

If we now impose the condition of an equilibrium of the bilateral balance of payment we shall obviously have $\frac{m(m-1)}{2}$

equations, or the number of combinations of m countries two by two.

If we now wish to obtain a general balance of exchange rates we have $\frac{m(m-1)}{2} - (m-1) = \frac{1}{2}(m^2 - 3m + 2)$ equations too many. A general balance of exchange rates will therefore be impossible. Only an equilibrium *sui generis* will be possible, characterized not by the presence of $m-1$ exchange rates but $\frac{m(m-1)}{2}$ independent exchange rates, that is to say, a number of rates formed by $m-1$ exchange rates, which we will call direct, and $\frac{1}{2}(m^2 - 3m + 2)$ cross-rates, which do not coincide with the direct rates. *In a free market this discrepancy between direct and cross-rates derives necessarily from the existence of bilateral trade relations.*

4

Thus we see that an international equilibrium of exchange rates and bilateral trade are mutually exclusive terms. This fact is of fundamental importance for the monetary policy of the International Fund.

From a lecture delivered by Mr. Gutt, the Chairman of the International Monetary Fund, in Harvard, in February 1948, we learn that the Fund was much disconcerted by the fact that in several countries exchange rates for dollar and pound had given rise to cross-rates differing from the official parity established by the Fund. This had already happened in the past in a number of South American countries, where multiple exchange rates are quite common, but the phenomenon had not been regarded as any serious threat to the pound because the countries in question played only a minor role in international trade. But the matter takes on quite a different aspect when it arises in countries like Italy and, more recently, France. The press has extensively reported the lively discussions of the Fund concerning the recent monetary reform in France, of which it disapproved.

It was argued that it was inaccurate to consider the rates formed in the so-called free markets as reflecting the real values of the various currencies; on the contrary, they were the result of a lack of co-operation between the governments concerned and the Fund. The object of the Fund was to bring foreign exchange rates into order even in a system of non-convertible currencies, but this could not be achieved unless all countries did their best to keep the cross-rates at the level of parity fixed by the Fund. In short, in the case of the dollar and the pound sterling all countries should undertake to maintain a cross-rate equivalent to the official parity.

In my opinion we should approach the problem as follows:

since the object of the Fund and of the member countries must be to re-establish currency convertibility and multilateral trade as quickly as possible, is not a continuation of the system of flexible exchange rates at present in force in a number of countries (perhaps even its extension) preferable to obliging governments to maintain cross-rates equivalent to the official parity?

Fund circles insist on the deleterious effect caused by the discrepancy between cross-rates and the official quotations of the Fund :

(a) doubts arise concerning the value of currencies which depreciate in cross-rates which develop in countries where there is a free market. For instance, the fact that the dollar-pound cross-rates are unfavourable to the pound confirms the opinion that the pound is at present ¹ overvalued in official quotations ;

(b) independent cross-rates increase the difficulty of re-establishing convertibility in the future. If the pound exchanges at its official dollar rate in one country, less in another, and still less in a third, on what basis will it be possible to establish a uniform conversion rate between dollar and pound ?

(c) cross-rates differing from one country to another and from the official parity fixed by the Fund lead to arbitrage despite official prohibitions and penalties ;

(d) the consequences are even more serious for trade currents. Imports and exports follow a completely abnormal trend which is bound to change abruptly once currency convertibility is re-established. The confusion brought about by cross-rates also leads to arbitrage on goods. If, for instance, the dollar is at a premium in Paris on the free market, French speculators will find it profitable to buy goods in Great Britain, import them to France, and then export them to the dollar area and sell the dollar proceeds on the Parisian free market. This type of transaction would unfavourably affect Great Britain's dollar revenues. Or another possibility might be a marked tendency to import British raw materials, work them up in France, and then export the manufactured goods to the United States. On the other hand, it might be in the interests of French importers to buy American goods through Great Britain, Belgium or other neighbouring countries rather than direct.

All this may well be true, but it should be remembered that if as a result of this arbitrage on goods the supply of dollars in France increases whilst the demand for dollars grows less, the cross-rate between dollar and pound will gradually change to the advantage of the pound and tend to approach official parity.

I do not propose to deny the disadvantages of an arbitrary system of cross-rates, but I cannot accept the form in which the problem has been couched so far. The deformation of trade currents is not the result of arbitrary cross-rates. On the contrary,

¹ Written prior to devaluation.—Tr.

it is the deformation of trade currents caused by bilateral agreements that makes a general equilibrium of foreign exchange rates impossible. This is the crux of the matter. *The international monetary system drawn up at Bretton Woods is incompatible with a system of bilateral trade agreements.*

How can the present anarchy be remedied? Should the free money market be done away with and its cross-rates replaced by the official par values established by the Fund? Let us look at the consequence of such a step. Let us suppose that the free-market dollar quotation in a given country is 100 and the pound quotation 250 so that the cross-rate is 2.50 dollars to the pound sterling, or less than the official rate. Now let us further suppose that in a desire to comply with the Fund's recommendation, the government of the country in question fixes an exchange rate in accordance with official parity. The immediate consequence would be an increase in exports to the sterling area and a drop in imports from this area, as such imports would have become too expensive; and, on the other hand, a drop in exports to the dollar area and an increase in imports from this area. The ultimate result would be an accumulation of inconvertible sterling balances on the one hand, and a growing scarcity of dollars on the other. In reality the cross-rates which the Fund condemns as anarchical because they result in an unofficial appreciation of the dollar as against the pound sterling, are merely the expression of the scarcity of dollars, a scarcity, incidentally, which the cross-rates tend to correct at least in part by stimulating imports from the sterling area and exports to the dollar area.¹

In order to avoid the aggravation of the disequilibrium which would result from legally fixing cross-rates according to official parity, a complicated control system would have to be introduced

¹ Italy is a case in point. The Governor of the Bank of Italy declared in his report: "It is as well to remember that if sterling quotations on the Italian market have often deviated from the sterling-dollar rate, this was not due to the Italian currency system, but to the present unbalanced state of our exports and imports in the sterling area. When, following on the agreement of April 17th 1947, the pound could once more be spent anywhere, its quotation on our market immediately attained official parity with the dollar, so that the British Empire and the dollar area were looked upon as one market. The quotation fell again when the convertibility of the pound was suspended on August 20th. . . . To raise the sterling quotation to the dollar level, as has sometimes been proposed, would do no one any good, because a high official cross-rate would only make the lack of equilibrium more marked, stimulating Italian exports to the British Empire whilst the increased flow of sterling found no counterpart in any substantial increase of expenditure on imports." The truth of these observations was amply demonstrated by what took place in 1949 after the Italian Government had agreed in November 1948 to fix the value of sterling at 4.03 dollars, the official rate. The high value of sterling worked against imports from the sterling area. Blocked sterling to the tune of 50 million pounds accumulated in London and created a very serious problem for Italy.

to adapt trade balances to official cross-rates. It is easy for everyone to see that this would mean a reduction in the volume of trade and a perpetuation and accentuation of the bilateral system in opposition to all the resolutions of the I.T.O. and the Fund's desire to see a system of multilateral trade re-established.

Admittedly, cross-rate disparity has its drawbacks, but the drawbacks would be still greater if uniform cross-rates were imposed before the necessary conditions for uniformity exist ; to do so would be to introduce, so to speak, a foreign body into a system which, owing to the prevalence of bilateral agreements, logically implies a difference in cross-rates in the various countries.

A general balance of exchange rates cannot be artificially brought about. In my opinion to impose a system of general exchange-rate equilibrium before creating its necessary preliminary condition, namely, multilateral trade, would get us nowhere, and it would be opposed by many countries, including France. It is worth recalling that the French reform of January 1948 was not followed by the serious disturbances in international monetary and trading relations which were prophesied. Further, although it was severely criticised in some quarters, there were also prominent economic and financial authorities, including the Chairman of the Swiss National Bank, who regarded it (and the Italian monetary measures which followed it) as demonstrating a clear understanding of existing realities and as the first step towards an international co-operation based on the real facts of the situation.

Mr. Gutt is undoubtedly right in regarding the present exchange-rate position as far from satisfactory, but in my opinion the solution of the problem does not lie in any intensification of controls, and I consider it quite impossible to create a monetary balance by such means as things stand at present. A satisfactory solution of the monetary problem is to be reached only through closer and more systematic co-operation between governments with a view to abolishing bilateral agreements and replacing them by commercial agreements facilitating the re-establishment of a multilateral system of trading in the spirit of the recent Havana Convention. Of course, simultaneous steps should be taken to ensure the domestic recovery of currencies still threatened by progressive inflation. In the case of Italy, owing to the state of the budget, the time is not yet ripe to adjust the official parity of the lira to the Fund, and it is advisable that the present system, which permits the adjustment of the rate of exchange to changes in domestic prices, should continue for the time being. It will, of course, remain the duty of the Italian Government to continue its efforts to balance its budget at the earliest possible moment and to stabilize the value of the lira. Substantial progress in this direction was made both in 1948 and in 1949.

CHAPTER XIV

THE DISTRIBUTION OF INDIVIDUAL INCOMES

I

THE theory of marginal productivity has become the scientific formula in the works of contemporary economists for explaining the distribution of the total social product. In an economic system based on free competition automatically-operating economic forces tend, in a state of equilibrium, to reward each factor in accordance with the value of its corresponding marginal product (cf. Chapter II, 10).

The wage of the worker approximates to the marginal productivity of labour, because, as Marshall points out in a well-known passage, labour, just like any other production factor, is valued according to its marginal utility and not according to its total utility. Whereas the latter may be considerable, the former can be quite inconsiderable when the factor labour is available in such large quantities in relation to the other production factors that it has to be utilized for less and less important purposes.

J. B. Clark, one of the founders of the theory of marginal productivity, declares that the law of wages set up by this theory is "highly desirable and morally justifiable". This contention is justly rejected by contemporary economists. On the other hand, and especially in recent years, the theory of marginal productivity has been opposed in particular by those who refuse to admit the application of that theory to wages and wish to see wage rates determined by considerations of social justice. In their efforts to improve the conditions of the wage-earning classes, efforts which have always been approved by leading economists, they confuse two totally different things, namely, wages considered as *costs* of the entrepreneur, and wages considered as *income* of the workers. For a clear understanding of the problem of distribution the following two questions must be kept strictly separate : (a) the best utilization of the production factors. We know already (cf. Chapter II, 11) that rational production must be based on the marginal productivities of the individual production factors. The price paid for the use of the individual factors represents the corresponding costs of the entrepreneur, who then proceeds to choose the most favourable combination of these factors. Under a system of free competition each undertaking uses each factor up to the point at which the

value of its marginal product is equal to the price which has to be paid for its use. The theory of marginal productivity is valid no matter what the socio-political structure of the country concerned in so far as the intention is—whether in free production, economic planning by the State or even collectivism—to obtain the maximum product possible with the available economic resources. (b) Under an individualist economic system the prices paid for the use of the individual production factors are the personal income of those in whose possession they are. Under such a system there is really no problem of distribution as distinct from the process of production. The share of each individual factor is determined by the process of production itself, i.e., through the marginal productivity of each factor. Now the question arises whether the total product is distributed as a whole, whether it is inadequate, or whether some residue is left over, when each factor is rewarded in accordance with the principle of marginal productivity. A mathematical analysis of the problem shows that on the assumption of free competition and in a state of static equilibrium in which all undertakings have attained their optimal extent and therefore produce at the lowest-possible costs so that these costs equal sales prices, the total product is accurately distributed (cf. Chapter II, Appendix).

But now a problem of a social nature arises, namely, is it “just” from the social standpoint that personal income should be determined by the value the market attaches to the services rendered by the individual or by the means of production in his possession? This question arises each time a production factor brings any very considerable income to its fortunate owner in consequence of its shortage. If, on the other hand, the factor labour is, relatively speaking, available in superfluity and its marginal productivity and therefore its return, is low, people feel that it is “social injustice” that a worker should be paid a wage which does not permit him to maintain a reasonable standard of living.

Now all this relates to the second problem, i.e., the social problem of the distribution of the national income, and not the *technical* problem of what value is to be attached to the individual production factors. If there is an acute shortage of a certain commodity, for instance, very fertile or very favourably situated land, then in order that it shall be rationally utilized the price to be paid for it must be correspondingly high. Even in a socialist society the difference in the fertility or the position of land would have to be taken into account. The contribution to the whole made by the better kinds of land, which are at the same time scarce, must be valued more highly than that of the inferior kinds. If this is not done then there is a danger that the better kinds of land will not be used to the best advantage of society. Now, although it is absolutely necessary in the interests of securing the

best possible combination of the production factors calculated to produce a maximum total product that the prices of the individual factors, i.e., their costs to the undertaking, shall be in accordance with the contribution to the total product made by the marginal utility of each factor, it is, on the other hand, not at all essential that the personal income of all those who provide the individual factors shall be determined exclusively by their marginal productivity. The extreme case is offered by a socialist economic order in which there is no personal income from land and capital. But even in a system of free enterprise there is no reason why the State, *after once having let the market determine the prices of the individual factors*, should not take suitable measures, for instance, by means of a new tax, or in some other way, to limit the income of those who are fortunate enough to possess a factor which is not readily available. And, on the other hand, according to a definite socio-political concept, the income of wage earners can also be changed. Certainly, it is impossible, and would in any case not be desirable, to separate the reward of labour from the actual product of labour; even in Russia the authorities find it necessary to measure wages against the quantity and quality of the work performed. But the rigidity of the principle can be alleviated, for instance, by "compensation accounts" which could fix workers' incomes at various levels according to the size of their families, by tax allowances to the fathers of large families, and so on. Such measures in favour of the wage-earning classes have been taken in various countries, and in the last resort they result in an increase in real wages. In this way the income of the worker can be made to exceed the level of the marginal productivity of labour though the employer continues to pay wages in accordance with it.

The economists of the liberal school believed that once they had formulated the laws according to which the prices of the production factors developed they had at the same time completely settled the problem of distribution as well, and they rejected all State interference. The collectivists, however, recognized that there was a distributive problem, and that from the standpoint of social justice it was not satisfactorily settled by the mechanism of the market. But their conclusion was to advocate the abolition of the market itself. More than one critic of economic science has failed to understand that there is a problem of production apart from the problem of distribution. In their opinion it is not permissible that the wages of the worker should be left a plaything of "blind forces" such as supply and demand. They overlook the fact that the market is nothing but a mechanical means for measuring the marginal productivity of the various production factors, and that its operations permit the entrepreneur to combine these latter in the best possible fashion. For instance, the fact that wages in

Egypt are very low whilst ground rent is normally very high is not the fault of the market, which does nothing more than register the crying disparity between the amount of arable land and the amount of labour-power available to till it. Just as every sensible person recognizes the value of machinery—the question of its ownership, either by individuals or by the community, is another matter—so ought everyone to recognize the importance of the market, at least to a far greater extent than is the case at present, and to appreciate its value as an instrument for securing rational production in that it regulates the use of the individual production factors according to their relative availability.

The essential purpose of the theory of marginal productivity is to discover the conditions under which production can be carried on at the lowest possible costs. To say that the State can influence the distribution of individual income and that this distribution is by no means dependent on “economic laws” is not the same as denying the theory of marginal productivity. And, on the other hand, to accept the validity of this theory is not the same as asserting that the personal incomes of all those who share in the possession of the various production factors must under all circumstances be in exact accordance with the marginal product of the factors themselves.

2

John Stuart Mill draws a clear distinction between production and distribution even in his “Preliminary Remarks”¹ though the distinction has often been wrongly interpreted by economists. According to him the production of wealth is subject to physical laws, whereas, unlike the laws of production, those of distribution are partly of human institution. Mill admits frankly that the social institutions which influence the income of owners of land, capital and labour-power cannot be regarded as ultimate and final, and that thanks to social improvements they can be greatly altered.

The separation of questions of production from questions of distribution is clearest in the writings of that author who has done more than anyone else to develop the theory of marginal productivity, namely Walras. Reading his *Économie Sociale*² one realizes that he regarded its main work “*Économie pure*” as a presentation of the production theory, irrespective of the fact that this work also deals with the question of the reward of the various production factors under a system of free competition. His “*Économie pure*” is

¹ John Stuart Mill : *Principles of Political Economy*, p. 26, Longmans, Green, London, 1886.

² L. Walras : *Études d'Économie Sociale (Théorie de la répartition de la richesse sociale)*, 1896.

a collection of "theorems", "truths", "natural laws" and "logical observations". In his opinion those economists who believe that the theory of production can offer a principle for social morality are wrong. "In my opinion," he writes, "it is not a matter of great importance that social riches are produced liberally when they are not distributed properly amongst all the members of society. That is a special question: it is no longer a question here of truth or usefulness, but of justice." On the other hand, Walras complains that certain writers have allowed the moral view-point to encroach on the whole sphere of economic science. "Riches", i.e., production, whose accumulation depended on "natural" laws, and "justice", i.e., distribution, should be strictly separated. "There are two groups of social facts and relations, namely, economic facts and relations on the one hand, and moral facts and relations on the other, and therefore there are two different organizational principles, namely, a principle of an economic nature, utility or interest, and a second principle of a purely moral nature, goodness or justice. Thus we have two social sciences, two theories of these facts and relations, namely, a science which is known as 'economics', and a moral science, 'social science' in the narrower sense."¹ Production comes in the sphere of economic facts; distribution, on the other hand, comes in the sphere of moral relations. The latter deals with purely human and not with natural facts; it deals with impulses of the human will and not with the inevitability of natural forces, impulses which must subordinate themselves to the principle of the good and the just.

In conclusion, Walras declares that the following conditions must be satisfied for the economic organization of society: production must be as prolific as possible; distribution should divide social riches amongst the various members of society as justly as possible.

Pareto's writings also clearly separate production and distribution, though he lays less stress on the separation than Walras does. After having laid it down that the laws of production as embodied in economic science apply equally to a socialist economic order, Pareto comes to the following conclusion: "What can be altered without neglecting the condition of the maximum utility value of all goods in the interests of society is the distribution of individual incomes."

However, in a society in which the individual production factors are, generally speaking, in the hands of different social classes, the marginal productivity of the individual factors is always the decisive element which determines personal income no matter what changes in income are brought about by State intervention, whether through a co-operative distributive organization, or

¹ *Op. cit.*, p. 122.

through spontaneous individual action as expressed in the various forms of social welfare. The spreading of income from the well-to-do classes to the non-possessing classes by means of taxation has certain inevitable limits, and this applies in particular to countries where the flow of income is not great but the increase in the population is considerable.¹ In any case, no material changes in the distribution curve of individual incomes are possible along these lines (Section 6). But the State can open up a promising line of activities if it seeks to exercise indirect influence on the distribution of individual income *by changing the conditions, on which it depends*. Social institutions and social legislation have always had a permanent effect on the distribution of individual income. In this respect, for example, the difference in the laws of inheritance between Great Britain and France are extremely instructive: in the former case the law strives to conserve landed property and in the latter it distributes it. Agrarian reforms have sometimes divided up large-scale landed property amongst a new class of smaller proprietors. In Egypt, where, as we have already pointed out earlier, there is a crying disparity between the amount of arable land and the amount of labour-power available to till it, various governments have tried to alleviate the discrepancy by organizing big irrigation works and thereby increasing the available area of arable land. They have also sought to improve matters by strengthening the internal security of the country and thereby attracting foreign capital and increasing the demand for labour-power. But in a country like Egypt, where the population increases very rapidly, all such alleviation is only temporary and the living standards of the great masses of the people remain permanently low. A radical solution is the only one which offers any hope: emigration. Should this prove impossible then the only way to raise the living standards of the working classes is by birth control. A big population, but one which largely consists of undernourished and sick individuals unfit for work, does not spell prosperity, as the example of Egypt shows.

3

In all industrial countries governments have sooner or later intervened, with greater or lesser success according to circumstances, in order to improve the condition of the working classes, and in this way a whole system of social legislation has gradually arisen designed to restrict the employment of women and young people, to regulate working hours and in particular night-work, to insure workers against accident, sickness, old age and unemployment, to provide them with at least one weekly rest day, to improve their

¹ L. Einaudi: *La guerra ed il sistema tributario italiano*, p. 490, 1927.

housing conditions, to raise their educational level, and to give proper care and attention to mothers, babies and children. The overwhelming part of the social legislation of our day was brought into being by the liberal State. The first factory laws were passed in England at the beginning of the nineteenth century.

The State is not an independent thing, a sort of *deus ex machina*, apart from society and the individuals of which it is composed and above their interests and their passions. In the beginning powerful private interests in the liberal State opposed the introduction of labour legislation to protect the worker, but later this resistance weakened. The organizations of the workers were also violently opposed by the employers. Those same industrialists who appealed to the State to defend their interests against those of other social classes (for instance, landlords) and to prevent foreign competition, became zealous advocates of economic liberalism where the relations between capital and labour were concerned, and in this respect they were opposed to any interference on the part of the State.

Certainly, social legislation, like all other socio-political measures, must observe the rules of moderation. Social burdens which are so heavy that industry is hampered by an unjustified increase in labour costs bring about an artificial change in the coefficients of production which must deleteriously affect the whole economic system, and naturally the working class as well, which will suffer chronic unemployment in consequence.

4

Has the distribution of individual incomes a tendency to be unequal even in a free-market economy in which the constant activity of the State succeeds in preventing the exploitation of one social class by another? Or are forces at work under such circumstances to eliminate such inequalities gradually?

Many readers will be acquainted with Ricardo's famous theory of increasing land rent. With increasing population the prices of agricultural produce rise, and less-profitable land is now tilled, or tillage becomes more intensive, so that the ground rent of landowners shows a continual upward trend. On the other hand, real wages which are determined by the absolutely necessary means of subsistence for the workers, remain almost unchanged. Now, when a great part of the land is in the hands of a small number of big landowners, as was the case in England in Ricardo's day, the rising tendency of ground rent means that inequalities in the distribution of the national income are aggravated. Ricardo was not in a position to foresee the tremendous improvements in agricultural technique which came about after his time, or the opening up of

enormous areas of arable land in other parts of the world, or the revolution which took place in transport and communications, all of which caused the European market to be flooded with grain with the result that after 1870 European agriculture was visited by a grave crisis and ground rent dropped sharply.

Ricardo's theory provided the basis on which Lassalle developed his famous "iron law of wages", and Rodbertus tried to prove that within the framework of a free-market economy every increase in the total product inevitably benefited only those social classes which owned the land and the means of production. In order to prove his thesis Rodbertus cited English statistics concerning the distribution of individual incomes. Marx went even further in his conclusions, and he adopted Proudhon's standpoint, who, even earlier, had propounded the axiom: "The progress of misery is parallel with and corresponds to the progress of riches,"¹ declaring that there were immanent contradictions within capitalism which would ultimately destroy it. According to Marx, competition brought about an increasing accumulation of riches in the hands of a progressively smaller number of capitalists whilst the misery of the proletariat increased proportionately. Finally social antagonism would become so strong that the whole system would collapse: "the expropriators are expropriated".

If we leave ideologies out of account and turn to the facts we find that two groups of forces influence the distribution of individual income: one group tends to increase social differentiation and aggravate the tension between the upper classes and the great masses of the people; whilst the other group favours the rise of moderate incomes and therefore counteracts the effect of the first group. In all probability there was a tendency towards increasing inequality of income at the beginning of "the capitalist era." Former restrictions, hallowed by tradition and embodied in laws, and measures to protect the non-possessing classes, were abolished. Energetic, clever, but not overscrupulous persons exploited the new opportunities of profit which opened up to free enterprise. They could choose between big industrial and big banking concerns, or they could take part in the tremendous development of international trade and international financial relations, or in the opening up of new markets, or in the development of overseas countries by European capital. In addition, at the beginning of the nineteenth century, there had been a rapid increase of the population in England which had caused a fall in wages and a rise in ground rent. The development of large-scale undertakings and the modern banking system caused the decay of the old artisan class, whose members were not in a position to compete with big capital. In this way, so to speak, the middle rungs of the ladder of individual

¹ Proudhon: *Op cit.*, p. 89.

income were removed and the separation between those at the top and those at the bottom was aggravated. Those who had reached the upper rungs accumulated riches by saving, and, thanks to the income from this, prevailing inequalities were intensified, whilst inheritance perpetuated the situation.

But saving means the creation of new technical capital. Costs of production and commodity prices fall; quality improves and new commodities are produced. The demand for labour increases, and wages therefore rise, owing to the increase of capital, which tends to cancel out the unfavourable effects of the rapid increase in population for the working class. The advantages of economic development, which were at first confined to a small minority of the population, now begin to spread over wider and wider circles and the distribution of individual incomes reveals a tendency to become less unequal. The great inequality in the distribution of personal incomes which prevailed at first and permitted the accumulation of large savings—statistics show that a large volume of savings comes from people who have a large income—created conditions which later on improved the situation of the working class. The ranks of all those who should have fallen back in disorder at the first onslaught of “capitalist economy”—artisans, small employers, farmers and workers—begin to close again. Resistance developed in many ways, even with the assistance of the State. Later the process of industrial concentration, which cannot, of course, permanently go beyond the limits set by the “optimal” size of undertakings, slows down and considerable room is left in which smaller undertakings can flourish. On the other hand, the increase in the population and its concentration in big towns create favourable conditions for a new middle class (think, for instance, of the growing number of retail traders). Large-scale industry also strengthens the middle class by creating a new group of higher employees, technicians and book-keepers and also creates a certain differentiation in the working class itself, from whose ranks there develops an ever-increasing élite of capable and intelligent men able not only to attend to more and more complicated and delicate machinery, but to build and improve on it. The middle rungs of the individual-income ladder have been restored.

5

It is not possible to determine *a priori* which of the two groups of forces is on the whole the stronger. The question can be answered only after a thorough study of statistics relating to the distribution of individual income. Unfortunately the material at our disposal is very inadequate. It consists of statistics concerning the collection of income and property taxes, statistical investigation into wages,

and the special statistical inquiries of various investigators. And then, only England and Prussia possessed during the nineteenth century statistics (and they were imperfect) which permitted an investigation of the distribution of individual income over a period sufficiently long to permit more or less reliable conclusions.

Various index devices have been proposed to measure the distribution of individual income. In my experience the best form of index is that which indicates the relation between the number of individuals whose income is above the average and the total number of people composing the society in question. It can be worked out very easily and it has the added advantage of being easily understood by the layman. If this index figure rises, it means that the distribution of individual income is becoming less unequal. However, the method is accurate only if the distribution of individual income obeys Pareto's so-called "first law". If this is not the case then we shall have to use a second figure to indicate the share of the total income enjoyed by the individuals whose personal incomes are above the average (cf. the appendix to the present chapter).

For the sake of simplicity let us indicate the first ratio with P and the second with Q . It can now be proved that the difference $Q-P$ is equal to the half of the average deviation from the average income, the average deviation being expressed in a percentage of the average income itself. For instance, if $Q-P$ is 0.40 then individual incomes show average deviations from the average income which amount to 80 per cent of the latter. The significance of the difference $Q-P$ (which I indicate with D) is therefore quite clear: the higher D is the greater all in all will be the inequalities in the distribution of individual income.

6

After these methodological observations I should like to discuss briefly the most important results which statistics on income have given us. Above all, I should like to recall a principle set up by Pareto in respect of the relation between average income and the degree of inequality in the distribution of individual incomes. In the view of this great Italian economist, who not only permanently influenced economic theory, but also opened new avenues to statistical investigation, a diminution of inequalities in the distribution of individual incomes can come about only when the average income rises.

Everyone can see how tremendous is the significance of this axiom, provided that it is in accordance with the facts, for all economic and social policy, because it implies that all the State need do is to take measures calculated to increase the total income,

i.e., total production, and then the inequality in distribution must, *ipso facto*, diminish without any further intervention on its part.

Unfortunately this assumption applies *only when Pareto's definition of inequality is accepted*, and that is something which is peculiar to the outlook of Pareto himself and leads to conclusions which are all too unlike what is generally accepted under the word "inequality", so that it can hardly be considered as a useful instrument of scientific research. The following considerations indicate also that Pareto's axiom cannot be universally valid. Let us assume that within a group of people, whose average income = R , the richest amongst them are deprived of a part of their income, which part is then divided up equally for the benefit of the poor. The average income would remain at the same level, but the distribution would be more uniform. From this it can be seen that there is no necessary and uniform relationship between the average level of income and the degree of inequality in the distribution of individual incomes. This fact is also confirmed by the statistics of various countries and different districts in the same country. For instance, both the average income of the population and the inequality in the distribution of individual income is less in Italy than in Great Britain. But in the United States, where the average income is relatively high, higher than in Great Britain, the distribution of individual incomes is not so unequal as it is in other big industrial countries.

As there is no necessarily given relation between the level of average income and the inequality of individual incomes there is no logical reason why the government should not try to diminish this inequality even when the average income remains the same or even diminishes. However, any such attempt would meet with enormous practical difficulties. Income statistics from all countries show clearly that even in more prosperous countries the number of big incomes is quite small compared with the size of the population and from this it follows that even a very modest increase of the smaller incomes—which are, of course, by far the more numerous—if it had to be at the expense of the bigger incomes would demand such a great cut in these latter that it could not be carried out without causing the gravest disturbances. An increase in the total national income is therefore still the essential condition for any success in a policy of approximating individual incomes.

The following circumstance must also be taken into consideration. Statistics give us information about the distribution of incomes "earned" by individuals, but they tell us nothing about a very important social and economic factor, namely, about the way in which these incomes are subsequently expended. As a great part of the larger incomes is put to one side or taken away again in direct taxation, or expended for philanthropic purposes,

the distribution of incomes with regard to personal expenditure is much less unequal than the actual distribution of earned incomes. This fact was made clear in an investigation conducted by Professor Moulton in the United States. From this it follows that if the income of well-to-do people is to be divided up amongst the poor, then only that part of their income which is used for personal consumption could form the object of this redistribution, and that represents a very much smaller sum than the total income of the well-to-do classes.¹ And if that part of the income of the rich which is placed to one side and productively invested were also taken to be shared out amongst the poor then the result would be to stop economic development, which the poorer classes would also feel keenly.

A further consequence should not be forgotten. The total money income of a country is nothing more than a sum of prices—prices of individual commodities (each price must be multiplied by the quantity of commodities) and of various services. A redistribution of individual money income would fundamentally change individual demand for the various goods and services. The reduction of the income of the well-to-do would also mean a reduction in the incomes of all those who sell their services or their expensive and high-quality goods to the rich. Thus a redistribution of income in this fashion would probably result in a destruction of money income. The sum of money which would finally be available for distribution amongst the poor would probably represent only a small part of the sum calculated on the basis of the total income as indicated by the present individual incomes.

The previous observations indicate that a policy of levelling individual incomes would soon find itself in an impossible situation. On the one hand it would take the concept of social justice into consideration, but by hampering savings it would slow down the increase in the total income of the country. An all-too-glaring discrepancy in individual income offends our sense of social justice, but on the other hand it makes for an increase of production precisely on account of the possibility it offers for large savings, and this increase of production creates the conditions for a future material improvement of the conditions of the working classes.

Which point of view should prevail in deciding the policy to be

¹ In "plutocratic" Britain wages and salaries accounted for between 65 and 70 per cent of the total income of the population, whilst "profits and interest" amounted to between 20 and 25 per cent, which included the incomes of small entrepreneurs and small capital owners. The incomes of landowners and house-owners amounted to about 10 per cent of the whole. If the incomes of the rich were now divided up amongst the poor then as far as Great Britain is concerned the position of the latter would not be very much improved. Details can be found in Colin Clark's *National Income and Outlay*, p. 94, Macmillan, London, 1937.

allowed? Should the immediate or the future effects be taken into consideration? The decision will obviously depend on circumstances. If the misery of certain classes is particularly crass, then it will always appear a matter of immediate urgency to repair such a social blemish.

7

Here, however, is the cardinal point. Do available statistics indicate that the distribution of individual income tends to remain more or less the same, or to change in the direction of greater or lesser inequality? Lord Stamp and Professor Bowley have carefully investigated British statistics on the subject. According to Lord Stamp the distribution of individual income in Great Britain showed hardly any change during the course of the nineteenth century; at the utmost there were minor fluctuations. All social classes experienced an improvement in their material situation, but at the same time they maintained their respective positions and their size with noticeable constancy. Bowley also came to the conclusion that the increase in the total national income from 1880 to 1913 was so distributed amongst the various social classes that their relative position at the end was roughly what it had been at the beginning.

I have published a number of articles based on Prussian income statistics, and I propose to repeat the most important of my conclusions here. The individual values of the inequality index D over a number of years are given in the following table, beginning with the second half of the nineteenth century. I have ignored the previous years because only unreliable and fragmentary statistics are available concerning them.

<i>Year</i>	<i>D</i>
1854 . . .	0·32
1873 . . .	0·38
1875 . . .	0·28
1892 . . .	0·37
1913 . . .	0·33
1918 . . .	0·37
1928 . . .	0·29

The above figures indicate that during the course of the period in question the distribution of individual incomes in Prussia experienced changes in both directions. From 1854 to 1873, the twenty years in which modern capitalism developed in Prussia, the distribution was particularly unequal. The same was true of the period from 1913 to 1918 when the first world war brought rapid wealth to a class of war profiteers. At other times, however, the inequality

had the tendency to diminish, for instance, in the years 1873 to 1875, probably as the result of the grave economic crisis which followed a period of reckless investments, and again in the years 1918 to 1928. On the whole, however, the index figures show a remarkable stability, for instance, the years 1873 and 1918 have almost the identical index figure, whilst the index figure for 1928 (0.29) is not so very much different from that of 1854 (0.32).

Thus the figures in the above table, which embraces a period of over seventy years, offer no support to the Marxian thesis that the development of modern "capitalist" industrialism causes an ever-increasing disparity in the distribution of individual incomes. However, the antithetical theory according to which differences of income tend to equalize themselves, thanks to the forces immanent in a liberal economic order, receives no encouragement either. This second thesis was put forward by a number of economists, including Leroy-Beaulieu. It is also implicit in the theory of Pareto concerning the relation between the increase of average income—during the past hundred years the average income has increased considerably everywhere—and the diminution of the disparity in individual income.

The conclusions which we were previously enabled to draw are confirmed by a more detailed comparison of the statistical data for the years 1875 and 1928 embracing the whole population of Prussia. The results are set out in the following table, which shows what part of the total income (b) fell to the lot of particular population groups (a), which were more or less the same, in the two years 1875 and 1928, though the statistical data available did not permit us to obtain exactly corresponding detailed figures for the two years.

That upper tenth (approximately) of the total population which

1875		1928	
(a)	(b)	(a)	(b)
56.9	32.1	57.7	29.1
31.0	30.0	31.7	32.6
6.7	11.3	6.5	14.1
5.4	26.6	4.1	24.2
12.1	37.9	10.3	38.3
100.0	100.0	100.0	100.0

occupied the topmost rungs of the income ladder in the two years in question enjoyed an income in 1928 which amounted to about 38.3 per cent of the whole, and that was but little more than it enjoyed in 1875 over half a century before. On the whole the distribution of the total income in the two years was almost identical, as can be seen from the two columns headed (b). However, in the meantime the average income of a family had risen from 636 marks to 1735 marks and, although in the meantime the population of Prussia had increased from 25 to 39 millions, that, as can be seen from the statistics, was far in excess of the increase in prices which had taken place in the same period.

These results indicate that the capitalist system did, in fact, solve the difficult problem of improving the material situation of a rapidly growing population without at the same time causing an aggravation of the inequality in the distribution of individual income—thus putting modern German critics of capitalism to rout.

8

The inadequacy of the statistical data available means that comparisons between one country and the other can have only a limited validity. I have collected statistical data from various sources in order to set up our index of inequality *D*, for England, and the following is the result :

<i>Year</i>	<i>D</i>
1801 . . .	0.47
1843 . . .	0.42
1850-1 . . .	0.43
1867 . . .	0.41
1879-80 . . .	0.42
1891 . . .	0.42
1924 . . .	0.36

The first thing which strikes one is the considerably higher value of the index figure *D* in England as compared with Prussia. During the whole period in question the distribution of individual incomes was much more unequal in England than in Prussia. English statistical data also gives no indication of any tendency towards an increase in inequality ; in fact, there is a surprising constancy in the distribution of individual income, as pointed out by Lord Stamp and Professor Bowley. The first marked change took place in the years from 1913 to 1924 and that was towards a diminution of inequality so that by the latter year the big difference between England on the one hand and Germany, the United States and other industrial countries on the other in the inequality of individual

incomes had become less. Incidentally, in the opinion of English statisticians the increase of real wages enjoyed by the working class in this same period was quite considerable.

Another statistical argument which points in the same direction. If the development of the "capitalist" system had led to the increasing impoverishment of the great masses of the people, as Marx contended, then this phenomenon would be reflected in an increase in the number of people whose income was below the average level. Here are the figures I have been able to obtain :

NUMBER OF PEOPLE WHOSE INCOME IS BELOW THE AVERAGE

<i>England</i>		<i>Prussia</i>	
<i>Year</i>	<i>Percentage</i>	<i>Year</i>	<i>Percentage</i>
1801 .	. 82	1875 .	. 78
1850-51 .	. 80	1902 .	. 84
1879-80 .	. 83	1908 .	. 80
1913 .	. 81	1913 .	. 79

These figures indicate that the number of people having an income below the average level was round about 80 per cent both in England and Prussia. The constancy of this figure is a significant fact in relation to the stability of the individual-income curve and a proof that the fundamental circumstances on which the form of the curve depends continue to exist.

Not only these figures, but also many other facts dispose of the prophecy of Marx about the impending catastrophe to which the progressive concentration of national riches in the hands of a small group of "plutocrats" would lead. Incidentally, the contradiction between Marxist theories and the facts were pointed out forty years ago by Bernstein, David and others.

The romantic view that the working classes lived an idyllic existence before the rise of "modern capitalism" is also refuted by the facts. "Even when grain is cheap," wrote Turgot in 1770, "it is a luxury commodity which the people cannot afford." Very many people "consume neither grain nor corn. . . . The rural population live for a great part of the year on chestnuts, turnips and a poor quality black bread which has no real title to the name of bread at all . . . their wages and their living conditions are largely determined by the prices of these poor foodstuffs."¹

9

Our modern industrial economy, which is characterized by the concentration of capital, the use of extensive and costly machinery and plant, mass production and a rational organization of labour,

¹ Turgot : *Lettres sur la liberté du commerce des grains*, Daire, vol. I, p. 247.

inevitably replaced previous economic systems, whose lower productivity could no longer support a rapidly increasing population. We must, of course, not ignore the fact that in the period of transition which led up to the present methods of production certain human values were lost. For one thing, instead of the former direct connection between the master and his journeymen and apprentices, there is now a sharp cleavage between the factory management and the working masses. The worker no longer has a composite picture of his factory and its organization, and he no longer knows the pleasure given by the success of personal work ; instead each worker must make the same, more or less simple, movement again and again, until he is sick and tired of it, because it belongs to the process by which this or that commodity is turned out on a mass scale.

This depressing fact is regretted by all, irrespective of party, who regard the moral uplifting of the working classes as one of the most important factors in cultural progress. But as far as production itself is concerned there are also deleterious results. To increase the productivity of human labour-power it is not enough to improve the material conditions of production or the methods of financing it ; something more is required : psychological conditions should be created in the factory to encourage the workers to co-operate in the result. If the worker can be persuaded to take an active part in the life of the factory, be brought to understand the objects, requirements and difficulties of production, be made conscious of the importance of his own particular work and be given an opportunity of expressing his own personality then the effect on total production will inevitably be favourable. In addition, workers who stay a long time at the one job invariably accumulate a great deal of experience, particularly if they happen to be good observers of what goes on around them, and although each man's experience may not be of very great importance, the accumulated experience of all of them can do much to improve methods of production. During the war the Germans introduced a system of bonuses in order to encourage workers to approach managements with suggestions for improvements. This result obtained in this fashion was made available to all the factories concerned, and quite a considerable reduction in production costs was obtained.

In the last resort, however, the success of an undertaking depends on an undivided leadership which alone is in a position to make quick decisions, adapt operations to changed market conditions without loss of time and, finally, to obtain the best possible combination of the various production factors. The leader of the undertaking bears full responsibility and takes the risks involved. If he makes a mistake as a private entrepreneur then his profit suffers ; and if he is the managing director, etc., of some

joint-stock company then it is his shareholders who suffer, whilst he runs the risk of losing his job. It is quite clear that the man who bears the burden of responsibility must be free to make his decisions in his own way.

Now although the well-being of an undertaking is in the interests of both the entrepreneur and his workers their standpoints can be very different. For the entrepreneur the undertaking which he has founded, or which he has developed, represents a purpose in life ; for the worker it is often no more than just the place where he happens to be working for the time being. The entrepreneur must look to the future and judge what the remoter consequences of his decisions are likely to be. Above all, he is anxious to make his undertaking financially sound by building up reserves for the future and very often his plans are designed to bear fruit only at a later date. The worker, on the other hand, is quite naturally interested in immediate results.

These considerations clearly suggest that any workers' participation in industry ought usefully to be limited if the result is not to be lowered productivity and a withdrawal of private capital.

Let the so-called "factory councils" be legally recognized, but their powers should be carefully defined and it should be made impossible for them to interfere with the leadership of industry. Parity of representation of capital and labour in the council with the appointment of the entrepreneur or director as president is not sufficient guarantee. Such councils should have advisory capacities only and they should be called upon to give advice only in matters on which the workers are likely to possess useful knowledge and experience. It is certainly a desirable thing that use should be made of the practical experience of everyone who has it, but it can lead to nothing but trouble if workers begin to draw up their own production plans and interfere with organizational problems, which are usually of a highly complex nature and involve economic, technical and financial problems as well.

At the beginning of 1947 the Italian Minister for Industry made a proposal for the setting up of factory councils, but its provisions definitely overshot the mark and it therefore came in for a deal of justifiable criticism from industrialists. For instance, Article 18 of the proposed draft made it an obligation on the part of the management to keep the councils currently informed concerning all new labour projects, the purchase of raw materials, financial plans and so on. Industrialists had good reason to fear that if this were done information about their undertakings would leak out which would be better kept confidential. The advisory capacities of the councils were also extended to spheres in which it is doubtful, to say the least, whether practical co-operation on the part of workers could bear fruit. The proposal also gave councils

the right to make binding decisions not only with regard to the ear-marking and expenditure of funds for the purposes of social relief—which would be permissible provided the law laid down a maximum contribution in relation to the revenues of the undertakings in question—but also “concerning the best use of labour-power.” But this meant that the hands of the entrepreneur or his management would be bound in matters of internal organization, and that such matters would be left to the discretion of the councils. Certainly, there have been cases in Italy where such councils have worked joyfully together with managements to break down worker resistance and so secure a rapid reconstruction of industry. However, the material collected by the ministerial economic commission to date contains sufficient examples of the contrary to suggest that experience in this respect has not been altogether favourable. Under the influence of the political parties the councils became ideological battlegrounds, and indiscipline and unrest in the factories was the result.

Article 19 also represents a threat to the productive efficiency of industry because it hampers managerial freedom of action. By its provisions the councils can be empowered by the Ministry for Industry to supervise the execution of production plans, and can demand to examine the administrative and accountancy data of the undertaking. In addition, councils are under an obligation to report on “proposed planning projects and industrial production and distribution plans.” This is a clear indication that in the intention of the authors of the bill the councils were to be made into an instrument of that general economic planning of Italian industry which the extreme political parties have inscribed on their banners.¹ For the time being the proposals have been dropped and it is to be hoped that they will not be revived again.

CHAPTER XIV — APPENDIX

PARETO'S LAW OF THE DISTRIBUTION OF INDIVIDUAL INCOME

PARETO investigated the income statistics of numerous countries and discovered that the distribution of individual income can be approximately arrived at by a function of the form $N_x = \frac{A}{x^a}$ or, more

¹ Profound observations on the social problems of our day are contained in Professor Röpke's book, *The Social Crisis of our Time*, W. Hodge, London, 1950.

generally, of the form $N_x = \frac{A}{(x+a)^\alpha}$ where N_x is the number of people whose income is equal to, or greater than, x . A , a and α are parameters which can be determined from statistical data from case to case. Pareto defines "increase of inequality of individual income" as follows: if N_h be the number of people whose incomes are equal to, or greater than, h , N_x being similarly defined (x being greater than h) then the inequality of individual income increases with the decrease of the quotient $\frac{N_x}{N_h}$. If we put $N_x = \frac{A}{x^\alpha}$ and $N_h = \frac{A}{h^\alpha}$, it follows from this definition that $\frac{N_x}{N_h}$ increases when α decreases and vice versa. The constant α can thus serve as a measure for the inequality of individual income, i.e., a decrease in α corresponds to a decrease in inequality.

If the distribution of income follows the law $N_x = \frac{A}{x^\alpha}$, the total of incomes between the limits of h and k is

$$\int_h^k \frac{aAx}{x^{\alpha+1}} dx = \frac{a}{\alpha-1} (hN_h - kN_k).$$

If k is very large so that we may put $N_k = 0$ without appreciable error, we get a very simple formula for the average income of the N_h people whose incomes are greater than h : this average income is $\frac{ah}{\alpha-1}$.

From this formula for the average income it follows that the magnitude of the average income varies inversely as α , if h is assumed to be constant. This means that the average income must rise if α , the measure of the inequality, is to fall. This is the assertion of Pareto mentioned in the text.

On the given assumptions this assertion cannot be denied; in this case the assumption is Pareto's definition of inequality. He rejects any discussion of definitions as useless, as all definitions are arbitrary. It is nevertheless necessary to formulate definitions in such a way that they may be used as useful tools in the interpretation of facts.

The following definition should meet the case: the inequality of individual income decreases, when the differences between individual incomes and average income decrease (on an average). It is sufficient to calculate these differences either for the incomes above the mean, or for those below, and then multiply by two, as, from the definition of the (arithmetic) mean the sum of the positive

and negative deviations are equal. Let $a_1, a_2 \dots a_n$ be the incomes above the average m so that the sum of the deviations is $(a_1 - m) + (a_2 - m) + \dots$ and the arithmetic mean of the deviations expressed as a fraction of m is

$$2 \frac{[(a_1 - m) + (a_2 - m) + (a_3 - m) + \dots]}{nm} = 2 \left[\frac{r}{nm} - \frac{n_1}{n} \right]$$

where n is the total number of individuals, n_1 the number of individuals having an income above the mean, and $r = a_1 + a_2 + a_3 + \dots + a_n$, i.e., the total income of n_1 individuals.

The bracket on the right is nothing but the difference between the two fractions Q and P , discussed in the text (nm is clearly the total income). Thus it is shown that the difference between Q and P is equal to half the mean (relative) deviation from the mean income.

If the distribution of income follows Pareto's Law $N_x = \frac{A}{x^a}$ (in which case $m = \frac{ah}{a-1}$) it follows that

$$P = \left(\frac{a-1}{a} \right)^a ; Q = \left(\frac{a-1}{a} \right)^{a-1} ; D = Q - P = \frac{(a-1)^{a-1}}{a^a}$$

In this case the three indices P , Q and D depend only on a . Differentiating the expression with regard to D , we see that a decrease in a produces an increase in the mean (relative) deviation from the mean income. Further, from the expressions for P and Q it follows that a decrease in a produces a decrease in P and an increase in Q . Proceeding from the concept of inequality which lies at the basis of the calculation of the mean deviation from the average income, we see that there is an increase in inequality as soon as, in proportion to the total population, there is a decrease in the number of individuals having an income greater than the mean. By Pareto's Law $N_x = \frac{A}{x^a}$ it is sufficient to use P as a measure of the inequality; but if another distribution law is valid generally the magnitude Q must also be calculated.¹

¹ Further details can be obtained from the following treatises of the author: "Pareto's Law" (*Journal of the Royal Statistical Society*, 1937) and "Pareto's Law and the Index of Inequality of Incomes" (*Econometrica*, 1939).

CHAPTER XV

CONCLUSIONS

I

GERMANY was overthrown by powers which describe themselves as the representatives of Democracy. However, "economic planning" is still continuing on the economic field, and even shows a tendency to extend, though it is the opposite of "Democracy" because it necessarily limits individual liberty. We observe the nationalization of industry in the classic land of economic liberalism, and a great national production plan in France whilst the "welfare State" is making rapid progress in the United States. Is it still true that "*Graecia capta ferum victorem cepit*"?

The opponents of the liberal economic order declare triumphantly that it is now definitively a thing of the past, and not, they say, for political but economic reasons; "economic planning" represents a superior economic system. The latter contention is in crass contradiction to the results of economic science. As I have already pointed out on several occasions, economic science enters into no discussion concerning the aims of economic policy. If for reasons of political expediency the latter adopts measures which produce unfavourable economic results the economist has nothing to say, but when people declare that economic planning is a system which guarantees the economic well-being of society better than a free-market economy, then the economist can advance numerous reasons both theoretical and practical for believing that only in a market economy dominated by free competition can the economic resources of a country yield their maximum results. He points out that a price system is essential for rational production, both for the commodities themselves and for their production factors. That system cannot be the result of any "organization of the market" by official bodies in more or less close co-operation with the representatives of the various branches of trade and industry, but only of the spontaneously operating forces of the market itself (cf. Chapter III, 9-11).

If economic planning aims at obtaining the maximum product, then it will be faced again and again with the problem of creating some force whose effects will be similar to those of free competition (cf. Chapter III, 6). But that is necessarily an insoluble problem because not even the most complex bureaucratic apparatus wishing

to organize and operate a whole system of artificial incentives for entrepreneurs could possibly replace the ceaseless activity of thousands and thousands of entrepreneurs each bearing full responsibility for his actions and urged on by a desire to find the best possible combination of all the production factors and to depress the costs of production as low as possible.

Economic planning is not a new economic system, so to speak, a synthesis of individualism and socialism. It is merely a summary of interferences which prevent the achievement of the maximum possible product, even if the interference is motivated by reasons which find their justification in moral, social and political considerations.

It may be objected that the final aim of economic policy is not necessarily to secure the greatest possible productivity. For instance, the economic order of the Middle Ages aimed on the whole at an ideal of economic and social stability rather than at attaining the greatest possible product.¹ But is such a policy reconcilable with another objective of the modern State, namely, to maintain a high level of population and to secure demographic improvements, either in population figures or in the physique of the people? It seems hardly likely that the economic policy of highly populated countries will ever be able to ignore the principle of the greatest possible measure of productivity, except perhaps in very unusual circumstances, during a war, for example.

This principle is precisely the mainspring of a dynamic society like our own. The old economic order with all its restrictions on industrial and agricultural production began to disintegrate when a rapid increase in the population turned a static into a dynamic society, when it became necessary to replace the old economic order by a new one which would permit that rapid increase in production without which the growth of the population would have been impossible.

2

The main evil of "economic planning" is that it violates "economic laws". Its advocates think they can get over the difficulty by denying that the economic world has its own laws, but in practice it is not long before they find themselves involved in obvious contradictions because every time they are faced with a concrete problem they are compelled to recognize the existence of certain market laws. For instance, after a certain German writer had declared that "liberal" economic theories were "out of date", he was compelled to admit that "if the amount of money in circulation increases or the velocity of circulation increases,

¹ As Einaudi rightly points out, this stability was never really attained (*Rivista di storia economica*, pp. 96-97, June 1941).

without the volume of commodities increasing at the same time, then prices rise.”¹ What is that if not an economic law?

The most important problem which arises in the whole affair, namely, how economic planning is to be reconciled with economic laws, has never been seriously discussed by its advocates: they vacillate between propounding the omnipotence of the State in the economic sphere and a grudging admission that there is such a thing as the interdependence of economic phenomena.

Certainly, economic planning is quite in order in times of war when all the economic forces of a country must be bent towards one objective, namely, the utmost possible production for the prosecution of the war. War must be waged with authoritarian means even in the economic sphere. During the course of a war a free market would not be able, even with the assistance of its price mechanism, to guide all the economic resources of the country into the channel of production for war purposes. The demands of war require that the war industries should develop abnormally, whilst conversely other industries which normally produce consumer goods for the population should be throttled down. The main aim of a war economy is precisely to produce a disproportion in the economic organism by means of direct State intervention, and such a thing could not take place in the long run in a free-market economy because reactions would immediately occur to prevent a disproportionate development of some industries at the expense of others (cf. Chapter II, 9). In particular there would be an increase in the demand for consumer goods on the part of those social classes whose purchasing power had increased thanks to exceptional war expenditure. This increase in demand would cause entrepreneurs to increase the production of such goods, and thus raw materials, machinery and labour-power would be diverted from the war industries. It is true, of course, that a persistent money and credit inflation would encourage the development of some industries so that the reactions mentioned might be weakened or cancelled out altogether (cf. Chapter X, 1). However, the damage done by inflation, as shown by practical experience during and after the first world war, is so great that almost all the belligerent countries hesitated to use it more than absolutely necessary as a means of financing the second world war.

In order to persuade the economic organism to submit to certain mutilations in the interests of war economy and to tolerate them throughout the whole war period, governments adopted a series of measures in order first to provide the war industries with the necessary raw materials and production factors, and then to obviate the inevitable reactions on the production of consumer goods. For a long time the full development of the war industries

¹ Rentrop-Kaiser: *Preispolitik und Preisüberwachung in Europa*, p. 25, 1941.

in the United States was hampered by competition between industries producing consumer goods for the civilian population, and therefore even the government saw itself compelled to restrict the freedom of the market more and more and to adopt those compulsory measures which were already matters of course in the "totalitarian" countries. The "Supply Priorities and Allocations Board" was formed in August 1941 to undertake the task of distributing raw materials, transport and power, etc.

When the war was finally over, peace raised quite different problems. It was obvious that the restrictions on consumption introduced during the war, which had caused progressive malnutrition in a number of European countries, could not be permanent. The problem now arose of how best and quickest to raise the total product which had sunk so very low during the war. The first condition was, of course, rational production, and this in its turn raised the question of production costs again, a question which had receded into the background in view of the urgent demands of war. The increase of economic well-being once again became one of the cardinal objectives of economic policy.

3

A conviction is growing in a number of countries to-day that an economic system which throttles private initiative, and suppresses free competition and the free market, is not adapted to normal conditions and normal requirements because it paralyses the strongest motive force of economic progress and makes it difficult to secure lower production costs. Similarly, the idea is gaining ground that any future economic order must once again leave open a wide field of activities to private enterprise, though in view of the tremendous tasks imposed by the requirements of post-war social and economic reconstruction the State will have to guide the economic system in a definite direction for a long time to come and not merely during a short transitional period.

How can these two demands—for State guidance and yet private enterprise—be reconciled? That is a question which has still to be decided. Many seem to think that the solution is neatly summed up in the slogan: Leadership to the State; execution to private enterprise. Now everything depends on what is meant by "leadership". Even the old liberal State retained the ultimate control of the economic system in its own hands; it decided what tariffs should be imposed and it signed trading agreements which guided the economic system of the country into certain productive channels and deflected it from others. In addition there was the regulation of the monetary system and the activity of the central issue of banks; the organization of the transport system and,

finally, the introduction of various social reforms. But this system of encouraging and directing did not interfere with the mechanism of the market which remained in full force, with the result that economic equilibrium was able to re-establish itself, though perhaps at a level different from that on which it would have come to rest had certain forms of State intervention not taken place. But if "leadership" is to mean—as the present advocates of economic planning seem to think it should—that the State is to fix commodity prices, wages and the rate of interest, to limit the freedom of the worker to choose his own job and the freedom of the employer to choose his own labour-power, to allot quotas of raw materials and capital, to forbid the founding of new businesses or the extension of those already in existence, and to introduce a whole system of prohibitions, licences, quotas, etc., in respect of exports and imports, exchange control and so on, then it is not easy to see how the entrepreneur can be expected to develop any enterprise at all or be able to conduct his business in the most rational fashion.

Certainly the dismantling of the existing system of controls should be carried out only gradually in accordance with the principle that violent change should always be avoided.

4

For countries like Italy, which have a dense population and limited natural resources, the possibility of a reduction in production costs, and in this connection an increase in the modest total of national income, is dependent on the restoration of international trade, which alone can permit the importation of large quantities of raw materials at low prices. Professor Demaria in particular has stressed the importance of this point, showing that in the period 1928–38 when production rose in other industrial countries Italian production remained more or less stationary. According to Demaria there were two main causes for this: (a) the falling-off of international trade in this period, which prevented a rational utilization of Italy's productive forces; and (b) the development of certain forms of economic activity with high costs of production at the expense of more productive possibilities.

Further figures cited by Demaria show a reduction in the *per capita* consumption of the population in the periods 1922–29 and 1930–38 both for foodstuffs and other important consumer goods (vegetables, fruits, sugar, wine, meat, fats, milk, tobacco, coffee, etc.). On the other hand, the consumption of maize increased; taken together with a fall in the home consumption of grain this is a clear indication of a deterioration in consumer standards.¹ These

¹ Demaria: "Il problema industriale italiano", in *Giornale degli Economisti*, 1941.

were the effects of the autarchic policy followed by Fascism after 1930.

During the war there was a lot of talk in Italy about the creation of "a Mediterranean economy" of which Italy was to be the head and centre, but that was a lying propaganda invention and the prospects of any such thing were very slender. According to detailed statistical investigations conducted by Professor Vinci,¹ there is more or less a balance between the production and consumption of grain in the Mediterranean area, coupled with a shortage of fodder, butter, and other animal fats, meat and sugar; so that as far as food supply is concerned autarchy is quite out of the question. The gaps are even more obvious when we come to such essential raw materials as coal, rubber, timber, resin, jute, linseed, hemp, heavy oils and numerous metals, all of which have to be imported from abroad. The shortage of coal and iron, the two main pillars of modern industrial production, is particularly acute. A "Mediterranean Economic Area" would not have solved the problem of Italy's raw-material supplies.

5

The economist as such is interested only in the economic effects of the facts he investigates and he does not enter into a discussion of any political problems which may result from them. However, he finds it quite impossible not to point out what extremely unfavourable effects a policy of economic self-sufficiency, not strictly confined to certain commodities of exceptional importance for the defence of the country but extended gradually to many other commodities, would have on the national income. The effects would be particularly onerous in countries with a large and increasing population such as Italy. The economist also points out that an increase of economic prosperity thanks to the extension of foreign trade strengthens the political basis of a country, and that any considerable increase of the national income in times of peace means that economic reserves are being built up for use in the event of war.

It is not easy to see how a policy of economic self-sufficiency carried out by numerous countries could offer any satisfactory basis for international relations: Self-sufficiency is not a problem which can be solved once and for all; it arises again and again. The weapons required for the prosecution of war are not always the same. They change and new ones are added, for instance, it is not so long ago that petrol was nothing like so important for the prosecution of war as it is to-day. In addition, every increase in

¹ Vinci: *Unita Mediterranea*, Rome, Accademia d'Italia, 1942.

the population makes it necessary to increase the means of subsistence proportionately. Governments then feel an urge to extend the territorial area they control, and this inevitably leads to conflicts with other countries. The solution of all these problems and the resultant antagonisms can be brought about only by a new international political order guaranteeing a long period of peace with justice for all peoples, thus making it possible to abandon the policy of economic self-sufficiency, if not altogether then at least in great measure.

6

As we have seen, "economic laws" set certain limits to the activity of the State; the latter cannot disturb the relation between X and the conditions A , B and C , which determine X , without at the same time upsetting the economic equilibrium; but by appropriately influencing these conditions the State is in a position to change X . To recognize economic laws does not at all mean that economic intervention within the framework of these laws with a view to guiding economic forces in a certain desired direction, or in order to bring other forces into operation to cancel out those already operating, is impossible. However, if economic laws are transgressed, if the forces of the market are hampered and suppressed, and if arbitrary values are attached to economic magnitudes, then nothing but a disturbance of the natural equilibrium can result.

The source of much of the damage Fascism did to Italy was created when it imposed the idea on the Italian people that the State should have supreme control of economic relations—and in order to do so it dismissed the traditional economic science from all Italian universities, imposing instead the teaching of the so-called "corporative economics", whose meaning nobody has ever understood. Fascism taught that instead of the free market as a guiding principle for producers and merchants there was to be a bureaucratic organization enjoined to regulate all individual economic activity in order to carry out an "economic planning" of the national resources at the behest of the central authorities. Unfortunately it is now difficult to change the outlook formed in many years of such "economic planning" since it did not confine itself to the ranks of officialdom but was readily accepted by those who benefited from the privileges and monopolies which are the inevitable concomitant of any controlled economy. And this outlook now looks with a jaundiced eye at everything undertaken by private enterprise. It opposes all emergency measures such as private compensations, imports against "free foreign exchange", or the working up of raw materials to the account of foreign suppliers, by means of which enterprising merchants are trying to break

down the iron ring of prohibitions and controls. † This standpoint finds it difficult to understand that no one is prepared to take a risk unless there is also a promise of corresponding profit. It advocates impossible and senseless aims such as the establishment of an equal rate of profit for all economic activity. It does not want the State to limit its activities to determining the broad outlines of economic policy, but it is anxious that it should also fix prices, stop the production of certain commodities, allocate raw materials, and decide as the final court of appeal what commodities the individual entrepreneur shall import or export, and to what extent.

Many visitors from Anglo-Saxon countries who were in Italy soon after the war and who then visited the country again three or four years later were struck by the great progress which had been made in the meantime. The explanation I venture to put forward may appear paradoxical, though in reality, of course, it is not so ; it is that the war shattered the whole system of economic controls which had been built up by the Fascist Government, and where controls still existed on paper it was rarely possible to enforce them owing to the weakness of the new authorities. As a result, private enterprise was able to develop without much government interference. There was no " plan " imposed from above for the reconstruction of industrial plant destroyed or damaged by the war, and the result was that private entrepreneurs were able to get the job done in a comparatively short space of time—and that from their own resources (and those afforded by the market), for the Italian Government has so far met no war-damage claims. Of course, the task was made easier by the monetary inflation which set in after the war. There was also no " plan " for the reconstruction of the Italian mercantile marine, which had been reduced during the war to one-tenth of its normal size, but private shipowners succeeded, with very little assistance from the government, in building up a new merchant fleet with a tonnage amounting in 1949 to more than two-thirds of the pre-war tonnage. Great stretches of permanent way had been destroyed during the fighting, but private enterprise immediately threw hundreds of big cars on to the market, thus making it possible to satisfy at least the most urgent transport needs.

There was also no " plan " for the encouragement of exports, but during the years 1946 and 1947, when the very considerable obstacle of an artificial exchange rate which greatly overvalued the lira was removed, Italian exporters succeeded in regaining their old markets.

Many people erroneously believe that the advocates of economic liberty are fundamentally opposed to all forms of State intervention. On the contrary, they have always insisted that absolute liberty is

not possible even in the economic sphere, and that the State should define the limits of economic freedom, particularly in times of emergency like our own. As experience shows, under normal circumstances a free-market economy finds its proper level more or less rapidly thanks to the free play of economic forces, i.e., as a result of the reactions produced by the very disturbance of the economic equilibrium on individual producers or consumers. On the other hand, it is often necessary that a blanket measure should regulate the operations of the individual when disturbances arising in the economic and social order are of a serious nature. The difference between economic liberalism and all forms of economic planning refers in particular to the way in which the State intervenes. Within the framework of a liberal economic policy the State defends the interests of the community and issues certain general regulations of an impersonal nature known to all, thus fixing the limits within which the individual may do as he pleases. When in such circumstances the State desires to attain certain ends it does not exercise any direct pressure on any particular individuals, but instead it creates a whole system of measures, both encouraging and discouraging, which certainly influences the activity of the individual in the desired direction, but which at the same time leaves it open to him to make his decisions as he thinks fit in the given situation. Let us suppose, for instance, that certain commodity imports are to be cut down. To this end the government introduces import duties. It is then left to the free decision of the individual merchant to what extent he should reduce his imports of the commodities in question.

To-day, however, with economic planning, both government departments and semi-official bodies decide even individual cases; they grant or refuse import licences, they permit or forbid private compensation arrangements; they grant allocations or refuse them; they give one entrepreneur permission to open a new factory and refuse permission to another. Instead of one rule valid for all we have unpredictable arbitrariness. The defects of such a system are known to everyone to-day.

During the course of the present transitional period it may be necessary to retain certain restrictions on economic liberty, but at least the existing system should be replaced by certain generally valid regulations which would make it unnecessary for officialdom to investigate each separate individual case and which would at the same time cut down the excessive powers over which it disposes to-day.¹ In this way the necessity of State intervention can be reconciled with democratic institutions.

Although this book has properly stressed the importance of the

¹ This point is treated in detail in F. Hayek's *The Road to Serfdom*, Routledge, London, 1944.

functioning of a free market as an instrument for the maintenance of the economic equilibrium and the furtherance of general prosperity, it has been no part of its intention to diminish the significance and importance of the economic duties of the State. It will always be the task of the State to create a juridical framework and adapt it constantly to new needs and new demands, to create the most favourable conditions for the development of individual activities, to remove hindrances, defects and all those economic and social abuses which crop up even within the framework of a free-market economy, and of which I have cited sufficient examples in the preceding chapters. Whilst economic planning causes economic disturbances, limited intervention of a temporary nature, either in particular cases or in times of emergency, can contribute to the restoration of the economic equilibrium (cf. Chapter XI). Galiani illustrates this view with one of the many graphic examples which enliven his *Dialogues*: "The policing of society is a matter of detail ; it deals always with particular cases. If it became universal it would become a hindrance. Confined to particular affairs it produces order. In the same way if you put policemen on every street corner you would destroy the natural liberty of those who pass by on their lawful affairs, but if you place them only where they are required you will do citizens a great service." ¹

¹ Galiani : *Dialogues*, etc., p. 189.

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