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CAMBRIDGE ECONOMIC HANDBOOKS—VIII
GENERAL EDITOR: C W GUILLEBAUD, M A

INTERNATIONAL ECONOMICS

INTERNATIONAL ECONOMICS

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London

NISBET & CO. LTD.

Cambridge

AT THE UNIVERSITY PRESS

First published . . . May 1933
Revised and Reset . . . January 1939
Reprinted . . . February 1942
Reprinted . . . May 1945
Reprinted . . . October 1946
Reprinted . . . October 1947

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X:5A
G3; G9
14000

Printed in Great Britain

INTRODUCTION TO THE SERIES

By the General Editor

SHORTLY after the war of 1914-18 there seemed to be a place for a Series of introductory Economic Handbooks "intended to convey to the ordinary reader and to the uninitiated student some conception of the general principles of thought which economists now apply to economic problems."

This Series was planned by the late Lord Keynes under the title *Cambridge Economic Handbooks*, and he wrote for it a general Editorial Introduction of which the words quoted above formed part. In 1936 Lord Keynes handed over the editorship of the Series to Mr. D. H. Robertson, who held it until he became Professor of Economics in the University of London.¹

The judgment of its originators has been justified by the wide welcome given to the Series. Apart from its circulation in the British Empire, it has been published from the start in the United States of America while translations of the principal volumes have so far appeared in German, Spanish, Italian, Swedish, Japanese, Polish and Lithuanian.

It is symptomatic of the changes which have been taking place in recent times in the development of economic science, changes associated in a high degree with the work and influence of Lord Keynes himself, that within the brief space of fifteen years the text of part of the Editorial Introduction should have stood in need of revision. In its original version the last

¹ Professor Robertson now holds the Chair of Political Economy in the University of Cambridge

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paragraph of the Introduction to the Series ran as follows :

“ Even on matters of principle there is not yet a complete unanimity of opinion amongst professors. Generally speaking, the writers of these volumes believe themselves to be orthodox members of the Cambridge School of Economics. At any rate, most of their ideas about the subject, and even their prejudices, are traceable to the contact they have enjoyed with the writings and lectures of the two economists who have chiefly influenced Cambridge thought for the past fifty years, Dr. Marshall and Professor Pigou.”

When the Editorship of the Series was transferred to Mr. Robertson, Lord Keynes consented to the retention of his general Introduction, but subsequently re-wrote the concluding paragraph in the following form :

“ Even on matters of principle there is not yet a complete unanimity of opinion amongst professional students of the subject. Immediately after the war daily economic events were of such a startling character as to divert attention from theoretical complexities. But to-day, economic science has recovered its wind. Traditional treatments and traditional solutions are being questioned, improved, and revised. In the end this activity of research should clear up controversy. But for the moment controversy and doubt are increased. The writers of this series must apologise to the general reader and to the beginner if many parts of their subject have not yet reached to a degree of certainty and

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lucidity which would make them easy and straightforward reading."

Still more recent events have produced a world so far removed from that which existed when the foregoing words were written, that it has fallen to the lot of the present Editor to provide a new Introduction.

This is perhaps a good vantage point from which to survey very briefly some of the principal trends in the evolution of economic thought in this country during the past thirty years. Prior to 1914 economic theory here was largely dominated by Alfred Marshall, and economists, following him, thought in terms of the long period tendencies of the different sections of the economic system towards positions of equilibrium, even though ever-present dynamic factors were perpetually modifying the existing structure and presenting new and equally distant, if equally unattainable, goals as stimuli to change and adaptation. Moreover, in the Marshallian system, those tendencies resulted from the working of persistent underlying forces which were conceived of as largely competitive in character. The increasing trend towards monopoly was certainly affecting thought, but not so much in the realm of the theory of value as in the emphasis which came to be laid on possible discrepancies between the private interest and the social interest. Under the influence of Professor Pigou a Welfare Economics was developing side by side with, and out of, the Value Economics of the older generation.

After 1918 the long-drawn-out agony of the depressed areas, the weakening of the position of this country in international trade, and the tremendous intensity of the economic crisis of 1930-32 (to mention but a few

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out of the many contributing causes) combined, on the one hand, to focus attention on problems of the short period and, on the other hand, to throw doubt on the extent to which the self-adjusting, seemingly automatic mechanism, which on the whole had operated so effectively during the nineteenth century, was capable of coping with the deep-seated maladjustments and disharmonies which characterised the post-war world. At the same time value theory itself was profoundly influenced by the emergence of a number of writers who approached value problems from the view-point of monopoly, and emphasised the unrealistic nature of an analysis which was based on the assumptions of perfect competition and a perfect market. Most of all, however, economic thought was dominated by the desire to find a solution for the problem of how to maintain the level of effective demand so as to avoid the recurrence of phases of deep depression and widespread unemployment. There was a growing feeling of impatience with the economics of the long period "in which we are all dead," and a great, perhaps even excessive, concentration on the short period in which we live and move and have our being.

The result was a remarkable ferment of ideas, the challenging of ancient orthodoxies, and "for the moment controversy and doubt [were] increased." This ferment had by no means subsided when the second war with Germany broke out in September 1939, bringing in its train a degree of State interference with the normal peace-time working of the economic system far exceeding that reached even in the last years of the war of 1914-18.

In so far as it is possible to foresee future trends, they

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would seem to lie in a much greater measure of conscious public control over many aspects of economic activity than has existed in the past. It will no doubt still remain true, to quote Lord Keynes's Introduction again, that :

“ The Theory of Economics does not furnish a body of settled conclusions immediately applicable to policy. It is a method rather than a doctrine, an apparatus of the mind, a technique of thinking, which helps its possessor to draw correct conclusions.”

Nevertheless, economists may well find themselves to a greater degree than hitherto called upon to express their views on matters of economic policy, and—for a time at least—the writers of future volumes of the Cambridge Economic Handbooks may be concerned rather with specific problems than with the more general aspects of economic theory.

C. W. G.

Cambridge,

July, 1946

AUTHOR'S NOTE TO SECOND EDITION

In this revised edition Chapters VI–VIII have been completely rewritten. The theory of the balance of trade and the balance of payments has been treated more fully; and its relation to certain modern views regarding fluctuations in employment and the balance of saving and capital outlay at home expounded.

R. F. H.

January 1939

NOTE TO THIRD EDITION

This volume is mainly concerned with general principles of permanent validity. In Chapter V (Foreign Exchange), however, there is a detailed description of mechanism with illustrations from the British system between the two wars. Since this provides a good example for study and since we do not know how the mechanism will be re-shaped after the war, I have thought it expedient to make no change.

R. F. H.

November 1941

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INTERNATIONAL ECONOMICS

CHAPTER I

INTRODUCTORY

§ 1. *The Scope of this Volume.* It is proper at the outset to give some idea of the scope of this volume. The title does not sufficiently define it, for international economics is a large and complex subject; it might be surveyed from an historical or a geographical point of view; a brief description of the principal constituent items of international trade might be attempted, above all the reader might hope to find an analysis of the present phase and tendency of international trade, with a view to forming opinions about the probable course of events and appropriate policy. The purpose of this book is more precise and definite. As a preliminary to understanding aright the inner nature of particular events or to forming an intelligent opinion on matters of current controversy, it is necessary first to be apprised of certain simple and fundamental truths about international economic relations in general. It is to expound and elucidate these that an attempt is made here. The reader will find a treatment

of what may be called the simple arithmetic of international economics. Far too much is commonly said and written in ignorance of or with complete disregard of this simple arithmetic.

The reader may console himself that the body of doctrine which he is asked to master is not a large one, nor is the intellectual effort required for the purpose great. It may be compared with that needed for the understanding of three or four theorems in elementary geometry. Yet that much effort is indispensable. The path is short but slippery. The subject is one in which fallacy and specious argumentation abound. Only by a thorough grasp of a few central propositions and of the means by which they are reached can immunity from the insidious attacks of quacks and propagandists be achieved. In pursuing a more developed branch of science, the student would not expect to be completely exempt from intellectual effort. Yet, really, the fact that the achievements of economics are exiguous and the tools used simple makes it necessary to concentrate all the more closely on what there is. Their complex technique of proof provides the conclusions of the more highly elaborated sciences with a defence against the inroads of charlatans. In economics fools are only too ready to rush in

There has been much discussion whether economics should confine itself to the tracing of cause and effect or extend out into the practical sphere of advice and recommendation. Critics hold that, in making recommendations, economists are impinging on the region of ethics or politics. Controversy about method should, however, be settled, not on abstract grounds, but by reference to the achievements of the subject. Study

of the most notable economic work reveals that it has in fact contained a large element of the practical recommendation. The objection to this rests on a misunderstanding. The phenomena studied by the economist are largely connected with human purposes, which in their interaction have given rise to a system of some complexity. When a change occurs in part of the system, it may be interesting to know, and appropriate for economists to study, what consequential changes are likely to occur in other parts of the system. It is also interesting to test the system by the criterion of how far the purposes which give rise to it find their fulfilment through it.

To test the system in this way is not to criticise the purposes themselves, which would, indeed, be an ethical matter. In studying the systems, an approach may be made either by analysing the interaction of changes in its parts or by testing it with reference to its efficacy. The two approaches sometimes lead into the same terrain of analysis. It may be convenient now to adopt one, now another. Testing the system leads naturally on to making recommendations. Indeed the recommendations can often hardly be distinguished from a precise statement of how the system fails when the test is applied to it. In what follows the test method of approach is rather prominent. It is used in the analysis of the course of international trade and of the monetary system. The question is asked, what are the conditions in which trade takes such a course, that the purposes for which trade is admittedly undertaken are most fully realized? Again, what is the kind of monetary system which best fulfils the purposes for which the use of money is admittedly devised? No *a priori*

justification for the procedure will be given, it has, in fact, yielded the best results in this particular field. The recommendations which rise naturally out of such an examination contain no ethical element or political bias

The treatment of the direction and scope of foreign trade given in the early part of this volume is based on the doctrines of the classical writers. These have been subjected to much criticism in the past, mostly of a pettifogging or terminological kind, the main classical position in this sphere seems inexpugnable. The old economists were more concerned with the direction of trade than its volume. This is in line with their tendency to assume full employment at home as the normal condition and unemployment as an occasional and transitory phenomenon. Recently much work has been done on the fundamental causes of unemployment. In the second part of this volume an attempt has been made to develop a theory concerning the volume and balance of foreign trade, connecting this subject with the theory of unemployment at home. The size of this handbook has enforced strict simplicity of treatment, and this has an advantage. It is hoped that the propositions advanced throw much light on the subject, but are at the same time sufficiently elementary to be generally acceptable. An effort has been made to utilize modern theory without elaborating it so far as to take the reader on to ground which is still a field of controversy.

§ 2. *International Economics as a Branch of General Economics.* International economics is concerned with all economic transactions involving passage across a

national frontier. Examples are emigration, the loan of capital by the nationals of one country to those of another, the purchase of goods by the nationals of one country from those of another. A set of infinitely vigilant frontier officials might be able, by examining all persons, cargoes, and mail-bags entering or leaving Great Britain, to draw up an inventory of all the international economic transactions in which she was involved. It may at once occur to the reader that the findings of this company of officials might not be very different from those of another set whom we may imagine to have formed a cordon round the county of Warwick. They, too, would have their passengers, goods, and mail-bags to examine, and they, too, would find migration, loans, the sale and purchase of goods, etc., in progress across the boundary. The Warwickshire inventory of transactions with the outer world would be quite similar to the British inventory. Nor need we stop at the Warwickshire example. A circular cordon might be described, having Rugby for its centre and ten miles for its radius, and a similar result could be achieved.

Clearly, if international economics is to be justified as a proper subject of study, it is necessary to show that the transactions entered on the British inventory have attributes which make them differ substantially from transactions recorded in any of the similar inventories which might be drawn up on boundaries *not* coincident with national frontiers. In what ways do the economic transactions between people living under different national governments differ from those between people living under the same national governments, but in different localities ?

It is important not to exaggerate the differences. For instance, there is one notable respect in which the international and, may we call them, inter-county transactions do not differ, namely, that the inward payments to which all give rise must roughly balance the outward payments, the difference, if any, being covered by an actual remission of money. Theories regarding the mechanism by which the national balance of foreign payments is maintained may be tested by applying them to any arbitrarily defined area. If they implicitly assume the presence in every such area of a mechanism which does not in fact exist, they are properly suspect.

Moreover, it is also important to recognize the close interconnexion between international and internal transactions. It would lead to disastrous errors to treat the two in watertight compartments. The state of the external world may affect not only the volume of our imports and exports, but also such apparently domestic matters as the yield of income-tax and the rate at which new houses are constructed. Special attention will be given to this interconnexion.

§ 3. Distinguishing Features of International Transactions. What, then, are the distinguishing attributes of the inventory of international transactions?

(1) First and foremost, attention should be paid to the migration figures, the movement of persons across the boundaries. Temporary visits need not be considered here. A number of persons born and bred in Warwickshire leave it to settle and earn their livelihood in other parts of the kingdom, and vice versa. Similarly, each year a number of persons emigrate from the kingdom to seek their fortunes in other countries. But the volume

of inter-county movement, considered in proportion to the size of the area affected, is much greater than that of the international movement. Labour is more mobile between the different parts of a national unit than between different national units.

The reasons for this are sufficiently obvious. Barriers connected with language, national habits and sentiment, and, in recent times, stringent legal restrictions, obstruct the free flow of labour between different countries. The consequences are important. Within the national unit there is a tendency towards equality throughout the country in rewards to work, requiring given intensity and skill. Good opportunity for earning high rewards in one locality attracts movement to it from other parts of the country, and this movement sets up the tendency towards equalization. But great differences in the rates of reward may subsist in different countries; the general level of real wages is roughly twice as high in New York as in London, roughly twice as high in London as in Rome. Such differences could not continue long in one country. What is true of the movement of labour applies, though in less degree, to the movement of capital and enterprise.

It follows that internal trade consists largely of the interchange of goods between producers who enjoy similar standards of life. International trade often consists of the interchange of goods between producers enjoying widely different standards. It is clear that the principles which determine the course and nature of these two kinds of interchange must be in some respects different.

This is the most important circumstance which makes a special study of international trade necessary.

Analysis of internal trade assumes that there is a tendency towards an equal standard of living among those doing the same kind of work. The assumption may not accord with the facts precisely, but it is a workable approximation. In the case of international trade it has to be dropped entirely. Similar standards may prevail in different countries, but there is no *a priori* probability that they will. The analysis of the advantages which accrue from international trade is independent of whether they do or not. The frequent claim that the import of goods made with cheap foreign labour should be checked thus implies ignorance of the first principles of the subject; for it assumes that inequality of wages in two competing countries is abnormal, whereas in fact it is on the probable presence of that feature that the special study of international as distinct from internal trade is founded.

(ii) Special facilities for production may differ from place to place in one country and be similar in different countries, crossing political frontiers freely. But there are certain facilities and disabilities which are continuous with national frontiers, namely those connected with the activities of government. The citizens of one country are subject to the same system of national and local taxation, to the same regulations for health, sanitation, factory organization, education and social insurance, the same policy with regard to transport and public utilities, the same laws regarding industrial combination and trade unions, the same commercial code. Here is another basis for the distinction between internal and international trade. Even if capital and labour flowed freely between countries so that wages, interest charges, profits, etc., were the

same everywhere, the general level of real costs might be lower in one country than another, by reason of the superior advantages provided by the system of government. It would still be possible to distinguish between internal trade as interchange between producers provided by the government with similar amenities for production, and international trade as interchange between producers provided by the government with dissimilar amenities.

(iii) International transactions involving the payment of money are usually mediated by a foreign exchange transaction. Unless a common monetary standard is maintained fluctuations in the rates at which national moneys may be exchanged against each other clearly give a distinguishing mark to those transactions which are directly affected by the exchange rates.

Even if a common standard is in operation and foreign exchange fluctuations are confined within narrow limits, the fact that each national currency is controlled by its own government and central bank has special significance for international economics. The maintenance of the monetary standard involves the enforcement of a specific policy by the central bank; an identical policy is not always required in all countries at the same time. This policy has repercussions on the whole economic life of the community to whose needs the central bank is administering. National areas are usually co-terminous with those controlled by a single central banking system. Thus, from one point of view, international transactions may be thought of as the class of all economic transactions between persons living in the spheres of influence of different central banks.

CHAPTER II

THE GAIN FROM FOREIGN TRADE

§ 1. *Importance of this Subject.* The question which I propose to put first is, what are the advantages to be derived from foreign trade? It is convenient to do this, partly because the topic is one on which the most profound misconceptions prevail, partly because it is in its broad outline the simplest and most securely founded part of the subject of foreign trade; and also because it is well to bear the answer to this question in mind in considering and criticizing the mechanism by which foreign trade is actually carried out and all or some of its potential advantages reaped

Much popular writing on the subject of foreign trade shows considerable knowledge about the mechanism of foreign payments, the foreign exchanges, the balance of trade and circumstances likely to affect it, but no understanding whatever of what it is all for. Without a firm grasp of the origin and nature of the advantages that accrue from foreign trade, it is not possible to say much that is sensible about it. The reader is therefore asked at the outset to follow a discussion of the precise circumstances which determine the scope and degree of gain which foreign trade can be made to yield

§ 2. *The International Division of Labour.* As exchange in general is necessitated by the division of labour, so

foreign trade appears when the division of labour is pushed beyond national frontiers. It is the necessary consequence of an international division of labour. Two aspects of the division of labour may be mentioned. One is the splitting up of a productive process into parts, so as to simplify and thus render more effective the work which each labourer has to perform. The other is the adaptation of the productive system so as to give the greatest possible scope to those who have special talents or facilities for doing certain kinds of work.

It might be thought that the millions of workers which most nations can claim would suffice for the bare splitting up of the whole productive complex into conveniently simple parts. Adam Smith referred to the eighteen processes involved in pin-making; this must be multiplied by an appropriate number to accord with modern conditions; but, even if we multiplied the product by the number representing all the variety of different commodities which a community needs, we should be surprised if we found more productive processes in all than the number of workers in the whole community. This, however, would not be a fair procedure. Our demand for all commodities is not equal, if the working population were divided in proportions corresponding to our demand for various products, it is possible that the number earmarked for making some product the demand for which is a minute proportion of the whole would not be sufficient to give the most economical division of labour in the making of that product. If a nation is to be self-sufficing, a large proportion of its workers must be engaged in making the main staple commodities, and the surplus left over for

each of the various specialities might be inadequate, and so some international division of labour would be desirable

By hypothesis, however, this cannot be the cause of international division of labour on a big scale. And so it is necessary to look to the other aspect of the division, namely, the convenience of setting those with special facilities to do the tasks for which they are most fitted. Let each nation produce that which it can produce most cheaply.

Whence arise these special facilities ?

(i) Special facilities are provided by natural resources. Mines must be worked where they are found. This implies foreign trade, since the nations in whose territory the mines are situated must receive goods of some sort in exchange for the ores which they export. Many products, coffee, tea, rubber, etc., require a special climate for their cultivation.

Lands differ in natural fertility; it is desirable that more fertile land should be worked more intensively. This by itself might not give rise to foreign trade, for the world's population might be distributed in proportion to the fertility of land, so as to provide a dense population for the rich soils to support and a thinner layer for poorer soils. It is not, however, permissible to suppose that the population of the world is in fact so distributed.

(ii) If mother earth yielded all things in equal abundance in all her parts, the uneven distribution of population would itself make foreign trade desirable. Certain productive processes, those of the extractive industries, must needs be conducted in close collaboration with the natural resources. Others, those con-

cerned with the working up of raw materials into finished goods, can be conducted apart. Countries with a population dense in proportion to the capacity of the soil would naturally employ their surplus on the processes which do not have to be undertaken in close conjunction with the soil, and exchange manufactured goods for the raw products of more sparsely peopled regions.

(iii) Human capacity differs as well as that of the earth. The difference may be due to innate racial qualities of manual dexterity, scientific ability, vigour and enterprise, or to the political and social structure, itself the result of racial capacity for social organization, or of the whole chain of historical accidents. Processes in which scientific skill or the capacity for conducting great collaborative enterprise—production on a large scale—counts for more in increasing efficiency should naturally be undertaken by the peoples more highly endowed with these qualities.

(iv) There is the legacy of the past. A nation may be bequeathed with a great structure of equipment, of factories and railways, or with a structure of organization, special knowledge and useful habit, constituting present aids to certain forms of production. The growth of this structure may have been due to good fortune or a natural superiority in the past, now vanished. But the legacy has not vanished. The inherited structure may give special facilities, which are as decisive a factor in determining its proper sphere of specialization as the presence of mines or oil-fields. If the peculiar advantages which aided the growth of this structure cease to exist, after a very long time the structure itself will disappear, just as a coal mine is

finally worked out, and the nation will ultimately take its place among other nations bereft of this distinguishing feature

If the greatest possible advantages of foreign trade are to be secured for all, each nation should devote itself to what it can do most cheaply. The expression " what it can do most cheaply " needs careful definition.

§ 3. *The Law of Comparative Costs.* Writers on foreign trade have usually found it convenient to develop this definition by considering in the first instance two nations producing two commodities. An alternative method is to consider the position of one country, say, England, in respect of two commodities *vis-à-vis* the rest of the world. (The principle to be defined then becomes—England should produce for herself and for export what she can produce more cheaply, and import from abroad what can be produced more cheaply there.)

The term, " abroad," is, of course, an abstraction. The outer world is not a homogeneous place but consists of a large number of particular countries, each with its own conditions. For the purpose of considering the gain from trade to England, it is convenient to suppose that the other countries have already entered into those trading relations which they think fit and have established some sort of equilibrium with each other, so that, for the purpose of isolating the phenomenon to be studied, we can compare the state of affairs when the rest of the world has all its complex relations but no trade with England, with that when the rest of the world has all its complex relations and its trade with England also.

It must be emphasized that this is an attempt to

state what *should* happen, if full advantage is to be taken of the potentialities of the international division of labour. Whether that is what *does* happen, if trade is allowed to follow "its natural course," will be considered subsequently. Moreover, it may be held that it is not always desirable to take full advantage of the potentialities of the international division of labour, that it may be better to sacrifice increments of wealth in the interests of self-sufficiency. Such a consideration is beyond the immediate matter in hand.

Since this is an attempt to define comparative cheapness of production, it is necessary to have a unit for measuring cost of production. The same unit need not, and indeed cannot, be used for measuring cost at home and abroad. Cost may be measured in terms of trouble¹ or effort or in terms of the reward that is paid for effort; this reward may again be measured as so many baskets full of consumable goods, or as so much money. Happily for the present purpose it does not matter which method be adopted. All methods must presuppose that different kinds of cost, e.g. labour skilled and unskilled, waiting, the use of land or mines, can be measured against each other in the same country. Commodity A may take more land per unit of labour expended on it than commodity B. To compare the cost of producing A with that of producing B, we must be able to equate land to labour as elements in cost, to say that, for instance, 1 labourer per annum = 100 acres per annum, or, = 150 acres per annum. If the relative values of the various factors of production are determined, it is then possible to compare the cost of producing commodities A, B, C, etc., in the same country unequivocally.

The relative values of the factors may be different in different countries. Since the same unit will not be used for measuring the cost of producing commodities at home and abroad, this circumstance will not affect the argument.

To compare costs of production, units of the commodities must also be defined. Commodities are usually measured in tons, yards, etc., but for this purpose it is most convenient to take, as a unit of the commodity B, that amount of B which has in the first instance the same cost of production as a unit of the commodity A in England. Let us suppose that they each cost x units to produce. It is well to leave it undecided whether this means $\pounds x$, x labour days, or x baskets full of commodities, etc.

Let the cost of producing a unit of A abroad be y units. The nature of the unit of cost is again left undefined. The following table represents the definitions given so far :

TABLE I

	Cost of production in England.	Cost of production Abroad.
Unit of commodity A .	x	y
Unit of commodity B .	x	- .

The unit of B was defined as that amount of B which has the same cost of production in England as that of the chosen unit of A in England. Hence if the cost of producing a unit of A in England is x , that of producing a unit of B is also x . We have next to consider the cost of producing precisely these units of A and B abroad. We have supposed the cost of pro-

ducing this unit of A to be y . So far nothing has been assumed about comparative cheapness at home or abroad. This will be determined by the fourth term which has to be inserted to make the table complete.

The fourth term may be equal to, greater than or less than y . If the cost of producing the unit of B abroad is y —

TABLE II

	Cost of production in England.	Cost of production Abroad
Unit of commodity A	x	y
Unit of commodity B	x	y

no saving of cost can be gained by England taking on the production of either A or B for foreign consumption. It should be noted that this result has been arrived at without any assumption with regard to the relation of the cost of producing A in England to that of producing A abroad. It has not been asserted that y is equal to, less than, or greater than x ; moreover, such an assertion would have been meaningless, for it is not known whether any common unit for measuring costs in the two countries can be found. If the relative values of labour, capital and land happen to be different in the two countries, no common unit is possible.

Suppose now that the "fourth term" is greater than y and equal to, say, $2y$:

TABLE-III

	Cost of production in England	Cost of production Abroad.
Unit of commodity A	x	y
Unit of commodity B	x	$2y$

Productive resources can be applied with equal efficacy to the production of units A or B in England ; but productive resources abroad are only half as efficacious in the production of these units of B as they are in that of these units of A . It follows from this that there will be a net increase in production if England takes over the production of B for foreign consumption and imports A in exchange . By transferring productive effort from B to A the foreigner produces twice as many units of A as he was producing of B ; by transferring productive effort from A to B, England produces no less units of B than she formerly produced of A . How the benefits arising from the interchange will be distributed between England and the foreigner is discussed later .

But first the reader is asked to reconsider the tables, lest any misconception remain in his mind . Table III suggests, by reason of the notation adopted, that the Englishman is better placed than the foreigner, because on the whole he seems able to produce more cheaply . Nothing of the sort has been assumed . The units measured by x and y respectively are different units . y might equally well have been defined as the cost of producing a unit of B abroad . In that case the facts would be represented as follows :

TABLE IV

	Cost of production in England	Cost of production Abroad
Unit of commodity A .	x	$\frac{1}{2}y$
Unit of commodity B .	x	y

The facts represented in Table IV are precisely the same as those represented in Table III, though in

Table IV the foreigner has the specious appearance of being more efficient, while in Table III it is the Englishman who has that appearance.

The reason why the same facts can be represented in either way is that no assumption has been made about whether the Englishman or the foreigner is, taking the two commodities together, the more efficient; and the reason why no assumption was made is that it is irrelevant to the possibility of gain by interchange. This gain does not depend on the comparative cheapness of producing A in England and abroad or on the comparative cheapness of producing B in England and abroad. The gain depends on the relation between the ratio of the cost of production of A to that of B in England and the ratio of the cost of production of A to that of B abroad. *Gain is possible if the ratios are different.*

When trade is undertaken, the scene changes. Each country will come to produce more of some commodities and less or none of others. This will probably affect the costs of those which she still produces. New ratios of cost will be established. If these are still different from those prevailing abroad, gain can be secured by a further expansion of trade, and this again affects her ratios of cost. (It follows that, when all the trade is undertaken that yields a gain, her ratios of cost will no longer be different from those abroad.) A country should expand or curtail the production of different commodities until her ratios of cost are the same as those abroad, and export the surplus or import the deficiency so generated. (In some lines production may be abandoned entirely; and some goods may be imported which were not consumed, before trade was

opened, owing to the excessive cost or impossibility of producing them at home.)

The principle set forth above is known as the Law of Comparative Costs, and is due to Ricardo. It remains the fundamental principle in this subject.

So far costs of transport have been neglected. Gain can only occur if (adopting the notation of Table III) the cost of sending a unit of B from England to its foreign market plus the cost of sending that amount of A which has the same exchange value as a unit of B from its source of production to England is less than y . Otherwise the saving in productive costs will be swallowed up by the additional costs of transport. Any reduction in the costs of transport enlarges the sphere of gain by foreign trade. To cost of transport, excess cost of salesmanship must be added, where by excess cost of salesmanship is meant the excess, if any, of the cost of selling a unit of English-produced B to its foreign buyer over that of selling it in England, plus the excess, if any, of the cost of selling the appropriate amount of foreign-produced A to the English buyer over that of selling it abroad. For the trade to yield net advantage, the saving in productive cost must exceed both the additional transporting and selling costs. Any improvement of diplomatic relations, any tightening of non-commercial bonds of intercourse between nations, or any increase of foreign investment, will probably make it easier for a seller to establish relations with his foreign market and so enlarge the sphere of possible gain by foreign trade.

§ 4. *A Calculation of the Gain from Foreign Trade.* The proposition that each country should produce what it

can do most cheaply has now been defined. The next topic is the circumstances that determine the amount of gain which the trade yields. In the tables shown above, by "Cost of production in England" was meant the cost of producing that amount of the commodity which England would produce if the channels of foreign trade were closed to her. By "Cost of production Abroad" was meant the cost of producing that amount of the commodity which would be produced abroad if there were no trade with England.

If England was a self-contained country the coal-wheat position might be illustrated by some such figures as :

TABLE V¹
Costs in No-Trade Condition.

	Cost in England.	Cost Abroad.
Unit of wheat . . .	x	y
Unit of coal . . .	x	$5y$

If in these circumstances interchange between England and the rest of the world becomes possible, costs can be saved if England produces some coal for export in exchange for wheat.

There are various possibilities with regard to the way in which costs will change as the scale of output

¹ The reader will remember that this table does not profess to show the relation of the absolute cost of producing wheat abroad to that of producing it in England, or the relation of the absolute cost of producing coal. Actually, if England were cut off, the absolute cost of producing coal here would probably be somewhat less than abroad, while the cost of wheat would be very much higher. In the notation adopted both these facts are represented in the proposed figure of $5y$ (In this footnote the difficulty in principle of comparing absolute cost at home and abroad is neglected)

alters. In general, it is proper to suppose that the Law of Increasing Costs operates.

Comparative costs are different in different countries because the abundance of factors especially appropriate to the production of each commodity ("specific" factors) does not bear the same relation to the demand for each commodity in different countries. Thus, in the above example, it is to be supposed that, when England is cut off from foreign trade, the ratio of the abundance of coal mines relatively to the demand for coal in England to the abundance of wheat-fields relatively to the demand for wheat in England is greater than that ratio abroad. Consequently the ratio of wheat rents to coal-mining royalties will be higher in England than abroad, and the ratio of the amount of non-specific factors (e.g. labour) used in wheat production to that used in coal production will be higher in England than abroad. Thus the cost of producing wheat, compared with that of producing coal, will be higher in England than abroad, as shown in Table V.

If England begins to produce more coal, some being for export, and less wheat, some being imported for home consumption, that will tend to make available coal deposits less abundant in relation to the demand, which is now enhanced, and wheat-fields more abundant in relation to the demand, which is now decreased. This tends to change the ratio of costs in England in the direction of the world ratio. By converse reasoning the world ratio will be changed in the direction of the English ratio.

Coal and wheat have been chosen in this example to facilitate thinking, but the foregoing observations with regard to the relative abundance of specific factors are

general and do not apply only to the extractive industries. The case, however, where there are countervailing forces which produce constant or decreasing costs over a certain range is considered in § 9.

As England increases her output of coal, her cost rises, and as she reduces her output of wheat, her cost falls; and as the rest of the world increases its output of wheat, its cost rises, and as it reduces its output of coal, its cost falls. The new ratios might be as follows:

TABLE VI

Costs when some Trade is undertaken.

	Cost in England.	Cost Abroad.
Unit of wheat $\cdot 8x$	$1/02y$
Unit of coal $1\cdot 14x$	$4\cdot 986y$

The old ratios were 1 : 1 and 1 : 5. The new ratios are 1 : 1.4 and 1 : 4.9 (approximately). Since the ratios are still unequal and the Englishman has a comparative advantage in producing coal, something may be gained by his taking on the production of still more coal. He should push on with the production of coal until the rise in his cost of producing it and in the foreigner's cost of producing wheat and the fall in his cost of producing wheat and in the foreigner's cost of producing coal have brought the ratios of their costs to equality. Thus:

TABLE VII

Costs when full Trade is undertaken.

	Cost in England.	Cost Abroad.
Unit of wheat $\cdot 25 \dots x$	$1\cdot 075 \dots y$
Unit of coal $1\cdot 16 \dots x$	$4\cdot 984 \dots y$
Common ratio : 1 : 4.17		

England is now producing a large quantity of coal for export and importing a large quantity of wheat. The ratios of the cost of production in the two spheres are the same, viz precisely $1 \cdot 41\bar{1}$. Consequently no further gain can accrue by England taking over more production of coal.

First it is necessary to explain the figures chosen. It should be remembered that this analysis relates to the potentiality of gain resulting from the international division of labour without reference to whether the actual course of trade is likely to follow this route.¹

Cost figures in Tables VI and VII may be considered on the assumption that the aggregate output of wheat and coal is unchanged, the deficiency in the home output of wheat being made good by greater output abroad, and the extra home output of coal being compensated by reduced output abroad. The effect on demand is discussed subsequently. It will be observed that, as the output of wheat declines in England and rises abroad, the cost is made to fall in England by ten times as much as it rises abroad. Thus in Table VI the cost of wheat falls $\cdot 2x$ in England and rises $\cdot 02y$ abroad; in Table VII it falls $\cdot 75x$ in England and rises $\cdot 075y$ abroad. Similarly the cost of coal rises first $\cdot 14x$ and then $16x$ in England, and falls first $\cdot 014y$ and then $\cdot 016y$ abroad. These figures are reasonable and based on the simplest assumptions, provided that we suppose the pre-existent output in the rest of the world with which trade became available to have been ten times as great as that of England. For in that case the transfer of a given amount of output from England to foreign

¹ The reader not interested in the details of this discussion may proceed direct to Section 11, *Conclusions*, page 40.

lands involves a percentage change in the output of England ten times as great as the percentage change of output abroad.

Most commodities are produced, not in a single spot, but in a large number of different places, wheat-fields, mines, etc., each with its own law of increasing costs. If the output of foreign lands were ten times that of England, the simplest thing to suppose would be that there were ten times as many sources of output abroad as in England. In that case the average change in output from each source abroad would be one-tenth of the average change in output from each source in England when a given quantity of output is transferred between England and abroad. Every source may no doubt differ in the rate at which returns diminish when output is increased. Some will be able to expand with greater ease than others. It is fair to suppose in our initial illustration that England has the same share as the rest of the world of sources which can expand with normal ease, or which cannot expand without abnormal difficulty. In technical language our assumption is that the gradient of the English cost curve is ten times as great as the gradient of the foreign cost curve. The rise in cost per unit of output is ten times as great in England; the rise in cost for a proportional change of output is, at the initial point, taken to be *equal* at home and abroad. This is nearly but not quite the same as making elasticity of supply equal at home and abroad.¹

¹ The gradient of the cost curve $\left(\frac{dy}{dx}\right)$ is an easier quantity to handle in simple arithmetical examples than the elasticity $\left(\frac{dx}{x} \div \frac{dy}{y}\right)$ and is therefore used in this exposition, at some small sacrifice of logical requirements. If elasticity instead of gradient

It is not possible unfortunately to deduce precisely from the figures the gain due to foreign trade. It may be said dogmatically that some gain is due to every increase in trade up to the point at which the cost ratios are equal.

The difficulty in assessing the gain precisely is that in the changeover the relative values of the factors of production in England (and abroad) change. Indeed, it is only possible to retain the old unit of measuring cost, x , if there is some factor of production used both in the production of coal and in that of wheat. Classical writers were apt to use a labour-day. But even that is dangerous, since agricultural labour cannot be regarded as identical with coal-mining labour; consequently the reward paid for an agricultural labour-day may change relatively to that paid for a coal-mining labour-day, and consequently the amount of cost due to the employment of a labour-day in wheat production may change relatively to that due to the employment of a labour-day in coal mining. It should, however, be possible to find some factor common to both industries, such as a transport labour-day.

Now if the change of costs registered in Table VII is partly due to a change in the relative value of the factors employed, e.g. a fall in the rent of wheat land and the reward of agricultural labour and a rise in coal-mining royalties and coal miners' wages, it does not reflect precisely the change in real burden per unit of output due to the changed scale of operations.

where used, similar results would follow, the change of cost shown in the fourth term of the tables would be somewhat greater. The reader may safely substitute elasticity for gradient in the generalizations of the text without error

The following criteria may be adopted for comparing the degree of gain from foreign trade in various circumstances. (i) The gain will be greater the greater the volume of trade. (ii) The gain will be greater the more favourable to the home country is the final ratio, i.e. the rate at which coal exported is exchanged for wheat imported, sometimes called "the real ratio of international interchange."

Table VII provides an example of an apparatus that may be used for comparing the gain from trade in various circumstances. In order to obtain a clear understanding of the principles which may be deduced, the reader should make numerous experiments for himself.¹ The following sections contain some discussion of these principles.

§ 5. *Gain through Difference of Cost Ratios.* Gain by trade is possible when the cost ratios are different, at home and abroad. It will be greater, the larger the difference is, other things being equal. This may be simply illustrated by tables constructed on the same plan as V and VII. In each country the wheat gradient is assumed to be equal to the coal gradient in these tables; when a certain amount of additional coal production is undertaken in England, the quantity of wheat production knocked off is taken to be equal to this amount multiplied by the number of units of wheat at the ruling ratio that can be obtained for a unit of coal. Consequently the following rules are observed in the construction of all these tables. Coal is made to rise in England by the amount that wheat falls multiplied by the new ratio of costs; wheat is made to rise

¹ See Appendix.

abroad by an amount equal to its fall in England divided by 10, this coefficient showing the size of the outer world compared with England, and coal falls abroad by the amount that wheat rises there multiplied by the new ratio of costs.

TABLE VIII

Initial Position.

	Cost in England	Cost Abroad
Unit of wheat	x	y
Unit of coal	x	$10y$
Ratios	$1 : 1$	$1 : 10$

TABLE IX

When Full Trade is Undertaken.

	Cost in England	Cost Abroad
Unit of wheat	$12..x$	$1\ 088..y$
Unit of coal	$1\ 09..x$	$4\ 991..y$
Common ratio	$1 : 9\frac{2}{11}$	

The initial difference is bigger (foreign $1 : 10$) than that of Table V (foreign $1 : 5$). The final ratio ($1 : 9\frac{2}{11}$) is more favourable to England (Table VII, $1 : 4\frac{7}{11}$). Moreover the volume of trade on which gain is made is greater. Since the cost gradients are supposed to be the same as in Table VII, the volume of imports may be inferred from the change in costs. The amount of wheat imported is roughly $\frac{9}{8}$ times as great as that in the conditions of Table VII.

The following tables give an example of a smaller difference of ratios :

TABLE X
Initial Position.

	Cost in England.	Cost Abroad.
Unit of wheat	x	y
Unit of coal	x	$2y$
Ratios	$1 : 1$	$1 : 2$

TABLE XI
When Full Trade is undertaken.

	Cost in England	Cost Abroad.
Unit of wheat	$.625..x$	$1.037..y$
Unit of coal	$1.196..x$	$1.98 . y$
Common ratio	$1 : 1\frac{1}{4}$	

Here the final ratio is much less favourable to England. Moreover the volume of imports is smaller, viz. $\frac{3}{8}$ ths of that secured in the conditions of Table VII.

§ 6. *Another Example of the Importance of being Unimportant.*¹ It appears at once from the figures of Table VII that if the doors of foreign trade are thrown open to a country, the gain to her is greater than the gain to the rest of the world. In our illustration the opening of the door improved the terms on which wheat could be got for coal from 1 unit of wheat for 1 of coal to $4\frac{1}{4}$ units of wheat for 1 of coal ; whereas for the foreigner it only shifted the terms on which coal could be got for wheat from $\frac{1}{2}$ of a unit of coal for

¹ Cf. Henderson, *Supply and Demand*, ch. V, sec. 4.

1 unit of wheat to $\frac{11}{5}$ of a unit of coal for 1 unit of wheat. This does but conform to common sense. If Somerset were barred from trading with the rest of England and the barrier were then lifted, the other counties would doubtless gain by the fresh opportunities for interchange, but the gain to Somerset would be immensely greater. By like reasoning, if a particular country reduced its tariffs—a partial barrier to trade—the whole world would gain, but the gain to the particular country would be far greater. It follows also that the smaller the country, the more it is likely to gain by the free interchange of its produce with that of other countries.

It must, of course, be understood that if a particular country bulks very largely in the production of a particular commodity, as England bulked in the production of power-made goods a hundred years ago, or as Chile in nitrates before the lowering in the cost of artificial nitrates, the rest of the world may be an equal or even greater gainer by the opening of trade with that country. This may be seen if, in the former analogy, instead of Somerset, all the coal-producing counties of England, or Lancashire, had been supposed to be barred off.

Attention should be given in this connection to the cost ratio in Table VII of $1 : 4\frac{1}{11}$. This is ten times nearer the old foreign cost ratio ($1 : 5$) than it is to the old English ratio ($1 : 1$); England gains accordingly. If the outer world had been only twice as great as England, the cost ratio would have been $1 : 3\frac{2}{3}$, if 100 times as great $1 : 4\frac{9}{10}$, if equal to England $1 : 3$, etc.¹

¹ The formula by which these ratios can be calculated easily is given in the Appendix

§ 7. *The Gain from Trade, and Cost Gradients.* Next we may consider the relation of cost gradients to profit by trade. In general it may be said that the less the cost gradients at home and abroad, the greater the gain from trade. But if England were very large, approaching half the size of the whole trading world, then it would be of advantage to her to have steeper cost gradients. England gains in all circumstances by low cost gradients in the outer world. But if England is of moderate size, the elasticity of her own conditions brings in much greater gain than the elasticity of world conditions

This may be illustrated by an adaptation of Table VII. It was assumed there that the cost gradient in England was proportional to that abroad. In Table XII it will be assumed that owing to the intense use to which her natural resources are put, or for other reasons the cost gradient in England is twice as steep as was supposed in Table VII over the relevant range of output while that in the rest of the world is the same as in Table VII.

TABLE V (repeated)

Initial Position.

	Cost in England.	Cost Abroad
Unit of wheat . . .	x	y
Unit of coal . . .	x	$5y$
Ratios . . .	1 : 1	1 : 5

TABLE VII (repeated)

Costs when full Trade is undertaken.

	Cost in England.	Cost Abroad
Unit of wheat . . .	$\cdot 25 \cdot x$	$1 \cdot 075 \cdot y$
Unit of coal . . .	$1 \cdot 16 \cdot x$	$4 \cdot 984 \cdot y$

Common ratio : 1 : $4\frac{1}{4}$

TABLE XII

Full Trade Position with English Cost Gradient twice that Abroad, in Proportion to her Size.

	Cost in England	Cost Abroad
Unit of wheat	. 24 . x	1.038 . y
Unit of coal	. 1158 . x	4992 . y
Ratio	. 1 : 4 $\frac{1}{2}$	

Here a given transfer of wheat is seen to reduce the cost of production compared with the no-trade position in England by $(.38 \times 2)x$, and to increase it abroad by $.038y$, while an English increase of $(.08 \times 2)x$ in the cost of coal is balanced by a foreign decrease of $.008y$. Thus the English cost gradient is proportionally twice as steep, the ratio of change in cost to percentage change in output is twice as great. What is the effect of this on the general position?

The first thing to notice about this table is that much less output is transferred. This may be seen at once by inspecting the cost abroad. Since the cost gradient is supposed to be the same abroad as in Table VII, the fact that the marginal cost of wheat abroad in Table XII only exceeds the cost when there is no trade by approximately half as much as it exceeds it in Table VII, and that the reduction in the cost of coal abroad is likewise approximately only half as great, indicates that there is only half as much transfer of production. Whatever gains may accrue from trade in the new situation, they will only come from a trade diminished by half compared with that envisaged in Table VII.

The final ratio of cost (1 : 4.8 approximately) is, it is true, more favourable to England. (The ratio of Table

VII was 1:4.63..). In Table XII wheat which England imports is cheaper relatively to coal which she exports, and this is a gain. The price which England receives for her exports divided by the price which she pays for her imports (in this case the rate at which coal exchanges for wheat), namely her "real ratio of international exchange," is more favourable in Table XII than Table VII. She gets more of what she imports per unit of her export.

But this is a minor matter. The big change in the situation is that she imports far less wheat, approximately a half of the amount she would import in the conditions of Table VII. Of what importance is it that she gets what she does import at a ratio of 1:4.8 instead of 1:4.63, when she is only importing a half of what she did in the other circumstances? The fact that her costs are subject to sharper change as she alters the scale of output means that she gets into line with the world ratio of costs much more quickly, namely, approximately twice as quickly. Thus the smaller volume of trade due to the less elastic conditions of our second assumption limits the gain from trade far more than the improved ratio of interchange increases it. This springs directly from the fact of the world being a bigger place than the particular country.

J. S. Mill in his famous essay on The Laws of Interchange between Nations, has guided subsequent writers along a wrong path by considering elasticity with reference only to how it affects the ratio of interchange.¹

¹ His conclusions follow naturally from his postulate of two equipollent countries trading with each other. They would be relevant in an analysis of the effects of bilateral tariff reductions, but irrelevant in that of the effects of unilateral or multilateral reductions.

The more elastic the home supply the greater the volume of profitable trade for the country. The importance of this easily outweighs the fact that the more elastic the supply the less favourable will the ratio of international interchange be. A change in this ratio is a bad indication by itself of improvement or deterioration in the foreign trade position.

Reflection unaided by numerical example may confirm the reader in his grasp of this principle. A country gains by foreign trade if and when the traders find that there exists abroad a ratio of prices very different from that to which they are accustomed at home. They buy what to them seems cheap and sell at what to them seem good prices. The bigger the gap between what to them seem low points and high points, and the more important the articles affected, the greater will the gain from trade be. If a change in the scale of production of the home country very materially alters her cost of production, so as quickly to bring it into line with foreign prices, the gain from trade is on a small scale, and is more or less fortuitous. But if when big changes are made in the scale of operations the comparative costs at home are altered little, that means that the fundamental economic structure of the country is such as to provide a permanent and solid basis for gainful trade. In this case the cost structure ruling when foreign trade is opened is not a transitory product of a variety of special causes, but is representative of the basic conditions of the country; and if this structure differs widely from the world structure, the scene is set for profitable operations on a large scale.

Turning to the conditions of supply abroad, we see that the lower the world cost gradient, the better for

England, both because the lower the world gradient the greater the volume of profitable trade, and because the lower the world gradient the more favourable the ratio of interchange. Thus the country gains in two ways from a low world cost gradient; but the condition of the world cost gradient has a far smaller effect on the gain from trade than that of the home cost gradient.¹

§ 8. *The Gain from Trade, and Demand.* The next point to be considered in connection with Table VII is its relation to the question of *Demand*. It was assumed that in equilibrium there was the same total output of wheat and coal, the foreign increase of wheat production merely offsetting the English decrease, and the foreign decrease of coal offsetting the English increase. Changes in demand were neglected.

It should be observed, however, that there was a certain reasonableness in the assumption of no change in aggregate output. The cost of wheat rises in the world by one-tenth of its fall in England and the cost of coal falls by one-tenth of its rise in England. If initially the output of each was ten times as great in the world as in England, as has been assumed throughout, and if the gradient of the demand for each is the same at home and abroad, the increase of demand for wheat at home should be equal to the fall abroad and the fall of demand for coal in England should be equal to its rise abroad. Thus the assumption of Table VII that the aggregate output of each was unchanged is consonant with the simplest assumption about demand at home and abroad, namely, that the gradient of each is in proportion to the size of the market.

¹ The reader may verify this by numerical examples for himself.

When demand is taken into account, it appears that the volume of trade will exceed the volume of output transferred. The import of wheat will be equal to the reduction of the home output plus the increase of home demand. The export of coal will be equal to the reduction in foreign output plus the increase of foreign demand. This introduces a new factor in the estimation of gain from foreign trade. Some of the output of coal for foreign consumption is used to buy not the wheat which we no longer produce for ourselves but additional wheat which we could only have produced at a higher cost than x . Since the transfer of demand is voluntary the consumer's surplus on the additional consumption of wheat must exceed that on the consumption of coal sacrificed. Thus when demand is taken into account, the gain from foreign trade is seen to be greater than at first appeared.

(The steeper the gradient of demand, the less the volume of trade will be.) If demand were absolutely inelastic the volume of trade would be no greater than the volume of output transferred from one country to another. The lower the gradient of demand, the more the volume of trade will exceed the volume of output transferred, and the greater the quantum of trade on which the gain per unit is realized.

Thus, as in the case of supply, so in the case of demand, the lower the gradient the greater the gain. It is true that the lower the gradient of the home demand, the less favourable will be the ratio of international interchange. But if the outer world is very much larger than the home country, this disadvantage may be shown, by like reasoning to that used in the case of supply, to be small.

compared with the gain from the larger quantum of output exchanged.

§ 9. *Foreign Trade under Constant or Decreasing Costs.* How does all this analysis apply, if the operation of the Law of Increasing Costs is no longer assumed? In the first place it may be observed that its operation is by no means confined to the extractive industries. Technical skill, specialized managerial ability, adequate supplies of raw materials in proximity, and of power, in fact all the circumstances which make one country more fitted than another to produce particular commodities, are usually limited in their abundance. Constant or decreasing costs may possibly prevail over a certain range of output; beyond it increasing costs are apt to supervene.

It is proper here to mention the class of costs, which simulate but are not identical with increasing costs of production, that Mr. Robinson has called costs of growth.¹ For purposes of this study the presence of these costs may be regarded as involving increasing costs of production; an industry subject to them may ultimately be able to increase its exports without limit; in an ordinary long period, expansion is limited by the rising costs of growth; these like increasing costs proper serve to bring cost ratios in different countries to equality.

If the English production of B is subject to decreasing costs over a long range, but the drastic result of the whole world production being concentrated in England is not achieved, increasing costs ultimately supervening, the arguments of the earlier paragraphs apply.

¹ Robinson, *Structure of Competitive Industry*, ch. VIII

The average cost gradient between the position with no trade and the final position of equilibrium is in this case very low, being negative over part of its range, and the gain to England is accordingly high.

If, however, constant or decreasing costs do persist indefinitely, so that the English ratio of A costs to B costs is never brought to equality with the world ratio, the production of A in England will be abandoned altogether. The rule that the ratios of costs within and without must be equal will apply in the negative sense that there will be no inequality, since there will be no ratio in England. England will satisfy all her demand for A by exchanging B for it, at whatever the world ratio is after trade has been opened.

The pre-trade world ratio was, by hypothesis, more favourable to A than the pre-trade English ratio. If England got A in exchange for B at no better rate than the pre-trade English rate, she would gain by the trade by the amount that her cost of producing B has fallen. A fortiori, if she gets A at the pre-trade world rate she will gain. If decreasing costs prevail outside as well as inside England, the rate after trade has opened will be still more favourable to A. If on the other hand increasing costs prevail in the outer world, the rate will be somewhat less favourable than the pre-trade world rate. It will be more favourable, the larger the rest of the world is compared with England.

§ 10. *A Multiplicity of Commodities Introduced.* In the real world there are more than two commodities

entering into foreign trade. Inspection of A and B in isolation (Table III)

TABLE III (*repeated*)

	Cost in England	Cost Abroad.
Unit of A	x	y
Unit of B	x	$2y$

suggested that England should export B in exchange for A. When other commodities are taken into account it appears that this may not be desirable. For instance :

TABLE XIII

	Cost in England.	Cost Abroad.
Unit of A	x	y
Unit of B	x	$2y$
Unit of C	x	$5y$
Unit of D	x	$6y$
Unit of E	x	$10y$
Unit of F	x	$15y$

If these are all the commodities there are, it is certain, assuming that transport costs are not excessive, that England will export F and import A. That she will export B, as seemed likely when the veil was only drawn from two commodities, now seems extremely unlikely. Though England has an advantage in making B compared with A, she is at a disadvantage in B compared with C, D, E and F. Which, if any, of the commodities E, D, C and B, England will export depends on the importance of each and on the gradients of the supply and demand of each at home and abroad.

All we can predict is that, if the maximum advantage of foreign trade is taken, the ratios in the two regions will be equal after trade has been opened and that this ratio will resemble the right-hand ratio of Table XIII (1 2 5 . 6 · 10 15) more nearly than the left-hand ratio (1 1 1 1 1 : 1). It will resemble the right-hand more closely, the larger the outer world is, compared with the home country.

§ 11. *Conclusions.* (i) The leading principle of this chapter is that the gain from trade will be greater the more the ratios of the costs of production in England and abroad differ, when England and the rest of the world are cut off from one another. Relative improvement of productive efficiency in the outer world at producing the goods which we import redounds therefore to our advantage, an improvement in making the goods which we export redounds to our disadvantage

(ii) The bigger the rest of the world is relatively to ourselves, the greater the gain from trade. A general improvement in productive efficiency all round in the outer world, or a growth of population, redounds therefore to our advantage

(iii) Any reduction in transporting costs or in the difficulty of selling in foreign markets or in the difficulty which a foreigner has in selling in our markets enlarges the possible sphere of gainful foreign trade.

(iv) The lower the gradient of the demand and cost curves over the relevant range of output, the greater the gain from foreign trade ¹

¹ This is true unless we approach the rest of the world in size, when it becomes advantageous for us to have steep cost and demand gradients

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These are the principal circumstances which determine whether and in what degree gainful foreign trade is possible. Our next question is—in what circumstances does the potentiality become an actuality?

CHAPTER III

POTENTIAL AND ACTUAL GAIN

§ 1. *Two Problems.* The last chapter was concerned with the fruits which can be reaped if the international division of labour is carried out on the right lines. It was an account of the direction which trade ought to take, or, what is the same thing, of the way in which countries ought to dispose of their productive resources.

The question which naturally seems to arise in succession to this is—do countries in fact tend to distribute their productive resources in this way and so gather in to the full the harvest which international division of labour is capable of yielding? What is the mechanism which would allow them to do so?

The answer which the classical writers gave to these questions was simple. Full advantage will in fact be taken of the international division of labour, if no artificial obstacles are put to the free flow of trade, if producers and merchants are allowed and encouraged to sell where they can get the highest price and buy where they find the lowest. It will be necessary to examine the presuppositions on which this simple answer rests.

Meanwhile there is another problem with which the classical economists did not concern themselves. The question which interested them was—what is the best

way to distribute the employment of labour and other productive services among different occupations? There is the further question—what are the conditions in which these productive services will be fully employed? It is now generally recognized that the volume as well as the nature of employment in the country is affected by international conditions. It will be necessary to explore the relation of the volume of employment to the international situation

§ 2. *Three Conditions necessary for Maximizing Gain by Trade.* The present chapter is concerned with the first of these problems. It is convenient to confine the field of enquiry to the best employment of productive resources in any one country. What is said of one country will apply to each and every country and, so, to the world as a whole consequentially. Attention is also confined to the production of goods which are capable of being exported and imported and will in future be called tradable goods. The distribution of employment between tradable goods industries and other industries will be discussed subsequently.

If complete freedom of trade is allowed the prices of tradable goods in the country will not stand above their prices at any point outside by more than the cost of transporting them from that point to the country and the cost of establishing contact between the foreign seller and the domestic buyer, nor stand below their prices outside by more than the cost of carrying out the opposite operations. This condition, consequent upon free trade, may be called, briefly, the equality of prices at home and abroad.

It should be observed that, while this condition is

consequent upon free trade, free trade is not necessary to it. For instance, if all foreign trade was concentrated in the hands of an Export Board and an Import Board, they could arrange that it proceeded on the right lines. They would have to push exports and allow imports on such a scale that the ratios between the home costs of producing various commodities were equal to the ratios of the foreign offer prices on the frontier of competition wherever, in equilibrium, that frontier might be. In one respect this controlled system would allow greater latitude than the free trade system. The absolute level of prices at home might be higher or lower by any amount than the absolute level abroad, provided that equality in the ratios was secured. Unfortunately the proposers of this kind of control do not make it plain that this would be the basic principle guiding operations.

If the free trade condition is realized the two following conditions require also to be realized to secure the best international division of labour from the point of view of the country

(i) The rewards charged by factors of production for services embodying a given degree of effort and skill must be the same in different occupations ;

(ii) Producers must be willing to push production of their various wares to the point at which the money costs of production are proportional to the prices which they can obtain.¹ If these two conditions are realized, the prices at which producers are willing to offer their various wares will be proportional to the real costs of production. If the free trade condition is also realized,

¹ These two conditions really reduce to one, if producers (or entrepreneurs) are regarded as one factor of production

the production of various wares will be pushed up to the point at which the ratios of the real costs of production of the various goods are equal to the ratios of the prices of the various goods in the world generally.

But we have seen that the best division of labour is secured if the ratios of the real costs of production are the same in different countries. This in turn will be secured if the producers in each country push production up to the point at which the real cost of production ratios are equal to the world price ratios. Things equal to the same thing are equal to one another. If the real cost ratios are in each country equal to the common price ratio, they will be equal to one another. And that is the condition for the best distribution of productive resources.

It may be observed that the prices of tradable goods in different countries are not, in the free trade conditions, absolutely equal, but may differ within the limits imposed by transporting and marketing costs. But precisely this difference between real cost ratios in the various countries was laid down in the foregoing chapter as being consistent with the best distribution of productive resources.

The two subsidiary conditions for the best utilization of productive resources are general, apply over the whole field of economics and are not in any sense special to the resources which enter into foreign trade. (The direct proportion between the marginal utility in enjoying and the marginal disutility in producing various commodities, which in a money economy is achieved by making price correspond to cost of production, is the general condition for the best distribution of productive resources among various occupations.) Corres-

pondence of price with real cost means that the factors of production are getting the same reward in different fields, the consumer is paying them the same amount for their services whether they are making, say, boots, or motor-cars. The marginal utility which the consumer is deriving from their services is the same in different fields; no gain can therefore be made by transferring their services from one field to another. But if the rewards are different in different fields, higher, perhaps, in the production of cars than in that of boots, that is a sign that the marginal utility derived from a unit of service is higher in the case of cars than in that of boots, and that a gain could consequently be made by transferring some amount of service from the latter to the former until the rewards are reduced to equality.

A trade can only raise its rates of rewards above those of its neighbours by stinting the public of its services. Cannot it improve its relative position, it might be objected, by superior efficiency? Certainly. Managerial skill and other forms of special skill must be counted among the factors. In the ideal equilibrium, a trade conducted with higher managerial skill should show higher profit to the manager than those conducted with less. What the principle demands is that trades conducted with equal efficiency should show equal profits and rates of pay generally, and it is a platitude to remark that in the real world this is often not so. Whenever trades with equal efficiency show unequal rates of pay the public would gain by an increase in the scale of operations of one and a decrease in the other. If the rates of pay to all the factors are equal, the price, which is the sum total of the rewards to all the factors, must be proportional to cost.

A failure to adjust resources in this way necessarily means loss of national income, whether the commodities involved are those which enter into international trade or not. There is, therefore, no need to labour this principle further. A nation may be devoting too much attention to her exports or to some particular line of exports, or too little; the test is whether wages and other rates of pay are below or above those prevalent elsewhere. When rewards in the unsheltered trades, as at the time of writing, are less than in the sheltered, it may be safely said that the amount of resources employed with the sheltered trades compared with that in the unsheltered is too small. At a time when productive resources are unemployed in all trades, it would be inappropriate to speak of a transfer of resources employed in one field to employment in the other. What can be said is that it is desirable that a larger proportion of the unemployed resources should be absorbed by the sheltered trades. Unfortunately a larger proportion are attached to the unsheltered trades. This has been, no doubt, a cause of the inadequate employment in both spheres.

§ 3. *Fulfilment of Conditions Abroad not Essential.* Since we are considering not the best distribution from the world point of view, but how any particular country can, taking the conditions in the outer world as given, best utilize her resources, the question of the conformity between the foreign cost structure and the world price structure becomes irrelevant. The best that a particular country can do for herself is to make her own price structure correspond to her own cost structure and to enter into such foreign trade as is consistent with that

condition and with the prevailing world price structure. In a general way she gains and loses nothing by discrepancies between the world price structure and the world cost structure. That is the affair of the world, each foreign country will be better off the less her own discrepancy is. The home country is indirectly concerned only in this way, that, according to the second conclusion of Chapter II, anything which makes the world richer will probably increase the benefits which she is in a position to derive from foreign trade.

The home country, viewing the prospects of foreign trade, is like the scientist studying nature. He is concerned with phenomena, with the external world as it impinges on his senses; with changes of structure which can in principle have no effect on the world of experience, he has no concern. The trader's world of experience is the actual price structure of foreign countries.

Consider the case of what is called Dumping, the habit of selling abroad below the cost of production. Any habit which causes violent fluctuations in the foreign price structure certainly does affect the home country adversely. Each and every country is concerned to prevent situations in which producers find it profitable to make big changes in their selling prices, which have no relation to the long period trend. But in so far as the Dumping is a permanent habit, the home country can regard a sustained offer of goods by foreigners at prices below the cost of production, precisely as if the low price were due to low cost. The low price has the same effect on her whether the cause be low cost or policy.

✓ If the Dumping has the effect of making the foreign price structure less like her own insulated cost structure, it is advantageous to her, if more like, disadvantageous.

Roughly, the Dumping of goods upon her is likely to be advantageous, in that it enlarges the sphere of gainful foreign trade, while the Dumping of goods by competitors in her export markets is likely to be disadvantageous. Similarly, with regard to the products of foreign "sweated labour."

Foreign bounties or Protection have analogous effects. Protection to a particular commodity, while raising its price in the protected area, tends to make its open market world price fall. The goods which the output of the industries fostered by the foreign country displace have to find a market elsewhere or general production outside the protected area must be reduced. Both will probably happen. If this occurs in a commodity which the home country normally imports, she will gain, if in one which she normally exports, she will lose.

§ 4. Failure of Conditions : (a) *When Industries are Growing or Declining.* Free trade in conjunction with the two subsidiary conditions secures the best distribution of productive resources. In the following paragraphs something is said of the general circumstances likely to disturb the subsidiary conditions.

(i) Inequality of rewards in different occupations is a symptom that the transfer of productive resources from one trade to another is desirable. This may be due to a variety of reasons, a change in the world price structure, in the home demand, or in the technical efficiency of industries. The first sign that the transfer is desirable is a rise in the profits of the industry to which the transfer should be made or a depression in the profits of those from which it should be made, or both. The reward to the entrepreneurs in the two fields

thus becomes unequal. This is necessary in a system of individualism to encourage entrepreneurs in one field and to discourage them in another. The greater the temporary disparity between profits, the more rapid is likely to be the transfer of attention from one field to the other.

It is sometimes thought that, owing to the sluggishness and conservatism of human nature, the natural incentive to shift is insufficient to make the shift occur as quickly as it is desirable that it should. This might be a reason for increasing the incentive artificially by giving bounties or Protection to the prosperous industry. It constitutes a part of the argument for protecting Infant Industry, an argument directly opposed to the recent British policy of safeguarding, which sought to give artificial support to industries in a state of natural decline. The policy here suggested is to foster the strong in order to accelerate their growth and squeeze out the weak more rapidly.

Against this it may be urged that there is danger in such a policy, since time is required to show whether the change in circumstances which engendered the prosperity is to be permanent. A reckless transfer of resources to and fro would be wasteful. The tardiness of entrepreneurs may not be more than prudent caution requires. It should also be remembered that profit derived from the use of existing plant is sheer gain and that, so long as liquid resources used in conjunction with the plant are earning their proper rate of reward, the plant should continue to be exploited. The low rate of profit is naturally a grievance to the owners of the plant. Nothing should be done to encourage these owners to produce more since their plight is a

symptom that it will soon be desirable for some of their productive resources to be transferred to other industries.

While profits are high in one field and low in another, pressure may be brought to bear to alter wages and salaries, by the wage-earners in one case and by the entrepreneurs in the other. If this is carried out, a discrepancy between comparative real costs and comparative prices arises, the money costs in the prosperous field are higher and in the depressed field lower in proportion to the cost in terms of the amount of the factors of production used. While this disparity exists, the weak trade is artificially fostered and allowed to drag out its declining career longer than it otherwise would. This discrepancy represents a further failure to make an immediate transfer of productive resources to their most profitable point of operation. If low wages are in the export trades, unprofitable foreign trade is being maintained in the wake of opportunities of profit now vanished, if in the internal trades, insufficient advantage is being taken of the opportunities in the foreign field.

The shifting of rates may be due to the prevalence of a good level of employment in the prosperous field and of unemployment in the depressed one. If there is an actual shortage of hands in the good field the shift may be desirable as being the only method of stimulating the transfer of workmen. It is analogous to the shift in comparative profits.

It might be urged that even in these circumstances the shift in rates is a sign of undesirable sluggishness on the part of the wage-earners, on the ground that the mere offer of employment in the improving field should be enough to attract the unemployed from the depressed

occupation. But a change of occupation has its sacrifices and, if that is so, it is not desirable to make the change unless there is an increment of income to compensate for those sacrifices. If in these circumstances a shift in wage rates is necessary to induce the change, while the discrepancy lasts the nation is losing in production, since the high price asked by the prosperous trade to cover high wages is unduly restricting the home or foreign demand for its wares, and the low price which the depressed trade is able to ask unduly expands the demand for its; but this loss is offset by the saving of sacrifice in the troublesome and painful process of transfer, which, it may be, can be conducted with a smaller aggregate of disutility in leisure than in haste.

A discrepancy of wage rates when there is unemployment in both fields seems less easy to justify. It is only justifiable at all in so far as it stimulates transfer. But a relatively high wage rate in the prosperous field, combined with some measure of unemployment, is hardly likely to act as a strong stimulus. A relatively high rate of reward for any factor in an occupation is justified so long as there is a shortage of the factor there, both as a necessary check to the demand for the commodity and an attraction inducing more of the factor to come from elsewhere. But, if there is unemployment in that field in addition to that due to normal seasonal fluctuation or the shifting of employment between various firms, the higher rate is probably objectionable.

Broadly, in the world at large, there has for some time been, and will continue to be, a shift away from agriculture. The reason for this is, as Mr. Loveday has so well shown¹ that as people grow rich they spend a smaller

¹ *Britain and World Trade*, passim .

proportion of their income on food. The capacity of the stomach is limited. The amount of food consumed continues to increase, but it increases at a lower rate than that of other commodities. If the birth rate among agriculturists is not lower than the average, men must be continually dragged out of agriculture into other occupations. This has been to some extent offset in the past by the slower rate at which productive efficiency in agriculture has increased, but with modern methods this increase will be speeded up. Consequently there has been a tendency for agricultural wages, at least in the old countries, to stand permanently below those of manufacturing industry—for the shift over is a continuous one. Thus agriculture is permanently stimulated to produce more than its correct output, by the comparative bounty to it provided by the low wages prevalent in it. There is thus a *prima facie* case for giving some compensating artificial stimulus to manufacturing industry in general, especially in countries which are not already encumbered by an intense manufacturing development. In countries which are, it is believed, reasonably or unreasonably, that it is desirable to keep a certain proportion of the population on the land and that this outweighs the gain which would be derived from further industrialization.

If the shift away from agriculture required for the proper distribution of productive resources in the world becomes larger, the discrepancy between rewards in agriculture and those elsewhere will increase also. In the upward phase of the trade cycle secular movements of decline are usually lost sight of, while they are accentuated in the downward phase. A crisis in agriculture

and a collapse in agricultural prices may be expected to be regular features of the downward phase of the trade cycle in future, unless some other means be found for securing a quicker shift over in productive resources, or the trade cycle be eliminated

The production of raw materials is likely to have a similar fate. Increased wealth not only involves an increase in the bulk of raw materials but also an increase in the degree to which they are worked up. This in turn means that a larger proportion of mankind will be needed for the finishing processes. Technical improvements in the utilization of raw materials may lead in the same direction. The production of consumable necessities may yield to that of quasi-luxuries. Within the sphere of quasi-luxuries there will be much more shifting about of demand than in the old more indigent days. The last-mentioned type of shift, however, is different from the others we are discussing, since its consequences are transitory and irregular. The shifts from one broad class, such as foodstuffs or raw materials, to another are enduring and likely to set up permanent discrepancies between rates of pay in different occupations. These discrepancies, which, for short, we may call wage discrepancies, have an appropriate effect in stimulating the transfer of labour and an inappropriate effect in limiting the transfer of enterprise. Whether they should be encouraged or discouraged depends on the circumstances of the case, on how necessary and effective they are in the matter of producing the movement of labour. In so far as they are judged necessary there is a case for giving an offsetting artificial inducement to the producers who are engaged in the growing branches of industry, and for giving an additional

squeeze to those who are being squeezed out by the natural progress of events.

§ 5. *Failure of Conditions : (b) Monopoly.* (ii) Prices may fail of adjustment to comparative real costs, because the factors have opportunities for organizing themselves better in one occupation than another, and so for securing better rates of reward. Discrepancies arising for this reason are wholly injurious, in that they deflect the employment of productive resources from the right channels.

(iii) Prices may also fail of adjustment to comparative real costs, because the monopolistic or quasi-monopolistic character of a certain industry enables the employers to hold prices above costs. This circumstance may not be unconnected with the disparities in wage rates mentioned in paragraph (ii) above, the men being able to stand out for higher rates in the quasi-monopolistic trades. Classical writers on economics were in the habit, when discussing monopoly, of dismissing it as an exceptional phenomenon. This attitude is out of date for two reasons, first because of the great growth in recent years of monopolistic combinations of various kinds, whether mergers, trusts, cartels or gentlemen's agreements, and secondly because the theoretic analysis of monopoly and competition has revealed that both monopoly and competition are limiting concepts, abstractions, relating to conditions not always realized in practice, and that most industries work in conditions which are an admixture of those represented by the two concepts. Thus a large sphere which the classical writers thought of as competitive is in fact only so, in a partial sense.

The ideal of competition tends to be realized in the case of completely standardized commodities in which the market is fully organized and the individual producers many and unorganized. In this case an individual throws his produce on the market in the confident expectation that he will get the ruling price for it and that his contribution will not have a discernible effect on that price. It is in his interest to push his production up to the point at which its cost is equal to the prevailing price.

True monopoly, on the other hand, is realized when a single firm, by the possession of a state grant or patent, or of the whole of the available supplies of a limited natural product, or in virtue of its immense size and commensurate resources, which enable it easily to buy off any competitor who is not prepared to operate on a similar scale, has absolute control over the whole market. Such a firm pushes its production not to the point at which its cost is equal to the price, but only to the point at which its cost is equal to the increment of receipts due to the marginal product.¹ The price exceeds the increment of receipts in the case of the monopolist, for, since he is the sole supplier, a discernible increase of his output has a discernible effect on the market price. It will depress the market price by an amount which depends on the elasticity of demand. But this depression in the price affects the whole of the rest of his output. By increasing his

¹ For industries subject to decreasing costs, marginal cost must be substituted for cost in this sentence, total cost per unit will be somewhat higher than marginal cost, but it will still stand below the price, if the quasi-monopoly allows abnormally high profit to be made (Total cost per unit, or, as more briefly expressed in the text throughout, cost, is taken to include a normal rate of profit for the entrepreneur)

supply he has spoilt his own market. The increment of receipts due to this extra output is not the price of this increment of output at the new price level, but the price of this less the difference between the price at which he used to sell the rest of his output and the price at which he now has to sell it. He will not produce this extra output unless the increment of receipts, so measured, which is due to it, covers the cost of making it. The less elastic the demand, the more the price exceeds the increment of receipts and consequently of cost. The monopolist is always limited in his attempt to mulct the consumer by the elasticity of demand. Happily the demand for most commodities has a considerable degree of elasticity owing to the availability of substitutes. Traffic may desert the railways and take to the roads; electricity may be used instead of gas, etc.

Few producers have an absolute monopoly; but less producers than used to be supposed work in conditions of ideal competition. Any condition in which a producer cannot increase sales without making a price concession implies partial monopoly. This may arise in two ways, either by adhesion to an agreement among the producers, or because the market is not completely organized or the product not standardized.

In both these cases price will stand above the increment of receipts due to an increment of output. But the cost will be equated, so far as the producer's knowledge of his own cost and market conditions enables him to equate it, to the increment of receipts¹. Consequently the price will stand above the cost of produc-

¹ For the modification required in this proposition in the case of decreasing cost industries, *vid.* p. 56, footnote.

tion. Producers will often fail to act in their true interest, but we may assume that their efforts to do so will lead to an even distribution of their errors around the point of their true interest, and the principle that the cost shall be equal to the increment of receipts, if not verified in the case of each individual, may be accepted as a statistical law.

Under this head the discrepancy between price and cost will be greater, the more important the element of goodwill, the more specialized and individual the product and the less organized the market. The greater the discrepancy, the more output will fall below the level required if productive resources are to be distributed in the right way.

Whether anything can be done to whip these partial monopolists into greater activity in an individualist economy is a question difficult to answer.

§ 6. *Summary.* To resume the main thread of argument. In Chapter II it was laid down that, to gain full advantage of international division of labour real cost ratios must be the same in all countries. In the present chapter it has been argued that the most any particular country can do is to make her real cost ratios correspond to world price ratios.

This correspondence will be effected if three conditions are realized.

(i) The price ratios must be the same inside as outside the national frontiers (the Free Trade condition).

(ii) Rewards to factors must be the same in different occupations.

(iii) Producers must be prepared to sell their

wares at prices proportional to the money costs of production.

Something has been said of the general circumstances which are likely to cause a failure of the second and third conditions.

CHAPTER IV

COMPARATIVE PRICE LEVELS

§ 1. *A Classification of Goods.* In Chapter III two questions were put. One, dear to the heart of classical economists, was, what is the best distribution of a nation's productive resources among different occupations? The other was, what are the circumstances in which a nation will be able to make full use of her productive resources? Before the second question can be answered some consideration must be given to the relation of national price levels to each other. For the purpose of this study it is convenient to make a three-fold classification of goods. The division sketched out below has, like all such divisions, an arbitrary element. Many similar divisions might be made. In the attempt to analyse a highly complex phenomenon some arbitrary simplification is inevitable.

A The first division of goods, called briefly A goods hereafter, are the staple goods of homogeneous character and capable of entering into foreign trade. This class consists in the main of raw materials and food-stuffs. The rates at which such goods exchange for each other are, with due allowance for the costs of transport, common throughout the world. Gold is such a commodity. If we take price to be the exchange

value measured in terms of gold, these goods have a single international price level. The prices of silver, copper, corn of specific quality, rubber, tea, etc., are telegraphed from market to market and, if the price of an ounce of silver in London differs from its price in New York by more than the cost of transporting that ounce one way plus that of transporting its price in gold the other, that difference is at once corrected by an arbitrage operation. If the price of silver is higher in London, it is simultaneously offered for sale in London and purchased in equal quantity in New York, until its price is brought to an equality in the two centres. The same is true of all staple goods for which an organized market exists in the important commercial centres throughout the world.

The conditions of perfect competition referred to on p. 56, have, on the whole, tended to prevail in the production of A goods. But deliberate attempts at the control of output by producers' agreements have recently been made in a large number of cases.

B. When much labour is embodied in the working up of raw materials into a finished or half-finished condition, the resulting commodities are apt to be somewhat specialized in character, differing in quality and detail of design according to the place in which the manufacturing process is carried out. These differences destroy the unity of the world market. English electrical apparatus designed for a certain purpose may be different in various particulars from German electrical apparatus designed for the same purpose. Consequently machinery for organizing a single world price for such apparatus cannot come

into play. Each type of product has its own price. The difference between such prices is often greater than the qualitative differences of the products might be expected to justify. An organized market establishes an impersonal contact between those who have a demand for and those who have a supply of the commodity there dealt in. In the absence of such a market, the contacts are of a more personal kind, goodwill is established between buyer and seller, channels of trade become stereotyped, habits are formed and the substitution of German goods for similar English goods can only be secured by a bigger price differential than that corresponding to the difference in the utility of the goods.

To this category of goods many services also belong. Insurance or the issue of securities ought, it might be thought, to be susceptible of international standardization. But many differences in the detail of national law and custom creep in, to distinguish the quality of the services offered at various commercial centres. In consequence of this firms can establish relations of goodwill with their clients, habits are formed, and an international unity of market is not achieved.

C Some goods and services are by their nature incapable of entering into international trade. Such are houses, fixed plant, railway services, public utility services, and domestic services; these cannot be moved from their location.

Retail goods must in general be regarded as amalgams of A (or B) and C goods. This fact has important implications, as will subsequently appear. The price of coal to the domestic consumer is, it is well known,

very much higher than its price at the pit-head. The prices of all goods in the shop window stand well above the prices at which those goods are discharged from the factory. The difference is due to the many services which have to be performed in transporting the goods and making them available for the retail purchaser's selection. If the goods were to be exported, such services would be irrelevant. When the goods reach the shop window they must be regarded as embodying a purely domestic (C) element; they would only be capable of being exported at a value far below that which they are now expected to have attained; they have been metamorphosed from tradable into non-tradable goods.

There is no international price level for Class C goods. The price levels of these goods in different countries are related to each other only through the relation of each to the A and B goods.

We have then before us the following problems :

(i) What determines the international price level, that is, the common world price level of A goods ?

(ii) What determines each national price level of C goods ?

(iii) B goods stand in an intermediate position. There is some tendency towards a common international price level. But complete uniformity is seldom achieved and for long periods there may be considerable differences between the prices of similar B goods of different national origin.

The discussion of this chapter presupposes some common world monetary standard, such as gold. The complications which arise when various countries have independent standards must be postponed, until the monetary mechanism has been explored.

§ 2. *The Price Level of International Goods.* The traditional treatment of monetary theory is not wholly satisfactory for the study of international trade. This treatment uses the concept of a general price level, which is the reciprocal of the value of gold. The general price level can thus be shown to depend on the demand and supply of gold, which in turn depends, when allowance has been made for its industrial uses, on the quantity of valuables it has to be exchanged against, on the rapidity with which it is turned over, and on its quantity. The equation embodying this truth, which is known as the quantity theory of money, may then be set out.

The validity of this theory cannot be shaken, but its employment is not of great service in the elucidation of the problem before us. If it is applied on a world scale, it determines, not the international price level, that is, the average of the prices of A goods which have a common international price, but the *general* world price level, which must include the prices of all valuables exchanged and, in particular, of samples of B and C goods from all nations. The quantity equation applied on a world scale does not bring out the relation of the international price level to the national price levels.¹

∨ The international price level does depend partly on the relation of the quantity of gold and its efficiency in use to the world output of goods. But it also depends on the relation of the demand and supply of world goods to the aggregate demand and supply of all national (C) and quasi-national (B) goods. It is sometimes rashly assumed that, if the production of gold

¹ For the variety of different price levels and the equations appropriate to each, see J. M. Keynes, *Treatise on Money*, chs. IV-VI

were sufficient to keep pace with the increase in the world production of goods, the international price level would remain steady. But this would not occur if the value of these goods happened to decline, as it probably will over a long period, for reasons stated in Chapter III, relatively to a sample of all national goods. (Even if the production of gold were sufficient to keep pace with the increased world production of goods, the international price level would probably fall.) This, conjoined with a rise of other price levels, might be accepted as a necessary evil, but its incidence on the burden of international debts should be noticed. Since these can only be paid in international and quasi-international (B) goods,¹ the burden of international debts, payable with relatively depreciating assets, must increase, even if the general value of the gold in which they are expressed were held stable.²

The unity of the international price level is disturbed by transport costs and broken by tariffs. In the case of A goods, a traveller leaving a centre of output will ascend a slope of rising prices until he reaches the watershed which bounds the area supplied by a neighbouring centre. The level at the various centres is not necessarily the same. The price at each centre plus the cost of transport to the watershed dividing them, must be the same. If the gradient of the ground (i.e. the cost of transport per mile) is the same on either side of the watershed, the price will be lower at which-

¹ Also called above quasi-national goods. These terms are clearly interchangeable.

² The *real* burden will not increase if the reason for the relative fall of A goods is a relative increase of efficiency in producing them, but it will increase in so far as the fall is due to the sluggishness of factors in transferring themselves to the production of goods for which there is a relative rise in demand.

ever of the centres is further from the watershed. Generally prices will tend to be low near the large centres of supply. But quite small centres may reach very low levels if the gradient in the neighbourhood is steep. Small centres may also be found at very high levels. The demand may be thought of as being drained into the centres of supply, lakes whose sizes depend on the amount of the demand which they satisfy.

✓ Tariffs are dams impeding the flow of demand outwards from a given area (but not impeding the flow, if there be one, in the contrary direction). If some of the demand flows out over the dam, the price inside will exceed that outside by the amount of the tariff. If, however, the tariff is completely obstructive, the price inside may stand anywhere between the price outside plus the tariff and the price outside. The price immediately inside the dam cannot fall below the price immediately outside it, for it does not obstruct the inward flow of demand.

§ 3. *The Price Level of Quasi-International Goods.* A traveller exploring the price level of B goods finds somewhat different scenery. In the first place the ground is rougher, partly because tariffs are more numerous and higher, but also because the market is incompletely organized and the cost of salesmanship is heavier. Different prices for very similar goods may be found in close geographical proximity, if trade is running in old channels. The margin of a centre's market may not be the most distant part of it. One feature may strike him particularly. In the case of A goods he found that, as he approached a centre, prices

fell to a minimum in its immediate vicinity. In the case of B goods he may find an opposite phenomenon—prices rising as he approaches the centre of supply. He is then in the presence of the notorious and unduly maligned practice of Dumping. The centre of supply will in this case prove to consist, not of a large number of independent competitors, but of a single firm or group of firms with a tacit or expressed agreement to exploit the market to the best of their advantage. They can charge a higher price near the centre of their area because that is most distant from the rival centres. In pure competition it is only to consumers in close proximity to the watershed that it is nearly a matter of indifference which centre they draw their supplies from; to those much nearer one centre than another it is a great advantage to draw from their own centre. The monopolist or quasi-monopolist exploits this advantage and extracts a higher price from his immediate neighbours than he gets from those on the periphery.

For this reason a country which exports more B goods than she imports is likely to have a higher general price level than the country which imports more B goods than she exports. For, since we may suppose such a country to import more A goods than she exports, the price level of the A goods will probably be higher than that of the country in the opposite position, to cover the higher cost of transport of the A goods; the price level of her B goods, on the other hand, will not be proportionately lower and may not be lower at all.

From the nature of the contours the traveller may get some glimpse of the future. If high and low priced

B goods of similar quality are selling side by side, the high priced centre is only maintaining its position by a goodwill, that is bound to wear down with time. The area controlled by the centre supplying the high priced B goods is probably subject to a long period recession.

Another rough generalization may be made about the B goods price level. In a period of falling world demand and a falling general price level, the production of goods will tend to be cut down. Suppose that there is no general fall in the reward to factors of production. In the case of A goods the law of increasing costs comes into play and the lower world prices are met by a restriction of production which reduces their real cost. B goods are more generally subject to the law of decreasing costs over a wide range on the productive side. A restriction of output may have no tendency to reduce real costs. It will therefore have to be pushed further if the new price is to cover the cost. If there is no reduction in rewards, the price of B goods will be sustained and the fall in demand will have to be met by a sufficient restriction of output. The A industries will complain chiefly of over production and low prices in the slump, while the B industries will complain of excess capacity and unemployment; output will be more sharply restricted in the latter and the price level better sustained.

§ 4. *The Price Levels of Domestic Goods.* It is now necessary to approach the problem of the relation of the national price levels of C goods to the international price level of A goods. The class of C goods as originally defined includes the fixed capital of the

country. The following remarks do not apply to the price of existing capital equipment, but only to that of new equipment (of kinds that cannot be exported) as well as to all C services such as transportation, retailing, catering, public utility services, etc.

Any two countries will tend to have the same price of C goods if the three following conditions are fulfilled. If these conditions fail, the price level of C goods will be unequal in the two countries.

It should be remembered that the goods falling into this class differ according to the tastes and habits of different countries, and difficulties of detail arise in any attempt to measure the price levels against each other. This analysis only aims at a broad result.

(i) The ratio of the efficiency in producing C goods to that in producing A goods must be the same in the two countries.

(ii) The rewards to factors of production must either be the same in A industries as they are in C industries in each country, or the ratio of the rewards in A industries to those in C industries must be the same in both countries. (The former of these alternatives is a special case of the latter)

(iii) The average excess of price over money cost, if any (this being due to monopolistic or quasi-monopolistic conditions among producers), in respect of C goods must bear the same relation to the excess of price over money cost, if any, in respect of A goods in both countries.

With regard to the first condition, it may be observed that great differences between national levels of efficiency are usually due either to differences in natural resources or to difference in the degree to which

scientific knowledge and capital have been applied to manufacturing processes. Both these differences affect the production of A and B goods. On the side of retailing, transport and domestic service it is doubtful if differences in efficiency occur on so great a scale. Since gold rewards are proportional to efficiency in the output of tradable goods, highly efficient countries may find the gold cost of providing their C services, in which proportional economies cannot be made, higher than that in the less efficient countries. It may be expected, therefore that the price level of C goods will be higher in the more efficient countries. Experience confirms this theoretic conclusion.

The cost of living is compounded of the prices of A, B and C goods. The efficient countries will therefore tend to have a high cost of living.

If the second condition is not fulfilled and rewards in the sheltered industries exceed those in the unsheltered industries by more in one country than another, the output of the sheltered industries will, *ceteris paribus*, be more highly priced in the former country.

The popular idea that in times of change there will be greater pressure to adjust rewards to factors in the unsheltered (A and B) industries than in the sheltered (C) industries is well founded. Whereas a period of slump involves some contraction in the demand for C goods and therefore some pressure to reduce rewards, a fall in the world price level of A and B goods may leave a country, whose rewards remain stationary, high and dry, in the sense that none of its A and B products could be marketed at all if costs had to be covered at the old level of rewards.

✓ While the tendency to equality of the price levels of

A goods and, within broader limits, of B goods in different countries is indisputable, it cannot be said that there is such a tendency in respect of goods in general. On the contrary, a general equality of prices in which C goods—and all retail goods have an important C element—are included would only be realized in special and unlikely circumstances.

If countries have, as has been assumed hitherto, a common monetary standard, such as gold, prices may be compared directly. If there is no common standard, prices in each country are expressed in terms of different national units and must be measured against those in other countries by reference to the rates at which the national currencies exchange with each other

Whatever the rates of exchange ruling, the prices of A goods, so measured, will not vary outside the limits imposed by the costs of transport and tariffs.

If countries have no common monetary standard, fluctuations may occur in the rates at which their currencies exchange against each other. Some of these fluctuations may be caused by transient day-to-day conditions. An attempt has been made to distinguish such fluctuations from those due to the normal trend by reference to comparative national price levels. This attempt is known as the Theory of Purchasing Power Parity. It is asserted that the rate at which currencies exchange against each other should normally be that rate which causes each when converted into the other to purchase the same quantity of goods in the land of the currency into which it has been converted as it purchases at home. That the purchasing power may diverge within the limits imposed by the cost of transport and tariffs is recognized.

If attention is confined to A goods, it is clear that currencies converted at the ruling rates of exchange will purchase the same quantity of these, whatever the rate of exchange. For as quotations are telegraphed from centre to centre, each centre calculates the rate at which it will quote for A goods by taking the rates, at which the currencies of each centre exchange, into account. In each country A commodity prices are purely the effect of the foreign exchange rate and cannot be used to determine what that rate of exchange should normally be.

When C goods are taken into account the Theory of Purchasing Power Parity is no longer true. For C goods are not expected to have the same prices in different countries, except in the unusual case in which the three conditions referred to above are fulfilled. If the degree of failure of actual conditions to correspond to those postulated were known and could be accurately measured, it would be possible to deduce the normal rate of foreign exchange from the actual prices of C goods. The normal rate of exchange must correspond to purchasing power parity after the failure of these conditions to be realized has been taken into account. If a simultaneous shift occurs both in the normal rate of exchange and in the degree of failure of these conditions to be realized, whether the latter shift is necessarily cause and the former effect, or whether the rôles may be reversed, we are not yet in a position to consider. We can only do so after a study of the monetary system.

§ 5. *The Price Levels of Factors of Production.* Factors of production are like C goods in that there

is no tendency towards a common international price level. Uniformity of price level is brought about by the free flow of demand from a high to a low level and the flow of goods in the opposite direction. Some of the factors are completely immobile, between nations, others have a very limited degree of mobility. Mines, land, railways, and fixed equipment cannot be moved at all. There is some international flow of labour, but a very small one relatively to the large wage differences which exist. Migration is impeded by the cost of movement, by the many sacrifices which the severance of home ties and the abandonment of well-tryed habits of life involve and, especially in recent times, by severe national restrictions on immigration. South America is the only important region of the world which can be said to welcome immigrants. The movement of scientific knowledge, business ability, and industrial skill is also extremely slow and sticky. Free capital moves somewhat more easily. Foreign investment in fixed interest securities is restricted by the possibility that the lending or borrowing country may depart from the gold standard, and by the investor's ignorance of the chances of default owing to political or economic disturbances in the borrowing country. Other forms of foreign investment are also restricted by the investor's ignorance of the true prospect of the success of enterprises in distant lands. International movement of free capital on a large scale does nevertheless occur.

Classical writers made the immobility of factors of production the basis of the division between their treatment of national and that of international trade. Within the country it was assumed that rewards to

factors in different employments might legitimately be regarded as tending to equality. As between different countries this is not even an approximation to the truth.¹ In a closed national system the proper distribution of productive resources among occupations is that which makes the output in each have equi-marginal utility. To secure equi-marginal utility of output in the world as a whole, the factors of production would have to be moved from one nation to another on a vast scale. The output of productive resources in the U.S.A. or England has exceeded and will long continue to exceed the output in Poland or India. To secure the best international division of labour with the existing distribution of population and skill, it is necessary to fall back on the principles already enunciated. Goods should be allowed to flow between countries so as to secure that the *ratios* of the output per head in different occupations should be approximately equal in all countries. The *absolute level* of output must remain different in different countries, so long as the factors of production cannot flow freely between them. The countries which have the higher absolute level are the more efficient countries.

Broadly, rewards to factors in each country are in proportion to their efficiency. The substantial truth as well as the limitations to this doctrine may be demonstrated by supposing the opposite. In what follows it is assumed that the relation of prices to costs in the world as a whole is such that productive resources in the world generally are in reasonably full employment. The opposite condition receives examination in a subsequent chapter (Ch. VII), but is not relevant to

¹ Cf ch I, sec 3

a consideration of the relative position of countries. First suppose rewards in a particular country to be low in relation to her efficiency. Rewards may be apparently but not really low in this sense. For instance, low wages per hour may so impair the health and efficiency of wage-earners, that a rise would increase output per unit of wage cost. To raise wages above such a level would be to make them lower "in relation to the efficiency of the country," and conversely. If rewards are low, the prices which a country can obtain by the sale of her A and B goods will then on the average exceed the rewards payable to her factors in respect of their productive services. But this is impossible. The price received for a commodity must be divided among factors of production. It follows that the sum total of rewards payable in respect of a representative parcel of her output cannot be less than the price obtainable for it.

A distinction may, however, be drawn between the relatively inflexible rewards to factors, whose rate is pre-determined by contract or agreement, and the adjustable item of profits. The sum total of inflexible rewards may be low in relation to the efficiency of a country, profits being correspondingly high. If this condition persists pressure may be brought to bear to raise the inflexible rewards. In accordance with the general theory of value, each factor will be rewarded in proportion to its own marginal net product. It should be observed in passing, however, that if one of the factors, such as labour, is not well organized to press its claim for a rise in reward when occasion offers, it may, in certain circumstances, continue for a long period to be paid a reward which is low in relation to

the productive capacity of the country, it may continue so to say, to be "exploited"; the certain circumstances may be defined as those in which employers are in a quasi-monopolistic condition *vis-à-vis* labour. This, in its turn, may be explained as the condition, which is indeed the usual one in the absence of collective bargaining, in which a rise in the demand price of labour does not operate through an organized market, but is volunteered by an employer. An employer who offers such a rise has to pay more not only for the increment of labour he may wish to take on, but for all the labour he is already employing, and tends to make the marginal product of labour equal not to the wage he pays, but to the total increment of outlay in which the rise of wages required to attract the marginal increment of labour involves him¹ Wages will then stand below the marginal net product of labour.

Secondly, suppose that rewards are high in relation to the efficiency of the country. At first sight this might also appear to be impossible since not more than the price obtained for the representative parcel of products can be paid out to factors. Inflexible rewards might indeed be high, profits in this case being squeezed. The two converse suppositions of low and high inflexible rewards do not, however, lead to similarly opposed results. If profits are high there is a tendency towards expansion of output, but this is ultimately limited by what is physically possible. The total output of a country cannot exceed the physical capacity of her

¹ Cf the analysis of the relation of cost of production to increment of receipts in the case of the quasi-monopolistic producer of goods in ch III, pp 56-57

productive resources. If profits are low, on the other hand, there is a persistent tendency towards contraction. The process of contraction does not meet with a physical obstacle analogous to that which opposes itself to a limitless expansion. As contraction proceeds, it may, if confined to one country, produce a new equilibrium. By restricting output a country tends to confine herself to the fields in which her comparative advantage is greatest. By limiting the scope of her activity, she raises her own efficiency per unit. Thus the sum total of all rewards cannot be high in relation to her efficiency in the output which she actually undertakes; but they may be high in relation to her efficiency in the broader sphere of what she could undertake, were rewards not so high. High rewards are secured at the cost of the partial unemployment of her productive resources.

A country which relies chiefly on the production of B goods is in a rather worse position than one relying chiefly on A goods, when faced with the demand by factors for rewards in excess of what efficiency justifies. The A goods country raises, at the cost of unemployment, the average productive efficiency of factors in the various fields of employment by the operation of the law of increasing productive costs in the production of A goods.¹ But B goods are often not subject to this law over a wide range on the productive side. The restriction of output may not raise the average efficiency on the productive side in respect of *each* of these goods. If the production of the least profitable types is abandoned altogether, average efficiency may

¹ This means the real costs *decrease* and productive efficiency increases when production is restricted.

be somewhat higher in the remaining field than it was in the whole field before. But in the types some output of which is still undertaken, there will probably be no gain of efficiency in production, the adjustment, if any, being made through the abandonment of the less accessible markets. But as the foreign competitor approaches, the new frontier may soon become as hard to defend as the old one. The higher reward is being paid in part out of a capital asset—goodwill. As time passes, if there is no adjustment of productive efficiency to reward, or reward to productive efficiency, more and more goodwill may have to be sacrificed progressively, and, without any further widening of the gap between reward and efficiency, unemployment will grow

To recapitulate, the sum total of all rewards must be proportional to the efficiency of a country in respect of the output which she undertakes. The sum total of inflexible rewards may be low in relation to that efficiency, but this will be precisely offset by high profits. The sum total of inflexible rewards may also be high in relation to that efficiency, if profits are correspondingly low; this condition is unstable, however, as output will tend to contract. Finally, the sum total of all rewards may be high in relation to the efficiency of a country in respect of her potential output; in this case there will be unemployment.

The foregoing analysis did not take account of the fact that not all output is marketed at world prices. That level of rewards may be regarded as neither high nor low in relation to her efficiency which enables a country to sell, at a normal rate of profit, enough to give employment to all productive resources *other than* those engaged in C industries. C goods may be divided

into two classes, consumable C goods (and services) and immovable capital goods. What determines the proportion of total resources devoted to providing consumable C goods (and services) may be stated fairly simply. Since the total income is equal to the sum of rewards to all factors, the proportion of resources devoted to the production of C consumables is equal to the proportion of total income expended upon them. (This statement has to be modified if part of income is derived from foreign investments or foreign gifts; more will be said of this later.) The proportion of productive resources devoted to the output of fixed capital is, in equilibrium, determined by the rate of saving of the community and the technique of industry. At any given time there is therefore a definite proportion of total productive resources, which, if the system is in equilibrium, are devoted to C-output. The level of rewards proper to a country may therefore be defined as that which enables such a quantity of goods to be marketed at world prices with a normal rate of profit, that, if the employment so given is added to employment given by C industries when in their normal relation to the A and B industries, the productive resources of the country are in reasonably full employment. If inflexible rewards are higher than this there will be unemployment, if lower, inflated profits.

There is much popular misconception regarding the detriment to this country that is due to the prevalence of low wage rates elsewhere. Since many countries are less efficient than this country, wages must necessarily be lower in them; the low wage is offset by low efficiency. Of course the low wage may also be due to the ability of the other factors to secure a larger share of

the product ; in this case the low wage is offset by high profits or rents. Low wages in foreign countries are decried on the ground that they give those countries an unfair competitive advantage ; this attitude is highly confused. A foreign country's power as a competitor depends on the volume and nature of her production , the payment of low wages will not allow her to force production above the level determined by the numbers and skill of her people. She cannot sell more than she can produce. We are benefited if the foreign country can maintain production at a high level, unless she happens to specialize in the goods which we export.¹ In this one case we are injured by her prosperity and would gain if her output declined. To complain of her low wages means nothing unless it means that we should like her to put her wages so high as to restrict her output and create unemployment in her own land ; and this is more than we can in fairness expect.

Low wages abroad may be condemned for keeping the health and efficiency of workpeople there at a low level and so reducing the real wealth of the foreign country. In accordance with the second principle of Chapter II, anything which reduces the real wealth of the outer world is likely to reduce the gain accruing to this country from foreign trade. But this is not the score on which low wages abroad are usually decried. The level of wages in foreign countries has no relevance to the proper level of wages at home.

Changes in general world level of A and B prices are clearly relevant ; but it is important to guard against the fallacy of using the low costs or prices elsewhere of

¹ Cf ch II, p 40

particular commodities as evidence that wages at home are too high. Rewards to factors are proportional to the general level of a country's efficiency. It does not follow that there is any meaning in saying that rewards in any particular trade are or should be proportional to the country's efficiency in that trade. Efficiency, i.e. the value of output per unit of factor employed in the production of a particular commodity, depends on how much output of the commodity is undertaken by the country. To make rewards proportional to the efficiency of factors producing a particular commodity in a country, when engaged in satisfying all and no more than that country's own needs for this commodity, would be equivalent to dispensing with all foreign trade. If it is said that rewards to factors producing a commodity are or should be proportional to their efficiency in producing that amount of the commodity which the country actually produces, the proposition is true but states nothing. For how much will she produce? That amount which, given the rewards to factors *and* their efficiency, she can market at home or abroad. Of the three variables, efficiency, rate of reward, and the amount of production of the particular commodity, if two are known the other can be determined. But if only one is known, efficiency, the other two cannot be deduced from that.

§ 6. *Summary.* The conclusions of this chapter may be summarized :

(1) For *A* goods there are common world prices. The price of each *A* commodity in one place will not differ from its price in another by more than the cost of transporting it between them, plus the monetary

equivalent of any impediment to trade, such as a tariff, dividing them

(ii) The prices of B goods also tend towards a common level. But the forces operating to bring about this result have to overcome greater friction than in the case of A goods, moreover B goods of the same description produced in different centres are apt to differ to some extent in kind.

(iii) There is no world price level for C goods. The national price levels are only related through the relation of each to the price levels of the other classes. There are conditions in which national price levels for C goods will be equal, but these are not likely to be realized. Consumable C goods and all retail goods are likely to be more expensive in more efficient countries.

(iv) There is no world price for factors of production. Each national price level is proportional to the efficiency of the factors in making A and B commodities. A distinction must be drawn between the more and less easily adjustable prices of factors. If rigid rewards to factors are high, in relation to the efficiency of the country, equilibrium is secured by unemployment in that country being more intense than elsewhere.

CHAPTER V

FOREIGN EXCHANGE

§ 1. *The Balance of Payments (introductory).* If an imaginary boundary line were drawn around any area of the world's surface, an inventory could be made of all the payments moving over the line, some proceeding outwards, others inwards. These payments could be divided into those arising out of purchases, loans and gifts. Money may be paid in exchange for goods and services, it may be lent or repaid, or it may be given. This seems to be an exhaustive classification of the reasons for which money may pass from the pockets of residents on one side of the line to those of residents on the other side. It is not, however, quite all the money that passes over, for residents themselves may move out or in, taking money with them.

Payments out may thus be classified according to the purposes for which they are made as follows :

- (i) Importation of goods and services.
- (ii) (a) Loans to the outer world.
(b) Repayment of loans previously made by the outer world to the area.
- (iii) Gifts, including indemnity payments, made to the outer world.
- (iv) (a) Expenditure of tourists travelling in the outer world.

- (b) Money taken by emigrants leaving the area for the outer world.

The first of these (1) may be further subdivided :

- (a) "Visible" import of commodities.
(b) Payments made for the use of such foreign services as insurance, brokerage, etc.
(c) Interest and profit on foreign capital invested in the area.

Payments coming into the area may be classified in a similar way.¹ Thus each division and subdivision involves or may involve both payments out and in. It is important to bear in mind on which side of the balance-sheet each item comes. The importation of goods, the income derived from investments made by foreigners in the country, loans to foreigners and the expenditure of nationals travelling abroad, for instance, all come on the same side. The exportation of goods, the income from foreign investments, foreign loans to the area, the expenditure of foreign tourists in the area all come on the other side.

Payments are often divided into those arising from "visible" and those from "invisible" items. The former class includes only the division (1) (a) above. All other items are invisible.

The most elaborate statistical estimate of a balance of payments is that undertaken by the United States Department of Commerce.² A large variety of

¹ Under (1) there is an important extra item, freight receipts of national shipping companies. There is no corresponding item on the payments out side, since the payments to foreign shipping companies are included in the valuation of imports.

² The Balance of International Payments of the United States, annually since 1922.

"invisible" sources of international payments have been sedulously explored. Estimates are made for such items as motion picture royalties, charitable contributions, telephone services, and underwriters' commissions, and payments arising from unconstitutional kinds of trade have not been left out of account.

Payments in and payments out may be cancelled against each other and the difference is the net balance of payments. If the payments in exceed the payments out the balance is called positive, active or favourable. If the imaginary boundary line happens to be a national frontier, the money in use within will probably not have currency outside and the payment will have to be mediated by a "foreign exchange" transaction, by which one national money is converted into another. These transactions can, however, only cover the payments which may be cancelled against each other; the net balance, active or passive, cannot be met in this way; (local money can only be exchanged against foreign money in so far as there is a counterbalancing offer of foreign money to meet the offer of local money.) If there is an unfavourable balance the excess of local money offered may be met by the offer of foreign money on short loan. But if we include short loans in estimating the balance and there remains a net deficit there is no means of covering it by a foreign exchange operation. If a gold, or silver, standard prevails within and without, gold, or silver, may be exported or imported to cover the net balance. From this it may be deduced that when all items as well as short loans are included in computing the balance, the net excess or deficit must be equal to the quantity of the standard metal imported or exported. If trade in the precious

metals be included in computing the balance, there can be no excess or deficit. Payments out must be exactly equal to payments in. If the country is not on a gold (or silver) standard foreign trade in these metals should be reckoned along with that in other commodities, and, as in the other case, there must be an exact balance of payments in and out. This is a principle of cardinal importance in the subject and failure to appreciate it leads to much confusion of thought in popular discussion.

Official figures giving the visible trade in commodities usually show an active or passive balance. When "invisible" items, such as freight payments, merchants' profits, the payments made for the services of banking or insurance houses and interest on capital are brought in there may still be an active or passive balance. The state of this "balance on current account" has a considerable importance and interest of its own. But when long and short loans are also brought in, and movements of the precious metals, the balance can no longer be active or passive. It must be an exact balance and that not only in the long run, but from day to day and from moment to moment. Within any period, however short, all the British pounds sterling given in exchange for other currencies must be exactly equal to the pounds' worth of other currencies given in exchange for pounds sterling; nor is there any other way of making payment except by the exportation of precious metals; actual sterling may be remitted abroad by way of payment, but in that case the recipient must convert the sterling into his own currency if the payment is to be made negotiable in his country, of course he may hold on to the pounds sterling and defer converting them: the holding of

British currency abroad in this way is reckoned as a short loan to Great Britain.

§ 2. *The Gold Standard and Gold Points.* In the Foreign Exchange market those who, having the currency of one country, desire to acquire that of another, meet those who having the currency of the other desire to acquire that of the one. Foreign payments arising under whatever head are normally made through this market. A gold standard implies that the value of the currency is fixed in terms of gold. Reference to the official gold value of a unit of currency, a pound, a dollar, a franc, etc., determines the par of exchange. When the exchange is at par, a unit of one currency exchanges for units of another equal to the same amount of gold at the official valuations. For a gold standard to be effective the central monetary authority, the Central Bank or Treasury, must be willing to give in exchange for units of currency the amount of gold prescribed in the official valuation. Thus the holder of a currency in a country on an effective gold standard has always two possible methods of making a foreign payment; he may purchase the foreign currency in the foreign exchange market or he may acquire gold in exchange for currency from the central authority and remit it. The rate of exchange quoted in the market depends on the balance of supply and demand. If the demand for foreign currency is strong its value expressed in the market quotation tends to rise; if the demand for the home currency is strong the value of the home currency tends to rise.

The language of the foreign exchange market is rather confusing. If the conventional method of

quoting a rate of exchange is the number of units of foreign currency which may be obtained for a unit of the home currency (as in the British market so many dollars, francs, etc., to the pound), the rate for these currencies is said to rise, if a greater number can be obtained for one pound, that is, if the exchange value of the foreign currency falls. If on the other hand the conventional method of quoting is the number of pounds, shillings, and pence required to obtain a foreign unit (e.g. so many pence to the rupee), a rise in the rate means the same as a rise in the value of the currency quoted. To avoid confusion, the rise of a currency is always used, in what follows, to mean a rise in its value, irrespective of the conventional method of quotation.

The alternative means of making payment, the remission of gold, sets a limit to the fluctuation of foreign exchange rates. By the remission of gold the currency of a foreign gold standard country may always be obtained at par. But the remission of gold has a cost, the principal elements in which are the cost of transport, insurance and interest during the period of transit. If a would-be purchaser of foreign currency is to use the foreign exchange method he must be able to get it at a cost at most equal to its par value plus the cost of remitting gold; otherwise he will use the other method and remit gold. The quotation which makes the foreign exchange method equal in cost to the gold export method is called the gold export point and is the highest point to which the foreign exchange quotation of the foreign currency can rise while the gold standard is in operation in both countries. The quotation which makes the cost of the foreign exchange method

for the foreigner to acquire the home currency equal to the cost of sending gold to the home country is called the gold import point and is the highest point to which the foreign exchange quotation of the home currency can rise.

It is not to be expected that the spontaneous flow of payments in and out arising out of normal transactions will balance day by day. On days when there is a strong spontaneous outward flow, foreign currency will become more expensive. This is a balancing factor. Banks and other firms which normally have balances in more than one centre can make the payments they need to make in any centre on a particular day out of the available balance in that centre, which is allowed to run down. They can thus, within limits, choose the time at which they convert one currency into another. The rise in the quotation of the foreign currency will lead them to postpone purchase if a relapse is expected at a later date. Foreign firms may also take advantage of the low price of the home currency to purchase it in advance of need. Thus if the spontaneous streams of payment are unequal, the movement in the quotation will thin one and supplement the other, tending to make them equal.¹ Speculation may also be a balancing element. If the fall in a quotation induces the expectation of a subsequent rise, the cheap currency will be bought to be resold at a profit at a later date. If the spontaneous flow of the demand for the home currency is sufficiently weak, its quotation may fall to the gold export point. The Central Bank must provide the gold or foreign-exchange required to cover the

¹ For the operation of the flow of bills of exchange as a balancing element, see below, pp. 92-95.

deficiency, in exchange for units of currency, out of its reserve. Its reserve of foreign exchange may consist of deposits in foreign banks, actual foreign currency, or bills drawn on foreign firms.

Those desiring to purchase foreign currency will be equally well satisfied if the Bank provides them with gold or with foreign exchange in exchange for their own currency at a rate not higher than the gold export point. The gold standard will be maintained if, as soon as the exchange quotation reaches the gold export point, the Bank sells a sufficient quantity of gold or foreign exchange, to prevent its quotation rising above that point. To be able to do this the Bank must hold reserves of gold and/or foreign exchange.

If the Bank is legally obliged to offer gold in exchange for currency at par, the country is said to be on a gold standard. If it is only obliged to offer the currency of or bills on a foreign gold standard country at the gold export point, the country is said to be on a Gold Exchange standard. Even if the Bank is legally obliged to offer gold it may in fact offer foreign exchange. Provided that the would-be purchaser can get foreign currency from the central bank at a rate not higher than the gold export point, its quotation in the open market cannot rise above the gold export point. Individuals are concerned to get what they want at a rate not higher than this; it is indifferent to them whether they get gold at par or foreign exchange at the gold export point.

The central bank of a gold country is usually obliged by law to keep a certain reserve of gold. But it may keep the reserves, which it actually intends to use to meet a foreign exchange demand, in the form of foreign

exchange. The Reichsbank is allowed to keep 25 per cent of the gold reserve required by law in the form not of gold but of foreign exchange. Many central banks keep part of the reserves they hold in excess of legal requirements in this form.

In order that the gold import point may also be effective, the central monetary authority, now usually the Central Bank, has the more welcome obligation to issue domestic currency in exchange for gold. This, however, is not always done at par. When the currency takes the form of gold coins the appropriate central authority to issue them is the Mint, which may wish to make a charge for coinage. Between 1666 and 1914 the English Mint made no such charge; it was, however, unwilling to issue coin on demand, but only after a period allowing time for the process of minting. The Bank of England was willing to issue coins on demand in return for a payment equivalent to interest on the process period, which was ultimately reduced to 1½d. on £3 17s. 10½d. (= 1 oz. 22 carat gold). This is the origin of the difference between the Bank's buying price and selling price of gold (£3 17s. 9d. and £3 17s. 10½d.) in the period 1925 to 1931, as laid down by the Act restoring the gold standard in 1925. Thus the difference between the gold export and import points was not equal to twice the cost of remitting the gold between London and the foreign centre, but twice that cost plus 1½d. an oz.

By widening the margin between its buying and selling price the Bank could widen the margin between the gold points. In his *Treatise on Money*¹ Mr. Keynes gave reasons for thinking as large a margin as 2 per

¹ Op. cit., Vol. II, p. 325.

cent desirable. Such an arrangement would not be inconsistent with a gold standard. The natural course of events, on the other hand, is tending to reduce the margin between gold points due to the cost of remission.¹

When Hungary stabilized her currency in 1924 she explicitly adopted a Sterling Exchange standard. The value of her currency, the pengo, was fixed not in gold, but in sterling, which was not itself at that time a gold standard currency. To maintain the position her central bank had to keep a reserve of sterling currency or sterling bills. The sterling exchange quotation was only allowed to fluctuate within limits analogous to the gold points. So any country might undertake to keep its currency stable in terms of some other currency. An objective standard, such as gold, is not a necessary condition of foreign exchange stability.

If the central bank is not obliged and does not, in fact, undertake² to buy and sell gold or foreign exchange in exchange for the local currency at fixed rates, there is no limit to possible fluctuations of foreign exchange rates in the open market. The rates may then move freely under the influence of supply and demand. The probable course of foreign exchange in these circumstances must be studied in relation to the influences affecting supply and demand.

§ 3. *Bills of Exchange.* Reference has been made to

¹ Einzig, *International Gold Standard Movements*, ch 9

² The Secretary of State for India and the Government of India did between them in fact undertake to buy and sell sterling exchange for rupees at fixed rates between 1900 and 1914, though not legally obliged to do so. India was thus effectively on a Gold Exchange standard in that period. India is now on a Sterling Exchange standard.

foreign bills of exchange. In the nineteenth century these were the principal means by which foreign payments were effected. An Englishman wishing to make a payment in Paris would authorize the French firm to draw a bill on him, while a Frenchman wishing to make a payment in London would purchase such a bill. The bills might be payable on sight or after the lapse of ninety days. The quotations of the foreign exchange markets referred to the rates at which such bills could be bought and sold. The use of the telegraph and cable has facilitated the more direct bartering of bank deposits in different countries against each other by means of a telegraphic transfer ("T.T."), and the quotation for a bill is now calculated from the T.T. quotation and the current rate of interest in the centre on which the bill is drawn; in the case of the South American exchanges, however, the bill rate remains the governing rate.

If someone in London has to make a payment in New York he may authorize the payee to draw a bill on him expressed in sterling payable at sight or with ninety days to run. The authorization is confirmed by his bank or accepting house, acting through its agent in New York. The drawer of the bill may sell it at once to his banker in New York for dollars. The present dollar value of a ninety-day bill is computed by subtracting interest for ninety days at the market rate current in London, which gives its present sterling value, and translating that into dollars at the current rate of exchange. The New York banker may then remit it to London to have it accepted by the bank or accepting house, referred to above, on behalf of the drawee. When this has been done, the bill is a liability

both of the drawer and the firm which accepts it. It may then be discounted in London, and the American banker can buy dollars with the proceeds by cable. The discount house or bank which discounts the bill in London is paid off by the acceptor when the bill matures. The creditor (drawer) thus receives his money approximately ninety days before the debtor (drawee) has to pay.

The drawer's banker may not choose to discount the bill in the London market at once ; he may instruct his London correspondent to hold it on his account. ✓ Whether he discounts it in London or has it held on his account depends upon the current rate of exchange and the comparative rates of interest in London and New York. The moment when the bill is discounted in London and the proceeds exchanged for dollars is really the moment at which the English community pays its debt to U.S A. If sterling is low the American banker may defer discounting in the hopes of a rise. He will be still more influenced by current rates of interest. It will be remembered that the American banker paid the drawer for his bill a sum calculated from the current market rate in London. The American banker has purchased a short term investment yielding interest at the London rate. If the London rate is higher than the rate which he could get with his funds in New York, it is a good investment and he is tempted to hold it until it matures. If the rate falls in London the present value of the bill rises and he is tempted to part with it. If the rate rises in London after he has acquired it, the present value of the bill falls and the American banker is subjected to a loss, unless he holds it till its maturity.

Thus a low sterling quotation and, more important, a high relative rate of interest in London will check the discount of sterling bills in London, and thus reduce the offer of sterling in the foreign exchange market and so have a restorative effect on a passive balance of payments. More broadly these factors will stimulate the balance by making London a less attractive place to borrow from and a more attractive place to lend money to at short term.

A speculator in foreign exchange may lend his support to a weak currency by drawing a bill on his own agent in the strong centre. The bill is discounted at once and its proceeds used to purchase the cheap currency in the hope that it may be possible to buy back the expensive currency at a cheaper rate before the bill has matured. The margin of profit for such transactions is, however, very narrow.

§ 4. *Forward Foreign Exchange.* Something must also be said of forward dealing. If a currency becomes cheap, those who have payments to make in the future may desire to take advantage of the present rate without actually spending the money required to make the payment in advance; they may desire to secure themselves against future fluctuation, which is, of course, highly important in the case of payments to and from a country not on a stable standard. The purchase of forward foreign currency consists of a promise to pay home currency for it at a specified future date at a rate agreed on now. The rate agreed on may differ from the rate at which foreign currency can be purchased now (the "spot" rate). What determines the difference? Dealers in forward exchange have to satisfy the

demands of their clients, they undertake to deliver the foreign currency at a specified future time at a rate to be fixed now; they may be quite unwilling to speculate on the foreign currency becoming cheaper or not becoming dearer in the interval; consequently they must cover themselves by purchasing the foreign money at once; this they invariably do. In doing so they have transferred their liquid funds from one centre to another on the strength of a contract which enables them to bring those funds home again at the rate agreed on.

The advantage or disadvantage of having their funds for a time at the foreign centre depends on the rate of interest which they can earn there compared with the rate of interest which they can earn at home. If the rate is higher abroad, it is an advantage, for which they are prepared to pay by selling forward currency below the spot rate. The forward deal enables them to earn the higher rate abroad without running the risk of the exchange moving against them before they bring their funds back. The forward dealers therefore tend to be willing to sell forward currency at a discount compared with spot by an amount equal, after deducting a commission for themselves, to the excess of what they can earn in the short market of the foreign country over what they could earn in the short market of the home country during the period of contract. If the rate is lower abroad, the forward rate exceeds the spot rate by the excess of what they could have earned in the home market over what they can earn in the foreign market plus a commission for themselves.

Actually dealers are both buying and selling foreign

currencies forward and their contracts made in the course of a day may cancel each other out. But every one must be covered when it is made, to avoid risk ; if there is an equal balance at the end of the day the discount on forward sales cancels the premium on forward purchases (or vice versa) and the dealer's net profit is equal to the sum of the commissions on both.

If there is a lack of confidence in the future of a currency, those who wish to sell it forward will exceed those who wish to purchase it forward. The spot sales of forward dealers covering themselves will exceed spot purchases, and the opinion about the future of the currency is thus reflected in a present excess of supply over demand and a weakening in its spot quotation. This shadow, which the future casts before it, is particularly important in the case of currencies the exchange in which is not stabilized.

It is the difference between gold export and import points that allows short rates of interest to be at a different level in centres on the same standard.

If the rate in London is lower than the rate in New York, why should not an American who has English connections draw a bill on his agent in London, get it accepted and discounted there and acquire funds at the low rate for some purely domestic purpose ? If such operations could be carried out on a sufficiently large scale the English rate would be forced up to the American level. But they cannot be. For the spot sterling quotation may rise in the interval and, when the American comes to acquire sterling to honour his bill, he may have to pay a larger number of dollars per pound than he acquired at the outset when he discounted the bill in London and sold the proceeds for

dollars. If the maximum possible fluctuation is .5 per cent, which represents a loss on a ninety-day bill of 2 per cent per annum, the rate in London would have to be more than 2 per cent lower than in New York to cover the risk of such a fluctuation. May not the American safeguard himself by purchasing forward sterling at the outset, that is, at the same moment that he sells spot sterling? No, because if the London rate of discount is below the American rate the forward price of sterling will exceed the spot price by precisely the amount which the American hopes to gain by borrowing money at the cheaper centre. The larger the gap between the gold points, the greater the possible divergence of interest rates between two centres with close commercial connections. When the difference between rates is larger than that which the margin between gold points ought to allow, that must either be due to a lack of confidence in the stability of the currency in the high rate centre or because the firms in the high rate centre have not sufficient connections with accepting and discount houses in the low rate centre to enable them to borrow there on a sufficiently large scale to produce an equalizing effect on the rates.

§ 5. *The Central Bank and the Balance of Payments.*

If a country is on a gold standard and there is a passive balance of foreign payments, it is the duty of the central bank to make good the deficiency by being willing to convert domestic money into gold at par or into foreign exchange at the gold export point. Law usually prescribes that the central bank shall keep a certain reserve of gold against its note issue; some countries, of which the United States is one, also have a legal

reserve against deposit liabilities. If the law lays down that a certain percentage of liabilities (of either form) must be backed by gold, only the gold held in excess of the required percentage is actually available. The law of the United States, however, allows the reserve to fall below the required percentage for short periods on payment of a progressive tax. In England there is only a legal requirement in respect of notes, and it takes the form that all notes issued in excess of a certain quantity must have a 100 per cent backing.

When there is an adverse balance it is more usual for the bank to be called upon to give gold to meet its deposit liabilities than to meet its notes in circulation; the volume of notes in circulation satisfies the requirements of the community for small change and these are not likely to be reduced immediately in consequence of a passive balance. It follows that the gold backing of the notes is not legally available to meet the demands upon the bank reserve in the form in which they usually come. The "free" gold is what the bank has in addition to the legal requirement. The Bank of England usually issues notes against all the gold it has and retains the excess of notes issued over notes paid out in the Banking Department; the notes in the Banking Department thus represent the "free" gold reserve of the bank. This alone is available to meet an adverse balance. By the Act of 1928 the bank was allowed, after consultation with the Treasury, to issue notes for a limited period in addition to the £260 million normally allowed. This really means that the bank would in a crisis be allowed to tap part of the gold behind the notes. In the crisis of August, 1931,

£15 million of the gold was released in this way. A more drastic measure of release is to suspend the Bank Act and thus make all the gold behind the notes available. This expedient was regularly adopted in the crises of the nineteenth century. It was not, however, adopted before the suspension of gold payments on September 21, 1931; the bank preferred to meet the drain by raising foreign credits of an amount approximately equal to its tied gold (£130 million).

In the gold standard period of 1925-31 the notes in the Banking Department (=the "free" gold) fluctuated between approximately £60 million and £25 million. This was a very small sum either by comparison with the total outward payments of the country of the order of £1200 million per annum, or with the total amount of money in the hands of the public of the order of £2600 million.

When the gold standard is in operation it is thus necessary for the bank, if it is to fulfil its obligations, to secure that foreign payments, not counting in gold bullion movements, do approximately balance, or, at least, are not excessively unfavourable.

The immediate weapon which the bank has to hand is to raise its rate of discount. This can be made effective in the market by the sale of securities, which the bank can undertake on its own initiative, and which reduces the volume of its outstanding loans and so makes borrowable money scarce. In normal times the immediate effect of the raising of the bank rate is to make the balance of payments more favourable, for reasons already explained. The country becomes a less advantageous centre to borrow in than before and a more favourable centre to hold deposits in; this fact

decreases short loans by the country and increases short loans to the country.

If, however, there is any suspicion owing to abnormal circumstances that this weapon will not be effective in equating the foreign balance, it becomes ineffective. The difference between the rates of interest in different centres is small compared with the risk of loss, if the gold standard is suspended. Thus, if it is feared that the gold standard may be suspended, the high rate ceases to attract short loans to the country, and fails to make the foreign payments balance. And thus, if the foreign drain persists, the gold standard has to be suspended.

Suspicion, when it arises, is itself the cause of an extended drain, for those who hold liquid balances hasten to exchange them for a currency that is not suspect. A monetary system is seldom strong enough to withstand a loss of confidence.

The weapon of a high bank rate, which the central bank has to hand, has been considered so far from the short period point of view only. If it is possible for fundamental forces to be at work making for a sustained adverse balance of payments, the attraction of foreign deposits and the repulsion of short term foreign borrowers through a high rate of interest clearly will not by itself bring the balance into permanent equilibrium. It is necessary, therefore, to examine the fundamental conditions that determine the sizes of the inflowing and outflowing streams of payment.

§ 6. *Foreign Exchange in the Absence of a Gold Standard.*
If the country is not on the gold standard, the Foreign Exchange method is the only method of making a

foreign payment, and the rates move freely under the influence of supply and demand. Like other prices, they must make supply equal to demand. It does not follow that the supply and demand arising out of payments due in respect of normal transactions must balance from day to day, for when there is no par of exchange, speculative operations play an especially important part. Since changes in the rates may be large, successful speculation can yield a high rate of profit. Under the influence of speculative dealing, the rate of exchange may be steadied at a level which in the view of the speculators will equate the prospective non-speculative supply and demand. If, however, there is complete uncertainty as to the future, speculation may induce violent fluctuations. If the currency is moving in a certain direction, e.g. downwards, speculators will anticipate the future, and the present rate will tend to stand not at a point that balances present non-speculative supply and demand, but at one which is expected to balance non-speculative supply and demand three months, six months or a year hence. This process was amply illustrated in the external "undervaluation" of the inflating currencies after the war. Relatively to existing non-speculative supply and demand, their price in terms of stable currencies was permanently too low, but in relation to what was destined to happen in the ensuing year, the present undervaluation was often moderate.

§ 7. *Exchange Equalization Funds.* Since 1931 a growing number of countries have ceased to operate the gold standard in the manner described in the foregoing paragraphs; but they have not in most cases allowed

completely free movements of the foreign exchange rates.

Some, like Germany, have maintained a nominal gold par, while making it possible for their currencies to be obtained at a lower price in terms of foreign currencies for certain specified purposes. Some, including those maintaining and those not maintaining a nominal gold par, have obtained control over foreign exchange operations, by restricting dealings in various ways, e.g. by making it illegal to import goods except by licences which are rationed out. Arrangements have been made whereby foreign trade is in effect conducted on a barter basis, imports from a country only being purchasable by drafts on accounts created by exports to the particular country.

Where free dealing in foreign exchange is still allowed, the position has in some cases been modified by the establishment of an Exchange Equalization Fund. This may be illustrated by reference to the British Exchange Equalization Account, which was the first to be instituted (in 1932) and has had the most successful record of administration. It is a department of the British Treasury.

Its purpose and policy may be considered in relation (i) to the foreign exchange rates and (ii) to the internal monetary system.

(i) It is the purpose of the Account to even out fluctuations in the foreign exchange rates which may be due to one of two causes. (a) A country whose foreign balance of payments is equal when computed over a sufficiently long period may have discrepancies from day to day, from month to month and seasonally. This is only to be expected. The day to day totals

being aggregates of a large number of individual transactions carried out from motives of private advantage, it is not to be expected that discrepancies will not occur. In the ordinary operation of the gold standard these are made good in part by the movements of funds induced by small fluctuations in the rates of exchange, in part by movements of funds in response to changes in the relative levels of short-term interest rates and finally by movements of gold. In the absence of a gold par small movements in the exchange rates lose their significance and funds will not flow to take advantage of small differences in the rates of interest, since attempts to do this involve exposure to exchange risks of greater magnitude. The automatic gold-flow does not occur.

(b) Since the war there has been a growing tendency for short-term funds to move from country to country in search for security and in response to political alarms and rumours. Lack of confidence in the government may lead citizens to seek a temporary haven for their money abroad; restoration of confidence may lead to repatriation. Such movements have recently amounted to hundreds of millions of pounds sterling, and, if they are concentrated within a comparatively short period, they may dwarf the flow of money arising out of normal trading or investment activities. It is the purpose of the Exchange Account to prevent such movements creating a violent disturbance in the rates of foreign exchange. If foreign money is flowing in or domestic money being repatriated, the Account buys sufficient gold or foreign exchange to offset the movement and obviate the exchange fluctuation, which it would otherwise entail. This purchase also serves to

create a reserve out of which gold or foreign exchange may be sold in the event of a reverse movement.

In addition to the discrepancies arising under the foregoing heads, it is possible for there to be a persistent tendency towards a passive balance of total payments, either because there is a passive balance on current account not fully offset by foreign loans to the country or because while there is an active balance on current account, residents in the country choose to make net foreign investments of greater value. There may be a persistent tendency to an active balance in converse circumstances.

The fundamental forces governing the state of the total balance are discussed in the following chapters. The Exchange Account may make it its policy to allow downward or upward movements in the foreign exchange rate designed to redress the balance. This policy of allowing flexibility in the exchange rates in the long-run is consistent with resolute attempts to even out temporary fluctuations. Thus it may be possible to get the best of both worlds. It will be argued that a movement in the foreign exchange rate is the easiest and most rational method of securing rectification if there is a persistent tendency to an uneven balance caused by fundamental forces. Such a persistent tendency, connected as it is with the relation of the internal level of costs and income to the level of prices and purchasing power prevailing outside, must be distinguished from a reiterated movement to bring money in or take it away in response to a succession of political shocks.

A rectification in the balance secured by a movement in the foreign exchange rate must be contrasted with that resulting from the normal working of the gold

standard. In the latter case the movement of gold, say outward, can only avail to reverse a persistent tendency by operating in a deflationary way upon the internal monetary system. This deflation may tend to produce such a shrinkage of incomes and eventually of costs of production as to reduce imports and eventually perhaps stimulate exports and so bring the balance to rights. The other method by working directly upon the relation of money costs at home to prices abroad tends to secure a rectification without the painful process of internal contraction.

An Exchange Account is not bound to execute such a policy. It may endeavour to bring about a stable exchange rate in the long as well as in the short run. In order to achieve this it is bound to proceed in the same way, as if the country was attached to the gold standard; the difference between such a system and an official gold standard would be largely formal, the Exchange Account carrying out some of the operations—purchase and sale of gold—which would normally be conducted by the central bank.

The long run objective of the British Exchange Account has not been defined precisely. In the early years of its operation it certainly seemed to be favourable to long-run flexibility. The Tripartite monetary agreement between Great Britain, the United States and France, drawn up in 1936, which had among other purposes that of saving the face of the French Government in once again taking France off the gold standard, might be interpreted as indicating that the objective of long-run stability was to be pursued. Such an interpretation is not necessary, however, and subsequent events have suggested that the Account may be oper-

ated to combine short-run stability with long-run flexibility.

It is to be noted, however, that the Account may encounter difficulties in the execution of this policy. It may not always be possible to determine with precision the volume of the once-over movements of money due to the quest for security or the precise amount of the excess of payments in one direction which may properly be attributable to seasonal or temporary unevenness. In consequence it may be impossible to determine the precise volume of offsetting operations which is appropriate. Thus a tendency towards a persistent active or passive balance may be concealed or misinterpreted, and the rate of exchange may consequently be held for some time by the Account away from the desirable value. Such problems can only be solved by experience. The fuller the information at its disposal, the more likely is the Account to be able to execute a given policy with accuracy.

(ii) The segregation of part of the country's gold in the Exchange Account and the purchase and sale of gold by it to offset vagaries in the foreign balance may serve to insulate the internal monetary system from disturbances due to those vagaries. This is all to the good. Whether the vagaries are due to seasonal or occasional discrepancies or to once-over movements of funds in quest of safety it is undesirable that the internal monetary system should be affected by them.

In the period from 1925 to 1931 the Bank of England developed a technique for insulating the internal system from the effect of movements of gold destined to be temporary by open market operations in government securities. If when a gold inflow occurs the

Bank of England reduces its holding of securities by an equal amount, the net effect is that there is no change in the cash basis of the joint stock banks and no tendency for the monetary system to expand or contract. The Bank of England, however, perhaps wisely, did not attempt to build up a reserve against the substantial inflow of foreign short-term funds which occurred in that period. It was probably difficult to do so under the limitations of the gold standard, since these inflowing funds offset a net passive balance on other items; the gold standard precluded any attempt to stimulate the balance by a change in the exchange rates, and to obtain an active balance on total account sufficiently large to provide a 100 per cent reserve against the foreign funds by the only method open to the Bank, namely, credit contraction, might have involved very severe deflation. But the inevitable consequence was that when the foreign funds were withdrawn rapidly owing to the scare of 1931 it was happily impossible to maintain the gold standard, since a sufficient reserve had not been built up.

The insulating policy foreshadowed in this period has been adopted on a larger scale by the Exchange Account. It may be well to examine its working briefly.

Treasury Bills of the value of approximately £175 million were credited to Exchange Account in 1932; this sum has since been raised to £575 millions. If the Exchange Account wishes to buy gold, it obtains funds by the sale of these bills, and when it sells gold it takes bills up again. The internal system would be perfectly insulated, if those bringing capital into the country, whose action the operation of the Exchange Account

is intended to offset, invested their money in Treasury Bills.

If, however, the banks buy some of the bills released by the Account, a deflationary tendency may paradoxically be set up by an inflow of gold. For there will have been no expansion in the cash basis of the banks, and they, if they are to maintain a constant ratio of cash to other assets, will have to curtail loans in some other direction. This necessity can be obviated if some portion of the Treasury Bills are purchased by the Bank of England, so that the cash basis of the joint stock banks is expanded sufficiently to enable them to take up the extra Treasury Bills without curtailing loans in other directions. Alternatively the Bank of England may take over from the Exchange Account such an amount of the gold purchased by it as will effect the necessary expansion in the cash basis of the joint stock banks.

The situation will also be affected by the form in which the newly arrived capital is held. If it is merely kept on deposit, this quantity of deposits will be taken out of active circulation and the increase of deposits due to the purchase by the banks of Treasury Bills without offsetting loan contractions elsewhere will be needed to insulate the internal system from repercussions. If on the other hand the newly arrived capital finds its way into the holding of Treasury Bills or other investments, the purchase of Treasury Bills which it is desirable that the banks should make is *pro tanto* reduced, or the curtailment of other investments which they can make without setting up deflation *pro tanto* increased. Thus in this matter also the greater the knowledge available to the authorities, the greater will

be the precision with which they can execute an insulating policy.

In the next chapter the fundamental forces determining the balance of payments in the long run will be examined.

CHAPTER VI

THE BALANCE OF TRADE

§ 1. *The Classical Doctrine.* The foregoing chapter was concerned with the mechanism by which international payments are cancelled against one another and by which seasonal or random discrepancies in the balance are made good. It is necessary to consider the deeper question of the forces which tend to keep the balance even in the longer run.

A retrospect of "classical" doctrine is given at this point, because, it must be confessed, the classical writers presented a neater solution of the problem than any which can be given with confidence to-day. The modern view comprises a clearer and more thorough understanding of some of the factors involved but does not lead up to so compact a theory. Profound students of the history of thought know that the classical writers were by no means agreed on all particulars; so it is necessary to be content with a typical view

First suppose a gold standard in operation. If the sum of all payments in is not exactly equal to that of payments out on current and capital accounts, the difference is balanced by an international flow of gold. The consequence of a gold inflow will be a tendency of prices to rise in the receiving country and to fall outside; conversely with an outflow. The consequence of

this in turn is a reduction in the range of goods which the country can offer at the prices ruling elsewhere, which entails a shrinkage of her exports and an expansion of her imports. So long as the gold flows in, this process continues, the sum of payments in declines and the sum of payments out increases. This tends to reduce the active balance of payments and finally to extinguish it. At this point gold flows no longer, and equilibrium is reached.

Certain difficulties may next be considered in turn.

(i) The theory assumes that an inflow of gold tends to raise prices (and on outflow to reduce them). This is connected with the Quantity Theory of money. The quantity of money in the country is supposed to be connected with the quantity of gold in the country. An inflow of gold will, unless the banks deliberately take counteracting measures, increase the quantity of money, and an outflow will decrease it. The quantity of money in the country may, however, be large by comparison with the quantity of gold. In the event of an outflow, the reserve of gold may be exhausted before the equilibrium is reached. To meet such a situation the banking system may have to supplement the effect of the outflow and make an extra reduction in the quantity of money by curtailing loans. It is quite in conformity with the general idea of the classical doctrine, to suppose that supplementary banking action of this kind may be necessary.

Indeed according to one view the banking system will tend to keep a fixed ratio between the total quantity of bank money and the quantity of gold in the system. In this case the supplementary action would be taken automatically as a result of what

might be called the standing orders for working the gold standard.

(ii) On many occasions since the war countries on the gold standard have not worked it in this manner. On the contrary they have taken action to neutralize the movements of gold; this has either been through "open-market operations" of the central bank, which sells an equivalent amount of securities when gold comes in and so prevents the inflow from increasing the quantity of money in the country and buys when gold goes out, or, as in the case of the U.S.A. on one occasion, by government measures to sterilize the gold.

Under such a system the classical doctrine would not lead one to expect international payments to tend to a balance; and its exponents have pointed with some satisfaction to these measures as giving a perfectly good reason why an even balance should in fact have failed from time to time to materialize.

It is possible to suspect, however, that this explanation of the failure to balance explains too much, that trade has in fact balanced *better* than it ought to have, if the operation of gold flows on relative national price levels were indeed the sole means of securing a balance.

(iii) How is the Quantity Theory related to the price levels of the three categories of goods, defined in Chapter IV? So far as A goods are concerned there are no separate national price levels (apart from the effects of tariffs, etc.), so that in that field the theory breaks down or at least requires restating. The prices of B goods may vary from country to country; it is important to emphasize that the competitive power of

the home country will only be reduced (or increased) if money costs of production are raised (or lowered) ; if the alleged force of the gold flow is to be effective in this sphere, it must operate on money costs of production. C goods do not enter into the balance of trade, but their prices may operate through their effect on the cost of production of other goods. How may these forces be reduced to the simplest terms ?

Consideration of A goods may give the clue Here a price differential is ruled out. None the less, the flow of gold may influence the balance of trade in them in two ways (a) If there is an increase of *activity* in the receiving country in consequence of the inflow, and a higher aggregate income for this reason, more A goods may be bought and imports therefore increased. (b) If factors come to receive higher rates of money rewards in consequence of the inflow, they may be able to afford more A goods, the price level of which is presumed to be unchanged, both because they have a higher money income per head and possibly because other available goods will have become more expensive owing to higher money costs This would make for higher imports. On the other hand, with the rise of factor rewards, costs of production will be higher, and the marginal producers may be squeezed out of business, this makes for lower exports. ✓ These two considerations, increase of activity and higher rates of money rewards summarize the possible effects of a gold inflow on the balance of trade in A goods The same is true of B goods, the possible change of their price level in the process may be regarded merely as an incidental by-product of it.

Thus the classical theory has been restated, having

regard to the three categories of goods, and the required operation of the gold flow is seen to depend on its success in affecting (a) the level of activity in the country and (b) the level of monetary rewards. It was not characteristic of classical thought to pay much attention to the level of activity. This matter is considered in paragraph (v) below. In interpreting their doctrine primary emphasis should be placed on the level of monetary rewards.

Now in the modern world this level is notoriously somewhat sticky, and it may be hazarded that in the nineteenth century it was more sticky than the pure classical doctrine of the balance of trade implied. Exponents of the doctrine here again tend to express satisfaction since the stickiness of rewards may serve to explain why the theory of the balance has not been precisely fulfilled. And here again it is legitimate to suspect that the explanation over-explains. Trade has probably balanced more than it ought to have done, if the ready adjustment of rates of monetary reward to factors were the sole force at work securing such a balance.

(iv) Classical theory tended to assume that the international flow of investment intended to be permanent was governed by rival prospects of profit and security in different countries, and that it should consequently be regarded as an independent factor in the situation to which other items in the balance of payments would have to adjust themselves. Thus if the capitalists of a country in search of higher profits chose to invest £100 million per annum abroad, gold would flow in such a way and have such an effect on relative price structures, that the investing country

would automatically find itself with a favourable balance of trade of the value of £100 million.¹

Recently some doubt has been cast on the correctness of this. The flow of capital may not be so independent. It is possible that the capitalists of a country may be tempted to invest (or borrow) abroad precisely because of the conditions which the active (or passive) balance of trade has brought about. This view will be elaborated in a later section (§ 5).

(v) It is necessary to return to the problem set in the beginning of Chapter III—what are the conditions in which the productive services of a country will be fully employed? Classical thought tended to assume full employment in some sense. But suppose that this condition fails?

The gold flow was explicitly relied on to secure a level of monetary rewards to factors, such as to make trade balance, it being implicitly assumed that factors were fully employed. But it is clear that the level of factor rewards required to secure a balance of trade will be different according to whether or not the factors are fully employed. If a country is working with a high level of unemployment, it will concentrate on producing the goods in which it has the greatest comparative advantage; if it wishes full employment, it will have to employ the residual factors in less profitable fields. Consequently a balance of trade can be secured with unemployment at a higher level of

¹ Traditional theory has indeed assumed a balancing movement of short-term funds, this was dealt with in ch V. The argument of this chapter is concerned with movements likely to rectify a permanent tendency towards an uneven balance, not with temporary movements due to be reversed at a later date

money rewards than would be feasible if the necessity of full employment were postulated.

Now if we rely on the gold flow to secure a balance of trade through its operation on the rate of money rewards—assuming for the sake of argument that those are readily adjustable—what particular level of employment will it secure? There is clearly a missing link in the argument. The flow of gold clearly cannot automatically secure *both* a balance of trade *and* a full level of employment. Some determining force must have been left out of account. This matter is taken up in § 6.

If the assumption of the gold standard is removed, classical doctrine expects that the rates of foreign exchange will, in due course, be adjusted to a "natural" level at which the supply and demand for foreign currencies balance. This theory is simpler. We no longer have to consider how a flow of gold suffices to alter the rates of money rewards to factors; the relation of these money rewards to the level of prices in the outer world is automatically changed by the change in the foreign exchange rates. Thus the difficulties i-iii enumerated above do not arise.

But difficulties iv and v remain. The rate of exchange at which trade balances will be different according to the level of employment assumed to exist. The relation of the rate of money rewards at home to the world price level does not give a unique rate of foreign exchange. There will be various rates according to the level of employment assumed. Which rate does the balance of supply and demand establish? Presumably the rate appropriate to the level of employment actually existing. Suppose now that the quotations of

the home currency are lowered by artificial intervention and that in consequence employment at home is stimulated. The new rate will make trade balance at the new level of employment. It is, in fact, just as "natural" as the old rate. Yet it might never have been reached save through artificial intervention. In fact when variations in employment are reckoned as a possibility, there is no "unique" natural rate

The inadequacy of the theory may be shown as follows. Suppose that an equilibrium is disturbed by the loss of a foreign market. The loss of exports, by weakening the demand for sterling will weaken the foreign exchange quotations of sterling. How far will the fall go? The theory does not tell us. If producers take a bad view of the depression likely to result from the fall of exports, production may be curtailed all round, incomes reduced and therewith the purchase of imports, so that a new balance of trade is achieved with the foreign exchange rate very near to its old level and a considerable increase of unemployment in the country. If on the other hand producers refuse to be depressed and production, the level of income and of imports are all maintained, the foreign exchange rates under the pressure of the continued excess of supply over demand will move downwards till a balance of trade is achieved at the old level of employment. The fall in the exchange will improve the relative position of home producers whether competing with foreigners in home or foreign markets and thus fill the gap caused by the loss of the particular export market. Employment may be maintained at its old level. Now the traditional theory does not and cannot tell us which of these things will happen, since what does happen on

our showing depends upon the optimism or pessimism of producers. Either upshot is equally consistent with the traditional theory.

Optimism and pessimism were here dragged in as a *deus ex machina*, not as necessarily being the factors which do in the real world determine the course of events, but only to show that the classical theory is inadequate to determine which of the two alternative kinds of equilibrium is achieved. It is to be hoped that modern theory may avail to give a more precise explanation.

The failure of the classical theory is not due to any logical inadequacy, but only to the fact that its logic requires the postulate that full employment will in any event be maintained.

The relation of this argument to the general theory of comparative costs may be understood by a reference back to Chapter IV, § 5, where the relation of the price level of factors of production inside a country to the world price level is discussed, taking the possibility of unemployment into account.

§ 2. *Equilibrium in Simplified Conditions.* It is necessary to approach the problem by stages. In the first stage it will be supposed that all payments are in respect of goods and services traded. Since it is dangerous to consider foreign transactions in isolation and their inter-connection with national production and consumption must always be borne in mind, it will be supposed in this stage that not only is there no foreign investment, but no domestic investment either. Individuals and corporate bodies in their capacity of final consumers spend the whole of their incomes.

There is no addition to the capital goods of the country.

In this stage it will be shown that trade may be expected to balance without the intervention of a gold flow. Indeed the simplified assumptions rule out such a flow. Now although an automatic balance of this sort will no longer appear when the simplifying assumptions are removed, yet the kind of force here considered will be in operation subject to various complications. The reader may properly regard the argument as suggesting that the classical writers tended to make the gold flow play an unduly important part in the establishment of an even balance.

Consumers' expenditure is divided between home-made goods and imports, in which must be included the imported raw materials contained in home-made goods. The total national income is derived from the sale of goods to consumers at home and exports. (It is assumed that the reader is aware of the special problems connected with the treatment of taxation in computing national income, to avoid double counting) Income derived from the sale of goods to consumers at home is equal to the amount of income devoted to their purchase. And since total income is equal to total expenditure, the value of exports is equal to that of imports.

But what will the value of exports be? This depends on four circumstances: (i) the money rates of reward to factors of production at home, (ii) the efficiency of factors of production at home, (iii) prices and demand in the outer world and (iv) the profit element. (i) and (ii) together determine the cost of production at home. By comparing this with the prices ruling in the outer

world, the quantity and value of the goods which it is possible to export at any given level of profit are determined. What profit will producers insist on? This may depend in part upon past history as well as future prospects. If capital had already at the point of time under consideration been invested in a particular line of production, the producer may be content with any positive rate of profit that he can get. If on the other hand a fresh investment of capital is required, attention will be paid to the current rate of interest, the degree of risk involved and future prospects. The smaller the degree of risk and the better the prospects, the lower is the rate of current profit which will induce him to make the investment. Consideration of the influence of profit indicates that current conditions do not alone suffice to determine the value and volume of goods that will be exported. This proviso with regard to profit having been made, it will for the sake of simplicity be neglected in the following paragraphs. It will be assumed that the level of exports is determined by the other three elements in the situation only, which may be described by the single expression, the relation of the efficiency rewards of factors at home to the prices and demand in the outer world. The words "and demand" are inserted to cover the case of B goods, about which it is not always possible to assume that there is a single ruling price. Nevertheless as, owing to repeated use, brevity is desirable, the expression "the world price level" will often be employed simpler; it must be remembered that this is taken to include "state of demand" for those goods (B) which are marketed in conditions of imperfect competition and that the prices referred to are those of the

goods in which exporters are in fact in a position to compete with foreign producers in the places where competition is proceeding.

If the rates of efficiency reward at home and the world price level can be regarded as given factors in the situation, and if a gold standard is in operation, not only the level of exports but also the total level of income at home stand determined in the following manner

Let I stand for total income, let E stand for the value of exports, as determined by the circumstances enumerated above, and i for the proportion of income devoted to goods made abroad (including the imported raw materials in home-made goods). Then

$$i I = E$$

$$\text{or } I = \frac{E}{i}$$

Thus if the value of E is given, as supposed above, and the value of i is also known, the level of income may be deduced. This is indeed self-evident, but it may assist the reader to trace the matter out step by step. Let him begin with the income earned by the exporting fraternity. They earn income equal to E and spend $(1-i)E$ on home-made goods. The producers of these home-made goods earn income equal to $(1-i)E$ and spend in their turn a fraction $(1-i)$ of what they earn $(1-i)E$ on home-made goods. Thus they spend $(1-i)(1-i)E$ on home-made goods. Thus in turn another set of people earn $(1-i)(1-i)E$ by producing these and spend a corresponding fraction on home-made goods. Thus the *total* amount earned by those producing home-made goods is

$$(1-i)E + (1-i)^2E + (1-i)^3E +$$

This is an infinite series, but the sum is not infinite. By the use of elementary algebra the sum is found to be

$$\sqrt{\frac{1}{3} E - E}$$

But exporters earn income equal to E. Therefore total income is equal to

$$\frac{1}{3} E \quad f = \text{multiplier}$$

This method of analysing total income is known as the "multiplier" method. It consists essentially in dividing income into two parts, one part of which is derived from the receipts of income spenders and the other part, the absolute amount of which is taken to be known, is derived from another source. Total income may be deduced if it is known what proportion of their receipts income receivers spend in such a way that it does not flow back to other income receivers. The reciprocal of this proportion ($\frac{1}{3}$ above) is known as the multiplier. The part of income not derived from income spenders and taken to be known and given may be called the base. The method will be used again in the following sections with other multipliers and bases. It is undoubtedly a valuable method of approach to the problem of the balance of trade.

Next it is desirable to examine what happens in the event of a disturbance in the fundamental conditions which determine the value of E. Suppose that, other things remaining the same, there is an improvement in productive efficiency in some other country in respect of goods which we export, e.g. in the Japanese cotton piece-goods industry, and a consequent shrinkage in a

foreign market. This involves some loss of advantage which England was formerly able to derive from her foreign trade and a deterioration in her position. Two kinds of adjustment are possible: (i) the rewards to factors may be adjusted so as to keep productive resources in reasonably full employment; (ii) factors may be allowed to go out of employment

(i) The reduction of money rewards may serve to maintain full employment in two ways. By increasing the quantity of goods which it is now profitable to export at prices realizable in foreign markets, it goes some way to offset the initial fall in E . By reducing the prices of home-made goods competing with foreign goods in home markets it may increase the proportion of income spent upon them and so the multiplier. Thus suppose initially that total income is represented by 100, exports by 10, and $\frac{1}{10}$ of income is spent on imports, the multiplier thus being 10. Suppose that the loss of the market reduces exports to 9. A reduction of rewards will serve to maintain employment if it can re-stimulate exports to $9\frac{1}{2}$ and by lowering the relative price of home-made goods raise the multiplier to $10\frac{1}{8}$. Total income will then stand as before at 100 of which

$\frac{1}{10\frac{1}{8}}$ making $9\frac{1}{2}$ units will be spent on imports. Trade

will balance as before, but at a lower volume of turnover. If there is, initially, unemployment in Japan the stimulus to it, and therefore to Japanese imports, may operate directly or indirectly by triangular trade on English exports and thus lessen the amount of reduction in rewards required in England to maintain full employment

If the country is on a gold standard or, in the absence

of a gold standard, is committed to the policy of maintaining her rates of exchange with all or most other countries stable, the reduction in rewards must take the form of an outright money reduction. Otherwise it may be brought about through a depreciation in the value of her currency in terms of other currencies. The latter method of securing reduction can be carried out with greater ease and equity as between different interests; it is discussed in a subsequent chapter¹

(11) If real rewards are not reduced, what will the nature of the new equilibrium be? Full equilibrium in one sense of the term will not be achieved, since there must be some unemployment in the new situation. But there will be a new equilibrium in which receipts and expenditure, and exports and imports balance. In the new position the volume and *a fortiori* the value of exports will be reduced. It is necessary to examine the repercussions in the industries producing for the home market. Let us retain the supposition that individuals spend the whole of their incomes, neither adding to nor taking from their monetary holdings. In this case the loss of incomes in the export industries will be accompanied by a loss of incomes in the industries producing for the home market sufficient to reduce the purchase of imports by the amount that income from exports has fallen off. Thus, provided that consumers do not spend more than they receive, purchasing power will be automatically reduced by a sufficient amount to entail a reduction in imports equal to that in exports.

This may be traced out. Suppose an initial loss of income in the export industries of $\text{£}p$. The individuals involved spend $\text{£}p$ less. This reduction is divided among the two main classes of expenditure. If expendi-

¹ Ch. VII.

ture on imports is reduced by ξq_1 , that on home produced goods is reduced by $\xi p - q_1$. The income of the industries producing for the home market is now reduced by $\xi p - q_1$ and individuals in these industries will spend less; if they spend ξq_2 less on exports, they will spend $\xi p - q_1 - q_2$ less on home produced goods, and there will be a further consequential reduction of incomes in industries producing for the home markets of $\xi p - q_1 - q_2$. This entails a further reduction of expenditure on both categories. Reduction of incomes in the industries producing for the home markets will proceed by the progressive transfer of reduction, until there is no more reduction to transfer. This happens when $\xi p - (q_1 + q_2 + \dots)$ is zero, i.e. when

$$q_1 + q_2 + \dots = p^1$$

But the left-hand side of this equation is the sum of all the reductions in expenditure on imports, while p is the initial loss of income from exports. Thus the reduction in imports is equal to the reduction in exports. The result that, provided no one spends more than he receives in income, total income will be reduced sufficiently to curtail expenditure on imports by the amount that exports have declined has absolute generality. Moreover, the whole process is simultaneous, so that the transition from one equilibrium to the other occurs without lapse of time. Far-reaching complications arise, when the simplifying suppositions of this enquiry do not hold. A clear understanding of this most simple and fundamental type of case is a necessary preliminary to the study of complications.

¹ The series on the left-hand side of this equation will be infinite, since q_r is always less than $p - (q_1 + \dots + q_{r-1})$

Thus even if rewards in home industries are not reduced, a balance of trade will automatically be secured without the intervention of a gold flow. The contention sometimes put forward by exponents of traditional theory that if rewards to factors are not sufficiently reduced initially, a gold outflow will proceed until they are, is seen to be without foundation in these simplified conditions.

This conclusion may be viewed with satisfaction in view of the warning given in Chapter I, § 2. "Theories regarding the mechanism by which the national balance of payments is maintained may be tested by applying them to any arbitrarily defined area. If they implicitly assume in every such area the presence of a mechanism which does not in fact exist, they are properly suspect"

§ 3. *Balance of Payments on Current Account.* The equilibrium position when there are other items on current account in the foreign balance may next be considered. Such items are interest and profit on foreign investments, gifts, indemnity payments. If capital movements are still excluded, then in equilibrium a passive balance of trade is offset by an active balance on the other items and vice versa. Imports are equal to the income from exports plus the net active foreign balance on other items. The greater this net active balance the larger *ceteris paribus* will the total income of the community be. If F stand for the net active balance on other items,

$$I = \frac{I}{I}(E + F)$$

Thus a rise of £100 p.a. in F will, *ceteris paribus*, not merely increase I by £100 p.a. but by $\frac{£100}{s}$ p.a. The receipt of £100 will be balanced in part by the expenditure of its recipients on imports, in part by that of those consequentially given new employment in the industries producing for the home market on imports.

If a reduction in F occurs the opposite results follow. This may be illustrated by supposing that, on a condition in which foreign payments balance, there supervenes the necessity to make an indemnity payment. The people vote the required sum by taxation. Suppose that there is no change in world prices or rewards to factors at home and consequently no increase in exports. The people will have less money to spend by the amount of the tax they have voted. There will at once be some curtailment of the purchase of imports by the tax-payers and of imported raw materials by those producing goods for the tax-payers. This primary reduction in imports will not be sufficient to cover the indemnity, for presumably only part of the income lost by the additional taxation would have gone to the purchase of imported goods and materials. There will also be a reduction in the purchase of home-made goods. This will lead to a reduction in domestic employment and to a further curtailment of imports owing to the loss of purchasing power by those thrown out of work. The unemployment will be extended progressively until the reduction of imports through loss of purchasing power is sufficient to cover the indemnity.

The unemployment is not, however, inevitable. It can be cured by the factors of production consenting to take lower rewards for their services. If sufficient cuts

are made exports may be increased by the full amount of the indemnity, and if that happens the unemployment will disappear. How drastic the cuts required are will depend largely on the elasticity of demand and supply of the country's goods; the greater the elasticity the smaller the cuts required.¹ It will also depend on the nature of the exports. If they consist largely of B goods, more drastic cuts will probably be required than if they consisted largely of A goods. For the indemnity payment shifts the demand for goods in general from the tax-payers of the paying country to the tax-payers of the receiving country. This shift in demand will tend to give the producers of competing B goods in the indemnity receiving country a marketing advantage over those in the indemnity paying country. Thus the paying country will have to cut the price of its B goods relatively to that of the receiving country's B goods by a sufficient amount, which may be large, to tempt buyers in the receiving country to transfer their demand from their home-made goods, to which they are accustomed, to unwonted foreign-made goods of different pattern.² Thus the factors in the paying country will have to reduce their rewards more and the price of the output will have to fall more in the case of B than in that of A goods. As against this it must be remarked that the production of B goods is more likely to show decreasing costs over a considerable range, resulting from the larger market.

Thus the burden of an indemnity is twofold. The paying country has to reduce its expenditure by an

¹ Cf. the analysis of ch. II, pp. 31-35

² This will be further accentuated, if the receiving country imposes a tariff

amount equal to the taxation required to cover the indemnity. In addition it must either allow an unemployment crisis to persist, with the resulting loss of output and income, or it must reduce the real reward to factors of production

It is sometimes argued that full employment may be maintained without a cut in rewards, owing to the increased purchasing power in the indemnity receiving country operating upon the indemnity paying country's exports. This consideration certainly decreases the severity of the cuts (or of unemployment) suggested as necessary by the previous argument. Only in one condition would the stimulus to purchasing power abroad obviate the necessity for any cuts at all in the indemnity paying country, namely, if the stimulus to employment abroad were so great that the new income receivers spending no more than a normal fraction of their incomes upon the paying country's goods, which must be supposed to be a small fraction, have so much new income that they buy exports from the paying country equal to the value of the indemnity. Otherwise they will only be induced to buy sufficient exports from the paying country to cover the indemnity by price concessions made by the paying country. But these concessions entail reductions in rewards to factors in the paying country

§ 4. *Capital Movements (preliminary)*. In considering international capital movements it is necessary to remove the simplifying condition that the whole of income is spent. Account must be taken of capital accumulation in the country.

First, income may be classified according to how it

arises. Income arises (i) from the production of goods sold to consumers at home, (ii) from the production of goods sold abroad and (iii) from the production of goods which go to swell the stock of capital goods in the country whether fixed or liquid. Incomes derived from foreign investment or by way of indemnity or gift from abroad, as well as profits earned at home and remitted to foreign shareholders or indemnity payments, etc., remitted abroad, are assumed to be nil or to cancel each other exactly in this section. Their effect on the balance was discussed in the foregoing section.

Next, income may be classified according to how it is disposed of. It may be disposed of (i) in the purchase of home-made consumable goods, (ii) in the purchase of imported goods including imported raw materials in home-made goods and (iii) in the form of saving. This accounts for the disposal of the whole of income.

It is convenient to designate the magnitude of income derived from the three aforementioned sources by H, E, and K, namely, income from consumable goods sold in the home market by H, income derived from exports by E, and income derived from additions to capital by K¹ and to designate the *proportion* of income disposed of in the aforementioned ways by *h*, *i* and *s*, namely, proportion of income spent on home-made consumable goods by *h*, proportion of income spent on imports by *i* and proportion of income saved by *s*. Total income is I. Thus

$$I = H + E + K = (h + i + s)I.$$

¹ I have used symbols designed to aid the memory of what they stand for. Capital is represented by K (*das Kapital*) instead of C, as C has already been used in the classification into A, B, and C goods (Cf. ch. IV). Capital letters are used for absolute magnitudes and small letters for proportions.

Also since the amount of income spent on the consumption of home-made goods (excluding imported raw materials) is equal to the amount of income derived from their production

$$hI = H$$

$$\therefore (i+s)I = E + K.$$

It now no longer follows that $iI = E$, i.e. that there is an exact balance on current account.

The increase in the stock of capital goods in the country is equal to $K + Z$

where Z is the quantity of foreign goods bought not for consumption, but to add to the stock of capital goods.

Total imports being represented by $iI + Z$ and exports by E there is an exact balance of trade, if

$$iI + Z = E.$$

Since interest on foreign investments, indemnity payments, etc., are here excluded from consideration, and "goods" are taken to comprise services, the foregoing equation represents an exact balance on current account.

It is not necessary that there should be such an exact balance. If $iI + Z$ is greater than E , there is a passive balance, and conversely.

If there is a passive (or active) balance on current account this must be balanced by a loan from (or to) abroad and/or an outflow (or inflow) of gold.

The international flow of capital is governed by the quest for profit and the conditions of security prevailing. A flow of gold will balance any difference between the totals of current and capital items on the two sides of the account.

It is now required to consider what forces determine

(a) the level of employment in the country and (b) the state of the balance of international payments, now that the picture has been complicated.

As before, it will be assumed initially that the rates of efficiency rewards to factors of production expressed in money and the structure of prices in the external world are known and given and also that a gold standard is in operation, so that there are fixed rates of exchange. Assume also that the addition to their stocks of fixed and liquid capital which producers require is known and given. Assume also that the proportion of income which people spend on home-made goods is known and given.

With these assumptions the level of employment in the country may be determined. The technique described in § 2 is used. The relation of the money rates of efficiency rewards of home factors of production to world prices determines the quantity of exports which it will be profitable to make, and the quantity of home produced output required for additions to capital is taken as given. Total income will bear a definite relation to income derived from production for export and from production for capital purposes.

$$(i+s) I = E + K$$

$$\text{or } I = \frac{I}{i+s} (E + K)$$

This may be alternatively expressed as

$$I = \frac{I}{1-h} (E + K).$$

This level of income designated by I , which is related to a definite level of employment and activity,

can only be changed if there is a change in the volume of goods which it is profitable to export (E), in the home requirements of capital goods (K) or in the propensity to spend income on home-made consumable goods (h).

The level of employment being so determined, what of the balance of international payments? This is composed of the balance on current account and the balance on capital account.

The former, it has been seen, depends on the relation of $iI + Z$ to E. Assume temporarily that Z is zero.

Now since $iI + sI = E + H$, whether iI is greater or less than E, depends on whether the ratio of the proportion of income devoted to imports to the proportion devoted to saving is greater or less than the ratio of income derived from exports to income derived from the production of additions to capital.

There is nothing in the nature of things why these ratios should be equal or why, therefore, there should not be an active or passive balance on current account. This conclusion also follows if Z is not zero.

Let the balance on capital account be governed by the motives of capitalists seeking profit and security.

Let the consequent total balance be active, so that gold flows in.

Questions. Is this inflow likely (i) to affect the level of employment, (ii) to redress the total balance?

In the classical theory of the restorative effect of a gold flow, attention is concentrated on its effect on the current account. In examining that theory, it will be necessary to consider the two questions posed above in conjunction.

§ 5. *The Gold Flow and Capital Movements.* Before proceeding with the investigation proposed at the conclusion of the last section it may be expedient to explore the avenue neglected by classical theory and consider the possible direct effect of a gold flow on the capital account, i.e., on the volume of foreign lending or borrowing.

Suppose an active balance on current account not fully counterbalanced by the flow of foreign investment, so that there is a gold inflow.

In this case the amount of saving exceeds the current addition to the stock of capital goods, as may be shown as follows.

By the hypothesis of a favourable balance on current account

$$\begin{aligned} E &> iI + Z \\ \text{But } E + K &= iI + sI \\ \therefore sI &> K + Z \end{aligned}$$

But $K + Z$ is the addition to capital goods at home, comprising those produced abroad as well as at home and sI is the volume of saving.

The excess of saving over the addition to capital goods in the country is equal to the active balance on current account, and this is equal to the net flow of investment abroad, if any, plus the inflow of gold. Thus of the excess of saving part is invested abroad and the residue is invested in the incoming gold.

It makes no difference in this regard whether this gold is held by the banks or in private hands. If it is held by the banks, and they do not make any off-setting or neutralizing operations, bank deposits will be increased by the amount of the gold inflow, and the excess savings of individuals or corporate bodies will

take the form of deposits at banks. And if the banks do make offsetting operations, the net effect is still the same; the operations will release a volume of securities equal to the gold inflow and these will be held by the excess savers, while the banks will have a higher proportion of gold and a lower proportion of securities in their list of assets.

As the gold flows in, the position inside the country becomes progressively more liquid. If the banks fully offset the inflow, their position becomes progressively more liquid, and if they do not that of the public becomes more liquid. If the banks remain entirely indifferent to their increasing liquidity, then the gold inflow will have no further effect (cf. § 1, (11)). But there must be a limit to their indifference, especially if the gold is concentrated in the central bank, for ultimately it will own nothing but gold and have no means of earning its livelihood. Conversely if gold flows out the banking system may neutralize the outflow for a time, but if the outflow is persistent they must operate to reinforce its effects—or they will lose all their gold—and thus make the capital position in the country less liquid.

- ✓ Greater liquidity means that a larger proportion of capital assets consists of gold or deposits at banks, and a smaller proportion of remunerative assets. This situation will tend to reduce short term rates of interest, later long term rates, and finally the yield of securities generally. This, in turn, will tend to make capitalists look about for more lucrative assets; and in looking about, they may look abroad. In the outer world, which has been losing gold, conditions will *pro tanto* be becoming more stringent. The yield of

assets will be improving. In consequence it may be expected that an outward flow of investment will be stimulated. The longer the gold flows in, the greater the stimulus. ✓ The increased flow of investment abroad will tend to reduce the gold inflow and finally to extinguish it. A new equilibrium may thus be reached.

If the hypothesis of a gold standard is removed, the situation envisaged will lead to a rise of the currency in the foreign exchange market. If the authorities are concerned to preserve some measure of stability, they may buy gold to set a limit to the upward rise, and the same effects as those described in the foregoing paragraph will ensue. And conversely in a condition of weak exchanges.

Even supposing that they set their faces against having any truck with gold, yet if they are influenced by the foreign account at all, the strong condition of the exchanges will make them more ready to expand credit, and, again, the same results will ensue

✓ This account of the self-righting and ultimately self-eliminating effect of a gold flow seems sensible and in accordance with the facts of former times when capital moved across national frontiers more freely ✓

✓ The theory is classical in that it postulates a self-righting mechanism at work. It is unclassical in that it attributes the self-righting effect to the capital movements induced and not to a change in the commodity balance (cf. § I, (iv)). It is possible that this is the most reliable factor in the self-righting mechanism. In that case it is to be expected that in these days, when the international flow of capital in response to the relative yields of securities is much less free than formerly, the self-righting tendencies will not manifest

themselves so readily and a progressively less even distribution of gold in the world result

§ 6. *The Gold Flow and the Commodity Balance.* -Next consider the effect of a gold inflow on the commodity balance. Commodities are taken, as usual, to include invisible services

It has been shown (§ 1, (ii)) that gold will operate upon the balance (i) if it raises the total level of production and/or (ii) if it increases the money income distributed per unit of produce, i.e. money costs. It is of the nature of the classical theory to lay greater stress on (ii). The long chain of causation which it is necessary to assume between the gold inflow and the rise of money costs has already been explained (§ 1, i-iii). These two possible modes of operation of a gold flow will first be considered separately. Take the classical theory

The net effect on trade must be assessed by reference to the relation between E , value of exports, and $I+Z$, the value of imports. A rise in money costs will tend to reduce E . It will also tend by the reasoning of § 2 (the multiplier) to reduce total income and therefore I ¹. But the reduction of I may, in certain circumstances, be expected to be less than the reduction of E for two reasons. (i) The reduction of total income may be expected to be smaller than in proportion to the reduction of E , if the addition to the stock of capital produced at home (K) remains the same, since total income is related to $E+K$. (ii) The rising cost

¹ It must be observed that the classical theory assumed that an inflow would cause a decrease of exports and an increase of imports. The argument of the text examines a classical theory re-stated in the light of the reasonings of § 1 (iii) and (v)

of home-made goods may increase the proportion of income spent on foreign-made goods (i), and so cause the reduction of imports (iI) to be smaller than in proportion to the reduction of total income (I). Thus the reduction in imports will be less than the reduction in exports and the active balance will tend to be reduced.

✓ There is, however, a fatal flaw in this reasoning, namely the assumption that K will be constant. ^{*K - capital*} ^{*Ch!*} A very important influence governing the amount of extra capital goods required by industry is the rate of expansion of the output of industry. Now the chain of causation described in the last paragraph supposes a reduction in total income and output. This follows by the multiplier principle from the reduction of exports; and this principle will be reinforced if people, by reason of the higher price of home-made goods, come to spend a higher proportion of income on foreign-made goods. Consequently it is necessary to expect that there will be a severe reduction in K , the value of the orders of industry for home-made capital goods. There will be a corresponding reduction in total income, which may well be larger than in proportion to the reduction in exports. Consequently there is reason to expect that the reduction in imports (iI), and *a fortiori* in $iI + Z$, will be greater than the reduction in exports. And if this happens the inflow of gold will not become less but greater.

This being so it is necessary to set down the classical theory which looks to a rectification of the balance from the effect of the inflow on costs, as fallacious. —

Turn next to the other alternative, that the inflow may rectify the balance by stimulating production.

Here the chain of causation is as follows. The inflow of gold makes the situation of capitalists on balance more liquid. That same increase of liquidity which drives them to seek more profitable channels of investment abroad (cf. § 5) may also stimulate investment at home, by making the conditions of borrowing more easy. In other words it will tend to raise the value of K , income derived from production devoted to swelling the stock of home-made capital goods. This stimulus to capital investment will tend by the multiplier principle to raise national income and so further to stimulate investment in a vicious circle of expansion. This will tend to raise the values of both terms in the expression $(I+Z)$, it will raise imports because the whole national income is raised, and it will raise Z because some of the increased demand for capital goods may be supplied from foreign sources.

Thus these two chains of causation are seen to lead to opposite effects. It may safely be said that the net result will only be self-righting, if the stimulating effect of increased liquidity on the addition to capital goods (K) is substantial.

The problem may be synthesized by putting the question—why should an inflow of gold raise industrial costs and so reduce exports? Surely only by setting up a keener competition for the means of production. If this is so, the favourable effect on K must be deemed to be prior in time to the unfavourable effect on E , for otherwise there would not be a keener competition for the means of production. The mode of operation through an expansion of activity must therefore be considered the true theory and the phenomena which the classical view tends to stress a by-product.

The following limitations to the self-adjusting theory so stated must be noticed.

✓(i) The mechanism will only work effectively if the increasing liquidity provides a substantial stimulus to income arising from the production of capital goods (K).

(ii) It will not necessarily work in all phases of the trade cycle. For instance, if employment is already brisk, the increased liquidity may not affect the volume of production substantially, but merely lead to inflated prices and profits. The greater part of the increased flow of income may be saved and expenditure on imports (I) little expanded. Meanwhile, if rising costs lead to a reduction in exports (E), the net effect may serve to break the boom, and this in turn may increase the inflow of gold.

(iii) While the inflow may serve *pro tanto* to swell income and imports, it must be remembered that there are all the while greater forces at work serving to change those magnitudes, and the effect of the inflow may be entirely swamped. Nor is it profitable to say that the inflow must avail to right the balance in a sufficiently long run, for the other forces at work may entirely change the level of income and the balance before that long run is ever reached.

It is necessary, therefore, to be content with this somewhat inconclusive result, pending further discussion of the fundamental forces connected with the trade cycle.

§ 7. *Summary.* (1) The classical theory of the balance is stated in which the gold flow is held automatically to secure an even balance. The assumptions required by this theory are enumerated. Its main defect is that it does not deal systematically with the level of employment.

(ii) By means of the multiplier analysis, it is shown that if people spend the whole of their incomes, a balance will occur automatically without the intervention of a gold flow (a) when current exchange of goods and services only are taken into account and (b) when interest, dividends, donations, and indemnity payments are also brought in. A full level of employment is not automatically secured, this depends on efficiency rewards to factors being at the right level in relation to world prices

(iii) When the accumulation and movement of capital are taken into account, it is shown that payments do not balance automatically. ✓The multiplier method is extended to cover this case, and it is again shown that the level of employment depends on the relation of efficiency rewards of factors to world prices.

(iv) The gold flow may be expected to tend to even out a balance by influencing relative liquidity and the yield of assets in different countries and so producing a compensatory international movement of capital, provided that such movement is comparatively easy.

(v) The influence of a gold flow on the balance on current account is examined, having regard to its possible influence on (a) money costs of production and (b) the level of activity. It is shown that it can only exert a self-adjusting influence via (a) if it has an antecedent and greater influence on the level of activity (b). As other more important influences, originating in foreign trade, are operating on the level of activity, doubt is thrown on the reliability of the gold flow mechanism, if its influence is confined to the balance on current account

CHAPTER VII

THE TRADE CYCLE

§ 1. *Volume of Exports v. Excess of Exports.* The position reached in the last chapter was that an inflow of gold will, neglecting its effect on international capital movements, only serve to redress the balance of trade, if and in so far as it stimulates production in the receiving country. A view is thus presented of foreign influence sometimes working to stimulate output in a country until a new equilibrium is reached and sometimes through an outflow working to depress output. If the view is extended to include the world as a whole, but confined to a single period of time, there results a picture of some countries being stimulated to expansion by foreign influence while others are induced by foreign influence to contract; for at any time inflows of gold in some countries are exactly balanced by outflows from others.

Now this picture singularly misrepresents the true state of affairs. The trade cycle is a world-wide phenomenon, the phases of which occur, if not simultaneously, at least in fairly rapid succession in different countries. A set back to prosperity may occur in one important country or group of countries, but sooner or later all or most of the others are drawn into the maelstrom by forces which can only be supposed to

operate through those trading relations of which the international balance of payments gives a summary. It is hardly likely that each of a large number of countries would, if they were all entirely insulated from one another, share to anything like the extent they do share in the common world prosperity or adversity. And so it becomes necessary to suppose that in the downward phase there is somehow transmitted through their international trading relations an adverse force affecting all or most countries simultaneously, and conversely in the revival. This is a very different state of affairs from that suggested by the view that the stimulating or depressing effect of foreign transactions is exerted through a gold flow, which, in so far as it is stimulating or depressing, must simultaneously be exerting an equal and opposite influence in different countries at the same time ¹

The analysis already given in Chapter VI, § 2, points to the correct view. There the direct influence of the volume, as distinct from the excess of exports, was analysed. If the income which a country is able to earn by its exports increases, the income and activity of the country as a whole is stimulated, and conversely. Thus it may happen that falling exports so depress the level of activity in a country that imports fall still more (cf. Chapter VI, § 6) so that an inflow of gold occurs, but the depressing effect of the falling volume of exports outweighs any stimulating effect which the inflow of gold may exert. This, indeed, is what must be supposed to happen to a number of countries in the downward phase of the trade cycle

¹ I owe appreciation of the cardinal importance of this argument to the persistence of my former pupil, Mr S D Pollar

The world diffusion of a depression may be set forth as follows. A point comes at which the factors making for recession in the world as a whole become stronger than those making for continued advance. This tends to weaken the world-price level or the state of world demand. Each and every country, including those which are not themselves the theatre of the triumph of adverse forces, finds that the volume of A and B goods, which it can export at a profit, is reduced. Thus each and every country is subjected to an adverse influence through the fall of exports, and conversely in a revival. This is independent of its net balance of payments.

It should be noted that each separate country may be deceived into taking a wrong view of the causes of depressions, attributing them to failures of the export market. This may be a true view of the channel through which the depressing force operates upon it. But it was necessary to assume in the foregoing argument that there was a balance of forces making for depression in the world as a whole, *other* than those connected with foreign trade. For when the economy of the world as a whole is considered there are no exports and imports! All trade is internal trade. Even those countries which are the seat of the trouble may take a wrong view, since the effect of the weakening in the world position will react back upon their exports, and the evil of falling exports may be more plainly visible than the true causes of the trouble.

Countries which in these circumstances develop a passive balance may be deceived even as to the nature of the *impact* of the depression upon them, wrongly

attributing more importance to the passive balance than to the falling volume of exports

If, then, the gold flow is not the predominating foreign influence on the level of a country's activity, and if, as was shown in Chapter VI, § 6, a gold flow can only bring foreign trade to balance by its influence on the level of a country's activity, it follows that the gold flow cannot be regarded as a reliable instrument for bringing foreign trade to balance. This argument as to the ineffectiveness of the gold flow is independent of what the authorities may do in the way of "monkeying about" with the gold; it would hold, if they allowed and assisted it to exert a large effect on the quantity of money in the country. The argument may indeed justify the authorities in their monkeying about, for if the alleged curative effect of the gold flow on the balance is non-existent or unimportant, they may, with an easy conscience, impede its influence on the internal monetary system if they have other good reasons for desiring to do so.

The foregoing argument does not derogate from the possible influence of the gold flow on the balance of payments through its influence on international capital movements (Cf. Chapter VI, § 5.) But in a world in which international capital movements are themselves obstructed for other reasons, this influence is likely to be frustrated, so once again the authorities are justified in dealing with the gold in the way best adapted to the internal situation.

It is to be noted that emphasis on gold movements not only gives a wrong idea of the influence of foreign trading relations on the level of activity, but also provides a bad criterion for monetary policy. When

forces making for depression in the world overcome those making for continued expansion and the world enters upon the downward spin, it is desirable that each country should assist to the best of its abilities to stimulate revival. But if each country guides its monetary policy of expansion or contraction by reference to the balance of payments, some will pursue an expansive and others a restrictive policy. There will be no net balance of expansive policy and no net monetary effort in the world as a whole towards revival.

§ 2. *Trade Cycle Phenomena.* The modern theory of the trade cycle is not yet complete. It may suffice to mention some of the manifestations of the cycle.

Its main characteristic is an oscillation in the total volume of output. In the expanding phase prices usually have a rising tendency and in the declining phase a falling tendency.

The output of the constructional trades shows an oscillation of larger amplitude than general output. This may be most naturally explained by the fact that the demand for new capital goods is partly dependent on an expansion in the output of finished consumable goods, and if this comes to an end even if the production of consumable goods does not fall much, a large part of the demand for new constructional goods will be wiped out and a severe decline in those industries will be registered. By similar reasoning an abnormally high rate of expansion in consumption may entail an enormous change in the absolute level of constructional activity even although the increase in the absolute level of consumption is not great.

The oscillation in the output of primary foodstuffs is

not so great as that of general output. This may be connected with the fact that much of this class of output is controlled by producers whose own labour constitutes a large part of the cost of production, or with the nature of the competition which prevails in that sphere. But while the output is comparatively stable, the price level of such goods fluctuates correspondingly more and with it the purchasing power of those countries which are largely dependent for their income on the sale of such goods.

These great swings in the volume and value of various broad categories of goods, which manifest themselves regularly in the trade cycle, may have serious and divergent effects on the balances of payments of various countries. A decline of exports is universal but the magnitude of decline different in different cases.

The effect on the balance of payments is by no means proportional to that on the volume of exports. Much depends on the stability of the magnitude of the country's internal additions to capital. If the income derived from additions to capital (K) is very unstable, the country will go into a deep depression and may attain an active balance of payments. *Per contra*, if K is stable, the country may be saved from the worst ravages of depression but acquire a more passive balance.

The net effect on the balance results from a variety of factors. In depression, as in prosperity, those countries with active balances will exactly balance those with passive balances. More anxiety, however, appears to be aroused by the problem of passive balances in a depression. This may well be due to the fact that the primary method by which a balance on

current account may be met, namely a capital movement (cf. Ch. VI, § 5), becomes less likely to operate; Far less net investment occurs during the depression and there is therefore less scope for foreign investment. Moreover the depression is likely to produce an atmosphere of anxiety and a sense of insecurity which are inimical to international capital movements, in search of profit. *Per contra* the political movements of capital, which are not induced by and have no necessary connection with the state of the balance but are due to political alarms and excursions (cf. Ch. V, § 7) may well be intensified and make discrepancies in the balance greater.

§ 3. *The Trade Cycle and Capital Outlay.* A complete and definitive theory of the trade cycle cannot be expounded since none exists. None the less one contribution towards such a theory may be outlined with confidence.

The method of analysis outlined in Chapter VI, § 2 may be used. There a statement was given of the relation between the level of activity which a country might achieve in simplified conditions and the level of exports which it achieved, that relation depending upon its propensity to spend income upon foreign-made goods. The income from exports was treated as a base to be multiplied by a term related inversely to the propensity to spend income upon foreign-made goods.

In the more complicated theory (Ch. VI, § 4) the base was expanded to include income derived from the production of additions to capital equipment and stocks, and the multiplier was changed to include a reference to the propensity to save. Does this method

of analysing the level of total income and activity and therefore the variations in that level give any clue to the variations which constitute the trade cycle?

When the world as a whole is considered, there are no exports. In order to apply the multiplier method to the world as a whole, therefore, it must be modified so as to exclude them. The base now consists of income derived from additions to the capital stock only, and the multiplier is derived from the propensity to save.

Thus if I represents total income, K income derived from the production of additions to capital stock and s the proportion of income saved

$$sI = K$$

$$\text{or } I = \frac{K}{s}$$

This formula constitutes a simplified statement of an extract from Mr Keynes' theory of employment.

Thus the level of income and activity can only increase if the output of additions to capital increases or the propensity to save decreases, and conversely. Since the propensity to save tends, if anything, to rise in the upswing and to fall in the downswing of the cycle, those swings in activity must be associated with still larger swings in the output of capital goods. And attempts on a world scale to mitigate the swings of activity should endeavour to even out the still larger swings in the output of capital goods.

§ 4. The Gold Standard. Monetary expansion tends to stimulate the output of capital goods and conversely. If monetary policy is everywhere governed by the gold

flow, it must at all times exert a stimulating effect in some places which is equal and opposite to the restrictive effect exerted in others. But this is not what is required by the demands of trade cycle policy. That demands the universal application of a stimulus in certain phases and restriction in others.

If the gold standard is in operation, some attention must be paid to the gold flow. It is true that a receiving country is at liberty, without jeopardizing its gold standard, to sterilize or neutralize some or all of the inflow. And this may not be undesirable in the upward phase of the cycle. But if a losing country persistently neutralizes the effect of the outflow, it will be in danger of losing all its reserve and having to abandon the gold standard. But a gold standard is not likely to be long maintained if it is known that a country is willing to abandon it light-heartedly. Indeed a country cannot be said to be on a gold standard unless it has some measure of resolution to defend it when necessary. A gold standard can only be defined by reference to the intentions of the monetary authorities. At any time in any country the currency has a gold value which is defined by the current price of bullion. A gold standard means a confident expectation that the authorities can and will take such measures as are required to prevent the price of bullion moving outside narrow limits under the shifting influences of supply and demand.

Thus in a depression, with gold standards universally in operation, the receiving countries may or may not allow an expansive force to operate, but it is certain that the losing countries, if they mean business, must allow and may even have to intensify the restrictive

force due to an outflow. And this is the opposite of what the trade cycle situation requires.

Nor need we consider the case against the gold standard from this disinterested cosmopolitan point of view only. The losing countries will be subject to the blast of depressing forces, whether operating through falling exports or internal adverse factors, and it is most vexatious for them to be compelled to add to their troubles by a restrictive monetary policy.

And indeed, the trade cycle apart, there seems something inherently irrational in a system, the essential *modus operandi* of which requires a restriction of productive activity in a number of countries from time to time. The basis of any rational system should ✓ be the maintenance of full employment. Thus the gold standard stands condemned.

§ 5. *The Balance of Payments and Full Employment.*

What criterion for foreign exchange and foreign trade policy may be put in the place of the gold standard? It may be postulated at the outset that random and seasonal fluctuations in the balance of payments, together with those due to temporary flights of capital under the influence of political alarm, should be offset as far as possible by the operations of the central authority, such as an Exchange Equalization Fund, in the manner described in Chapter V, § 7.

For the rest it is sometimes said that the foreign exchange rates should be allowed to find their "natural level." But it has already been shown¹ that this expression has no precise meaning. Given the state of affairs in the outside world, the natural level, in the

¹ Cf. Chapter VI, § 1

sense of one which causes the supply and demand of foreign currencies to balance, will be different according to the level of employment inside the country.

A more radical suggestion is that the foreign exchange rates appropriate to full employment should be secured. Broadly, this must command agreement ; a condition of full employment is clearly desirable, and, if that is desirable, the appropriate rates of foreign exchange are desirable also.

It is necessary to consider the rate of exchange requisite to secure full employment in connection with the problem of the balance. Certain propositions will first be stated and numerical examples then given.

1. There is a unique (level of internal capital outlay) and of the (foreign exchange rates) which together will secure *both* full employment and an even balance of payments.

2. If it is outside the power of the authorities to determine *one* of the levels mentioned in 1 above, but they have freedom to manipulate the other, *either* full employment *or* an even balance can be secured, but it is impossible to guarantee both.

3. If neither level is within the control of the authorities, then it is impossible to guarantee that either full employment or an even balance will be attained

4. If the rates of foreign exchanges are fixed above the unique level specified in 1 above and the authorities are able to manipulate capital outlay, then if they seek full employment there will be a passive balance of payments and if they seek an even balance there will be unemployment. If the rates of foreign exchange are fixed below the level specified in 1 above and the authorities seek full employment there will be an

active balance of payments and if they seek an even balance there will be over-full employment (this is explained below).

5 If the amount of capital outlay cannot be manipulated and stands below the unique level specified in 1 above, but the foreign exchanges are flexible, then if the authorities seek full employment there will be an active balance and if they seek an even balance there will be unemployment. If the amount of capital outlay stands above the unique level, then if they seek full employment there will be a passive balance and if they seek an even balance there will be over-full employment.

These propositions flow from the relations set out in Chapter VI, § 4. It may suffice to elucidate them with numerical examples.

The reference to "over-full employment" needs explanation. There cannot, of course, be over-full employment. In the circumstances envisaged in 4, the classical idea that the balance is regulated by a shift in relative costs comes into its own. Where it is stated in 4 above that there would be "over-full employment," what is meant is that there would be more employment than there is if the factors of production were available. As they are not available, the pressure on means of production will tend to raise prices and costs. The effect of this on the balance will be in the same direction as if the extra factors needed were there to be employed. Instead of the balance being rendered less active by there being more people earning income and buying imports, it will be rendered less active through the rise in home prices and costs reducing exports and encouraging imports.

In case 5, if there were more factors available for

employment they would be employed in the export trades. As there are not, existing factors will be deflected out of other industries into employment there owing to the exceptional profits in the export trades arising from the exchange depreciation supposed to have been brought about

It may be thought, quite properly, that the point mentioned in connection with 4 may have wider application. A change in prices and costs may occur not only when there is full employment but also in response to any changes in the level of unemployment. This concession to the classical view was freely allowed in Chapter VI, § 6. A stimulating or depressing effect on activity might, it was agreed, influence prices and costs. On the other hand it was contended that a gold flow would not influence prices and costs *unless* it influenced activity in the appropriate direction.

The analysis of this chapter directs attention to the direct effect of changes in activity on the balance through changes in the volume of purchasing power. If these changes in activity also affect prices and costs, that does not invalidate the arguments of this chapter, since this effect on prices and costs influences the balance in the same direction as the change in activity supposed to give rise to it.

It must be observed that the analysis of this chapter cannot be quite complete since it does not investigate what determines the spontaneous volume of capital outlay. A leading determinant is the rate of growth of total output. When the theory of growth has been more fully developed in economic thought it may be possible to formulate certain very simple relations in this sphere. For the time we must be content to take

the value of K as a given quantity in the situation. It remains to give illustrations of the foregoing propositions.

Suppose that income from exports consists of 10 units and income from additions to capital of 10 units. Suppose that people spend $\frac{3}{4}$ ths of their income on home-made goods and dispose of $\frac{1}{8}$ th on imports and saving so that the multiplier is 5. Total income stands at $(10+10) \times 5 = 100$. Of this let $\frac{1}{8}$ th be spent on imports, so that imports are equal to exports. Suppose that there is considerable unemployment and that the authorities are anxious to stimulate activity, and raise total income to 110.

(i) Let them depreciate the exchange so that exports are stimulated to 11 and the proportion of income devoted to imports is, owing to their higher price, reduced from $\frac{1}{8}$ th to $\frac{1}{11}$ th. This raises the multiplier from 5 to $5\frac{2}{11}$. Owing to the expansion of exports the base is raised from 20 to 21 and total income from 100 to $21 \times 5\frac{2}{11} = 110$. Imports will be equal to $110 \times \frac{1}{11} = 10$ and exports to 11. There will be a higher level of employment in the country and an active balance (Cf. proposition 5, pt. I.)

(ii) Next suppose that the authorities leave the exchanges alone, but stimulate capital outlay by an expansive monetary policy, public works, public borrowing or otherwise. Let capital outlay be raised from 10 to 12. If there is no change in the multiplier, total income will stand at $22 \times 5 = 110$ and imports at $\frac{1}{8}$ th of this, i.e. 11. There will be a passive balance of 1 (exports standing as before at 10) (Cf. proposition 4, pt. I.)

If the increase of activity serves to stimulate spontaneous capital outlay the amount of artificial stimulus

required to raise total income to 110 will be *pro tanto* reduced, and if it serves to increase the proportion of income saved and so reduce the multiplier, the artificial stimulus required will be *pro tanto* increased.

(iii) Next suppose that the authorities combine the two methods. In order to secure full employment and an even balance they must do so in certain proportions. Assuming that the exchange depreciation required to stimulate exports from 10 to $10\frac{1}{2}$ reduces the proportion

spent on imports from $\frac{1}{10}$ to $\frac{1}{10\frac{1}{2}}$, the following

stimuli would be appropriate. Let exports be stimulated from 10 to $10\frac{1}{2}$ and let capital outlay be stimulated from 10 to 11. The base is thus raised from 20 to $21\frac{1}{2}$.

and the multiplier from 5 to $\frac{1}{\frac{1}{10} + \frac{1}{10\frac{1}{2}}} = 5\frac{2}{3}$.

Income will stand at $21\frac{1}{2} \times 5\frac{2}{3} = 110$. Of this $1/10\frac{1}{2}$, i.e. $10\frac{1}{2}$ units, are spent on imports. Trade balances (Proposition 1)

Provided that the mutual inter-connections between capital outlay, foreign exchange rates, level of employment and balance of payments are borne in mind, the foregoing considerations may be made to yield two simple executive maxims. (i) If there is unemployment the authorities should stimulate capital outlay. (ii) The foreign exchange rates should be allowed to find the level determined by the consequent pressure of supply and demand, subject always to the proviso that refugee movements of funds and other extraordinary terms in the balance are offset by appropriate operations of the exchange control.

If only the second maxim is adopted and not the first, an even balance will be secured but there may be considerable unemployment. If an effort is made to secure full employment by stimulating capital outlay and the exchange rates are held fixed, full employment may only be secured at the cost of a passive balance and the productive resources of the country will be unduly concentrated in the capital goods industries.

§ 6. *Policy in the Depression.* The policy outlined in the foregoing section is not, like gold standard policy, inconsistent with that required by the trade cycle. Quite the contrary. For it suggests that measures, whether of monetary expansion or other, should be employed to stimulate capital outlay when unemployment is falling below its full level. Consequently the prescription requires the general pursuit of such a policy in the downward phase of the cycle, when all countries are feeling the adverse effects of declining exports. The expansive policy is then to be pursued regardless of whether the balance of payments is active or passive. This is in conformity with trade cycle requirements.

In the final formulation of the last section, emphasis was placed on capital outlay and it was suggested that given the ideal policy in that matter the exchanges might be allowed to find their proper level under the influence of supply and demand.

An alternative plan might be suggested. Since it is admitted that exchange depreciation tends to stimulate employment, why not operate in the first instance on the exchange rates? This might seem a better method *prima facie* (1) because it is easier of execution than an

effective stimulus to capital outlay and (ii) because, unlike the latter, it tends to improve the balance of payments.

The case against may be set out :

(i) Unlike the stimulus to capital outlay, it makes no contribution to world recovery. When the world as a whole is considered, declining exports cannot be written down as a depressive factor, since the world as a whole, in contradistinction to its constituent countries, has no exports. Therefore, a country by stimulating its exports only is not making a contribution to world recovery. To do that, it should stimulate capital outlay. Each country should endeavour to stimulate world recovery in its own interest as well as in that of the world.

(ii) This policy not only makes no contribution to world recovery, but it may be definitely unneighbourly. Consider its effects upon the outer world. The same process which stimulates the country's exports, namely, the reduction of prices in terms of foreign currencies at which it can compete, tends to reduce the multiplier in all foreign countries taken together, for it increases the proportion of income which their nationals are disposed to spend on imports. Consequently it tends to depress activity in foreign countries.

As against this it must be admitted that if the stimulus to the given country's exports raises income in the country, it will tend to increase its imports which are the other countries' exports and so stimulate their activity. Which of these forces is greater must be determined by examining the net effect on the balance.

(a) Initially in order to get the required reduction in the foreign exchange rate, which by hypothesis is

not due to the pressure of supply and demand, it must be prepared to buy gold or the currencies of foreign countries. This purchase will be balanced by an initial excess of exports from the given country, so that it is in that respect exerting a net adverse influence. It is firing out cheap exports without taking payment for them by imports.

(b) It is more important to examine the new equilibrium. It was shown in § 5, example 1, that an increase of exports due to exchange depreciation is, in the absence of any stimulus to internal capital outlay, not likely to be fully balanced by the consequential increase of imports. Consequently the adverse effect exerted by reducing the multiplier in foreign countries is not likely to be fully offset by the beneficial effect of the increase of *their* exports to the given country. (The same argument of unneighbourliness applies *a fortiori* to the adoption of tariffs and quotas in a depression.)

(iii) By improving its own balance of payments in this way the given country tends to decrease liquidity in foreign countries and render the stimulus to capital outlay more difficult for them to apply.

(iv) This remedy may be countered by other countries resorting to like action in endeavouring to depreciate their own currencies and thus render abortive the action taken by the given country. Competitive currency depreciation is no doubt not as black as it is painted, indeed, the appreciation of gold in terms of all currencies may do some good by rendering the world position more liquid. But it cannot be set down as a very efficient remedy for the world as a whole or the competing countries. If, on the other hand, the given

country stimulates its income by capital outlay, the other countries will neither be able nor desirous to take counter measures to reduce its stimulating effect upon the given country.

These arguments are not intended to rule out the possibility of exchange depreciation. Indeed, a country faced, owing to a passive balance, by the alternatives of exchange depreciation or internal restriction, should adopt the former policy. Any policy designed to redress a passive balance has *pro tanto* a depressive influence on the outer world. But the internal restrictive policy has the additional demerit of aggravating the shortage of capital outlay in the world as a whole, by securing equilibrium at a lower level of activity in the restricting country it will secure that the corresponding level of activity outside is restricted also.

Nor should a country be deterred from exerting the greatest possible stimulus to internal capital expansion by the fear that this will entail a greater exchange depreciation than would otherwise be necessary. For the consequential stimulus to its imports will do more good to the external world than the stimulus to its exports through exchange depreciation does harm.

Exchange depreciation will not be injurious to the outer world if it is the consequence of an internal expansion and occurs under the influence of supply and demand. It will only be injurious if it is deliberately brought about by the authorities as a means of stimulating internal employment. An improper appreciation of this fundamental distinction has caused much confusion in the discussion of the merits and demerits of exchange depreciation.

It remains to add a further observation on the policy

of good neighbourliness. Any action designed to improve a country's balance tends to inflict injury on its neighbours, and the improvement of its balance as such does the given country no good. Furthermore, what is in its neighbour's interests is ultimately in its own. Therefore, in a depression, countries with an active balance should strive to reduce it and countries with a passive balance should strive not to reduce it, if the consequent strain on their reserves is not too great.

The policy laid down in § 5 prescribes that each country, should endeavour to maintain its level of employment by stimulating capital activity and allow the exchange to run down under pressure to what is then its natural level, i.e. to that which secures a balance of payments. But if a country in its reconstructive effort tilts the balance still further to the side of capital outlay, it will render a signal service to the world as a whole. For its excess of imports will be a stimulating factor. And its release of gold or foreign exchange assets will be a factor making for greater liquidity in the world.

There are two classes of country for whom it is a particular duty to try to hold up their exchanges in a depression (i) Countries with active balances should try to reduce them, and even allow their exchanges to move up (ii). Countries which, although they have a passive balance, have large reserves, should not endeavour to correct the passive balance until some part of their reserves has been dissipated. These are, however, counsels of perfection. And they may be impracticable in countries in which the actual unemployed are congregated in the export industries and cannot be readily shifted. .

The following principles, however, are not counsels of perfection, but rules which in all cases should be observed.

(i) In a depression afflicting both the world and a given country, the given country should in no case employ measures restricting capital outlay, whatever its balance of payments may be.

(ii) A country should only allow its exchange to depreciate under pressure of a passive balance. It should not force down its exchange by artificial measures with a view to stimulating its own trade.

§ 7. *Stable Purchasing Power.* The foregoing section has laid down as the proper policy for depression, that the utmost practicable stimulus should be given to capital outlay, and that the minimum practicable depreciation in the foreign exchanges should be allowed, subject to the overriding maxim that the state of the foreign exchanges should in no case be deemed a bar to capital expansion.

From an immediate practical point of view there is an objection. It may be doubted whether any devisable stimulants to capital outlay will be sufficient to maintain full employment.

The following scheme has the disadvantage that it departs somewhat from standard of good neighbourliness already laid down. But it has the advantages (i) that it is immediately practicable and (ii) that the principle is clear cut.

Since the wide breakdown of the gold standard, no clearly defined alternative principle for regulating the value of a national currency has been adopted. There is one, however, which, in one form or another, has the

highest support from students of the subject ; namely, that the currency be so regulated as to maintain a stable power of purchasing commodities."

In the event of a fall in world prices, the adoption of this policy entails an automatic depreciation of the foreign exchange rates of the currency (of a kind disallowed in the foregoing section).

If all the exports of a country were A goods, the income derivable therefrom in terms of its own currency would be fully sustained and the country would be insulated from the effects of world depression operating through its exports and the multiplier. Such a drastic result would not, however, follow if some of its exports consisted of B goods. For when demand falls in a field of imperfect competition, the amount of price-cutting required to maintain the purchase of a constant volume of supply may be very large. The volume of sales can only be maintained by encroachment on competitors' areas, and their entrenchments of goodwill and habit have to be captured. The policy here discussed seems most appropriate, therefore, for countries in which A goods form a large proportion of their exports. Such a policy, if adopted, should not be deemed alternative, but supplementary to the policy of stimulating capital outlay.¹

The policy might well be unneighbourly since it would probably entail a greater exchange depreciation than that prescribed in the foregoing section. The only reason for mentioning it with approval at all—and that approval must be guarded—is that it is so clear-cut. The world might benefit in the long run by the

¹ This has a family likeness to the Australian "premiers' plan" adopted in 1931.

example of a country resolutely combating the forces of depression by such an easily defined and readily comprehensible plan.

It could not be adopted on a world scale, however, since all currencies cannot be depreciated in terms of one another.

If there were a widely diffused determination to prevent currencies appreciating in terms of commodities, this could only be done by a still more drastic expedient. The various authorities would have to be prepared to buy and hold composite samples of commodities at a standard price for the sample to prevent a fall in their price level, just as in gold standard conditions authorities were willing to buy gold to prevent a fall in its price. Maintenance of the general price level by this method would leave the relative prices of commodities completely free to fluctuate.

If it is true that there is now a chronic and persistent tendency in the world for demand to fall short of the full employment level, employment would be sustained by this method, but the quantity of stocks held by the authorities would grow progressively. These stocks would in fact constitute additions to capital and the income accruing from their production would be part of the general income accruing from the production of capital goods. An increased holding of these stocks would be tantamount in its broad effect upon the world to a stimulus to capital outlay.

If the authorities thought that the accretion of stocks was becoming intolerable the remedy would be simple, namely, to stimulate other forms of capital outlay. The higher these, the less would be the

accretion of stocks consequent upon the stable purchasing power policy

§ 8. *Summary.* (i) The phenomena of the trade cycle clearly show that the volume of a country's exports has a more important effect than its balance in stimulating or depressing activity.

(ii) Application of the multiplier principle to trade cycle phenomena on a world scale suggests that to combat the cycle it is desirable to reduce fluctuations in capital outlay

(iii) A policy designed to do this is inconsistent with the policy required by the gold standard. The gold standard is condemned on this ground and also because it seems absurd to adopt a monetary system which can only operate by reducing employment below its full level from time to time

(iv) It is shown that both full employment and an even balance can only be secured if the authorities (a) have freedom to allow the exchanges to move and (b) are prepared to regulate the volume of capital outlay by artificial means. A general maxim is set forth that the authorities should stimulate capital outlay to a point at which, when the foreign exchange rates have adapted themselves to a level securing a balance in those conditions, full employment is secured; and they should allow the foreign exchange rates to move to the appropriate level.

(v) In a depression it is the duty of every country to stimulate capital outlay as much as possible, allowing, if need be, its foreign exchange rate to drop under the resulting pressure. It is a counsel of perfection that a country should strive to hold up its exchange

rate by the use of its reserves (but *not* by restrictive monetary policy). This counsel might well be adopted by countries with disproportionately large reserves.

(vi) An alternative scheme is considered for holding a currency stable in terms of commodities. This might infringe the rule of good neighbourliness in a depression and can only be recommended on the ground of its clear-cut character and the precision of its criterion. For this reason it might have a more stimulating influence as an example than the more meritorious policy referred to in (iv) above.

CHAPTER VIII

A REFORMED WORLD

§ 1. *Control of Trade Cycle and International Lending.*
In the foregoing chapter it was necessary to pick a path in the difficult environment of a world economic system fluctuating in a trade cycle, no international co-operation, obstructions to international lending and the specious appearance of stability vouchsafed by a gold standard once for all abandoned.

It may be well to take a glance at a world of happier conditions

The ideal, still unfortunately remote, is a world with the trade cycle under control. Capital outlay would be so regulated that it would grow steadily in conformity with the growth of general income and the propensity to save, and general income would grow in conformity with the increasing power over nature and the increase, if any, in the population.

In a world of international distrust, each country would have to stimulate capital outlay in relation to its own problems. This might mean that certain countries would be driven to less needed, perhaps even more fanciful, public works than others. (An alternative is of course the abolition of private property and the compulsion to spend the whole or an authoritatively prescribed fraction of current income.)

In a reformed world, however, it might even be imagined that the barriers of mistrust were removed and a free international flow of capital once more possible. In such a case countries with a high propensity to save in relation to their need for new capital would naturally lend to the countries with a lower propensity.

It should not be supposed, however, that a re-opening of the channels of foreign investment would of itself necessarily obviate the need for the artificial stimulus to capital outlay. For it is just as likely to be true in the world as a whole, which is but one country writ large, as it is in any particular country, that additions to capital spontaneously required should from time to time and even persistently fall short of the amount of income that people feel disposed to save when there is full employment.

Thus the international flow of capital would not obviate the need for stimulating the volume of capital outlay from time to time and even persistently; it would only obviate the need for some countries to stimulate it in an intensive and exaggerated manner compared with others. It would reduce the differences in degree of the stimulation required from place to place.

Indeed if the policy for stimulating capital outlay is not undertaken, it is not likely that the other desideratum, namely, easy international capital movement, will be secured. For the violent shocks to the international balance, to confidence and to solvency itself, due to the modern trade cycle, are not likely to be compatible with the maintenance of confidence and sense of security at a level necessary for easy capital movement.

But in a reformed world in which the ravages of the trade cycle were greatly mitigated and political appeasement attained, the free flow of capital might once again play an important part.

§ 2. *Flexible Exchanges.* It may occur to the reader to wonder whether in these almost utopian conditions, the gold standard might not be reintroduced. The main counts against the gold standard in present conditions are (i) the extreme difficulty of maintaining it in the face of refugee movements of capital, (ii) the extreme difficulty of maintaining it in the face of the large and sudden discrepancies in the balance of payments brought about by the trade cycle, and (iii) the obstacle it imposes to resolute attempts to stimulate capital outlay in the depression.

In the ideal circumstances under consideration these objections would not stand, but there are others. The gold standard is at best a crude device, which, when the world achieves the subtle and difficult task of eliminating the trade cycle, it may well be expected to have outgrown.

But, the question may be raised, will the easy international flow of capital, which has been postulated as desirable, be possible in the face of fluctuating exchanges? It should be. What is required is that currencies should not undergo great changes of purchasing power. If the trade cycle is indeed conquered, then in those parts of the world in which stability is achieved, we may be sure that fair stability of purchasing power of the currencies will have been achieved also. For the latter is a precondition of the former. ✓
Now provided that there is confidence in the con-

tinued maintenance of stability of purchasing power, there should be no serious obstacle to international lending. The lender and the borrower will have a clear idea of what they are committing themselves to. Indeed when it is remembered how much foreign lending proceeded in the old unreformed world, with currencies attached to gold, that very unstable standard, there need be no fear that, provided that currencies have fairly stable purchasing power, moderate fluctuations of exchange would render capital immobile.

It is well that the reader should remind himself at this point of the two conditions necessary for the joint maintenance of full employment and an even balance of payments. (i) Home rates of money rewards to factors must have the right relation to the world price level (*i. e.* foreign exchange rate must be, at the right level). (ii) The income derived from the production of home-made additions to capital goods plus the amount of foreign investment that is feasible must be equal to what people choose to save from their incomes at a full level of employment. Suppose a gold standard to be in operation.

It is assumed that the second condition is fulfilled by a proper stimulation of capital outlay. But it is necessary that the first condition should be fulfilled also. Suppose that the first condition is not fulfilled and that the level of money rewards at home becomes too high in a given country. Exports will fall off or, at best, cease to increase at a rate which is compatible with the regular increase in the other magnitudes, *viz.* level of income, capital outlay, saving, etc. If full employment is to be maintained at this juncture an abnormal stimulus to capital outlay will have to be

given, the task of fulfilling condition (ii) will be rendered harder. This is accentuated by the fact that if the artificially induced capital outlay falls short of the gap in exports and the level of income is not maintained, the spontaneous capital outlay will run down alarmingly, as it does in present-day depressions, and a much more drastic artificial stimulus to capital outlay will then be required. Indeed there will be a serious threat to the stable conditions supposed to have been achieved in the given country, and by the usual reactions through foreign trade, to stability in the world as a whole. That a sufficient stimulus to capital outlay is only too likely not to be achieved in the given country becomes apparent when we consider that labour is not so mobile that it can easily be switched over from the export industries, to which it belongs, to other occupations. And even if the given country can achieve sufficient outlay to maintain full employment its difficulties are not at an end. For the maintenance of full employment when money rewards to home factors are not rightly adjusted to world prices will entail a passive balance of payments (cf. Ch. VII, § 5, proposition 4, i). An outflow of gold will proceed until the position is rectified. This means that the country will be bound, if it wishes to maintain the gold standard, to pursue a restrictive monetary policy checking capital outlay; thus it will be driven to upset its own balance of full employment and thereby that in the world generally.

Flexible exchanges are recommended as the easiest means of averting this danger. If the level of money rewards is excessive, the exchange rates may be allowed to run down by the right amount.

It is, of course, possible in theory to rectify the condition within the limitations of the gold standard by reducing the rates of money reward to factors outright. There are, however, overwhelming practical difficulties in the way of this possibility.

(1) The course of prices in the outer world depends on the relation between the rise in the money rates of reward to factors and the increase of efficiency in production on the average in the world as a whole. Comprehensive averages, these, and not readily susceptible of calculation! The following propositions are subject to the condition that full employment is maintained in the outer world. If money rewards to factors do not change prices may be expected to fall at the same rate that efficiency increases; if money rates of reward rise at the same rate that efficiency increases, prices may be expected to be stable.

What is relevant to the employment position in the given country is strictly, however, not the world average, but the average of the prices of all those goods in those foreign parts in which the given country is at the margin of competition with its rivals. This collection of goods will have a continually shifting composition.

So much for the special price-level in the outer world that has to be considered in relation to money rewards at home. In order to gauge how these rewards *ought* to vary it is necessary not only to know how this special price-level is varying, but also how the efficiency of factors of production at home is varying, a still more difficult magnitude to compute with any reasonable accuracy. It is not one efficiency but an average of efficiencies that it is required to measure, namely,

the efficiencies of those factors of production engaged on making the basketful of goods that are on the margin of competition with foreign rivals. Furthermore, this margin itself shifts as the volume of exports required for the maintenance of full employment grows. Again, it may shift in consequence of a change in the tastes of consumers at home. If they become more addicted to home-made goods, the level of exports necessary to secure full employment becomes less.

Taking all these variables into account, it may safely be said that the behaviour of money rewards of factors required to maintain the equilibrium of full employment and an even balance of payments is not likely to be known, even roughly, in advance. Indeed, it is not likely to be known at all. The best that can happen is that the actual level may be guessed to have been wrong after the event.

(ii) Rewards to factors of production are not commonly regulated by a central authority. The constituent parts of the average in question consist of a vast number of different rates determined by the degree of scarcity of various skills, local conditions, the long-period trend of the particular trade whether of expansion or contraction, and sometimes the degree of exploitation. Rates of reward are perpetually shifting relatively to each other. To some extent this is essential to the mechanism of a free system, the relative shifts in rates being necessary to induce shifts of occupation (cf Chapter III, § 4). From time to time various groups shake themselves free of a degree of exploitation. This shifting scene cannot ever be expected to reach a final stage of rest, for the conditions are ever changing anew.

How can a central authority be expected to decree changes such that the average change will work out according to the complex criterion defined in (i) above? It would imply a degree of interference that would be intolerable and a level of knowledge unattainable.

And why should the attempt be made when the desired result can be achieved so much more easily by allowing a certain movement in the foreign exchange rates?

There is nothing in this proposal inconsistent with the fullest measure of international co-operation and goodwill. It would be understood that each country had the duty to maintain full employment in its own area as well as an even balance of payments. This requires that a certain special average of money rates of rewards should stand in a certain relation to a certain special average of prices abroad. The difficulty of securing by changes in money rates constituting this complex average their correct adaptation to the ever-changing circumstances would be fully recognized and the danger to world stability if such adaptation were not secured would also be recognized. In these circumstances the right of each country to secure the adaptation by shifts in exchange rates under pressure of supply and demand should be gladly recognized also. It may be supposed that the various Exchange Funds (or whatever the authorities responsible for exchange control may be) would keep each other fully informed of the day-to-day pressure of supply and demand, so that all adjustments would be by mutual agreement.

§ 3. *International Credits.* It is interesting to speculate upon which of the two conditions assumed in the fore-

going sections is more remote, world control of the trade cycle or political appeasement. The economist is inclined to think the former, since a greater sense of international security has in fact been achieved in the past, while deliberate control of the trade cycle is a problem requiring untried measures for its solution. Furthermore, it is unlikely that world control of the trade cycle will be achieved without international appeasement, while it is, perhaps, unnecessarily gloomy to hold that appeasement cannot come save by control of the trade cycle.

If, then, attention is given to the possibility of a transitional period supervening, in which there is more mutual confidence between nations, but the trade cycle is not yet brought under control, there are two factors which might mitigate the severity of the problems of policy considered in the foregoing chapter.

(i) There might be some revival of foreign investment. So long as international balances of payment are threatened by the movements consequent on severe depressions, a full revival cannot be expected. Any revival would contribute some assistance, for it would reduce the artificial stimulus to capital outlay required to maintain full employment in those countries the propensity to save in which was high in relation to their normal capital requirements.

(ii) The policy of good neighbourliness, outlined in Chapter VII, § 6, would be easier of fulfilment if mutual international credits could be granted liberally. It will be remembered that in a world recession, all countries were exhorted to do their utmost to stimulate capital outlay. Countries with a strong passive balance can only do so by depleting their reserves or allowing

their exchange rates to run down to an alarming extent. It cannot be denied that however indoctrinated with anti-cycle principles they may be—and such indoctrination is still a thing of the future—there will be a strong psychological resistance to pushing the policy *à l'outrance*. If the liberal granting of international credit could come to be recognized as a normal procedure in depressions, this psychological inhibition might be reduced.

Tariffs, quotas, and import restrictions of all sorts have not so far been discussed, belonging as they do to the pathology of the subject. It cannot be gainsaid that in a depression the universal decline of exports and the accentuation of passive balances in some countries set up a strong temptation to use this particular form of un-neighbourly remedy. A routine provision of foreign credit in the depression should reduce the strength of the second of these inducements.

This scheme need not be supposed to demand any self-sacrifice from the creditor countries. These credits would not be granted to particular traders but to the central banks (or exchange funds) of other countries. Moreover some such institution as the Bank for International Settlements might arrange by arbitrage operations that each particular creditor country should have a well distributed assortment of foreign holdings, so that no creditor need be too much concerned with the stability of any particular foreign country. It cannot be regarded as a self-sacrifice to have a lot of foreign money in your possession, provided that there is no reasonable danger of the value of the money going phut. And, if the creditor countries were uneasy, they would have the remedy in their own hands. They have

only to stimulate employment within their own area and thereby imports, to bring their own active balance to an end and thereby liquidate their holdings. It is the very special duty of countries with an active balance in a depression, to bring it to an end at the earliest possible date by measures of internal expansion.

§ 4. *Summary.* (i) International appeasement and the control of the trade cycle are the conditions for a satisfactory ordering of the world economy. In these conditions international lending might come into its own again and relieve the difficulties in countries, the propensity to save in which was high in relation to their demand for new capital.

(ii) Since the right relation of home rewards to world prices is a necessary condition for the maintenance of full employment and an even balance, since this right relation is continually changing and since the outright adjustment of money rewards in a given country would be too difficult to gauge with precision and would entail a high degree of interference, flexible exchanges are recommended. Controlling authorities could allow the exchanges to move in accordance with the pressure of supply and demand to meet changing circumstances by principles that would be a matter of mutual agreement.

(iii) If political appeasement were achieved, but not the control of the trade cycle, difficulties of policy might be relieved (a) by some revival of international lending, (b) by the routine granting of international credits. This would be particularly valuable during depressions.

CHAPTER IX

TARIFFS

§ 1. *Origins.* The evolution of a workable system of currency has been a slow and laborious process. Between the fall of the Roman Empire and the thirteenth century silver was the sole standard in Europe. The growing bulk of commerce led to the introduction of gold by the Italian cities in the thirteenth century and by France and England in the fourteenth. The system of bimetallism was adopted. But it was not worked satisfactorily. The need for different countries to have the same mint ratio between gold and silver was not appreciated, and ratios seldom were the same. Consequently each country was subjected to a loss of gold or silver. This was met on the one hand by stringent but ineffective prohibitions against the export of the precious metals and on the other by the progressive debasement of the standard. It was found by experiment that the debasement of coins containing the disappearing metal checked the outflow; for the debasement made the ratio more favourable to this metal. But it was often carried too far, the other metal began to disappear and the coins embodying it had to be debased in their turn.

An enlightened school of thought arose in England in the seventeenth century, which condemned the laws

against exportation, on the ground that they were ineffective and that, by presenting an obstacle to those who wished to use the country as an entrepôt, they reduced the profits arising from foreign trade, and so checked the 'inflow of metals which would result therefrom.

The prohibitions were abolished in 1663. To prevent the disturbances which were still liable to result from discrepancies between the bimetallic ratios, gold was for the time demonetized in England. Golden guineas were coined but allowed to circulate at their market value.

That the prohibitions were originally introduced in the Middle Ages to meet practical exigencies was forgotten. Meanwhile Spain had endeavoured to enforce prohibitions from another motive, having laid her hand on great sources of output of the precious metals in the new world, she thought that the resulting flow of wealth would be frittered away if the metals were allowed to leave the country. Wealth was identified with the possession of large stocks of precious metals.

Mun and his school, who recommended the repeal of the prohibitions, did not repudiate the notion, which had thus gained currency, that it was the proper object of the prohibitions to secure for the country the greatest possible stock of precious metals. The object was still thought to be a sound one; the means were discarded as unsuitable. Some more scientific means must be found. If it could be secured that the country always had a favourable balance of trade in commodities, the excess of exports would be paid for in gold and there would be a permanent inflow. To secure a favourable balance, an excellent weapon was to hand, the customs

duties. These had hitherto been mainly regarded as a source of revenue. Now, it was laid down, they must be carefully manipulated so as to maintain a favourable balance of trade.

This was the prevalent theory for a hundred years. Adam Smith's attack on it had two parts. He set out to show first that an accumulation of precious metals was not a proper object of policy, and secondly that the import duties did not secure a permanent favourable balance of trade. Both lines of criticism were effective and final.

Meanwhile tariffs had come to be favoured in Europe as means of fostering native industries. Against this view Adam Smith argued that capital would, if unimpeded, find its way into those occupations for which the country was most suited.¹ With the passage of time there has been a further development of protectionist doctrines; an attempt is made in the following pages to assess the validity of those which have been supported by serious argument.

§ 2. *Two Special Arguments.* (i) *Self-sufficiency.* (ii) *Bargaining.* In the first place two arguments may be referred to which are of a rather special kind.

(i) It may be desired to forgo the economic advantages flowing from the international division of labour in the interest of making a country self-sufficient either in all respects or in respect of certain commodities supposed to be of vital importance in time of war. The nature of this argument is plain, and its importance the reader can estimate for himself. It is clear

¹ It was in defining this view more sharply that Ricardo enunciated the principle of comparative costs. (See Chapter II, sec 3).

that the desire for self-sufficiency, if pressed to its logical conclusion, would entail the sacrifice of all the gain accruing from the international division of labour and lead to a very great impoverishment in all countries. Unhappily the tendency in this direction has never been so strong as it is at present

(11) The imposition of a tariff to induce other countries to lower theirs was admitted as a legitimate exception to Free Trade policy even by Adam Smith. This argument is consistent with the view that both foreign tariffs and tariffs imposed by the home country are injurious to the home country. The argument relates to tactics rather than economics. Certain objections to it may, however, be mentioned.

(a) In bargaining—it is usually impossible for the country to negotiate with the rest of the world as a whole. The injury which a country suffers—in the absence of special circumstances—from a given import duty of her own is equal to that which she suffers from a like duty in all other countries and is therefore much greater than that which she suffers from a like import duty in one other particular country.¹ Therefore, if she imposes this injury on herself, she runs the risk of a great evil, if the negotiation fails, in order to gain a comparatively slight good, if the negotiation succeeds

But, unless the foreign tariff which she seeks to get reduced has merely been imposed as a piece of bluff in answer to or to anticipate her own bluff (in which case the whole procedure is a mere waste of time), the negotiation is not likely to succeed. For the other country

¹ Import duties are said to be 'like' when they are of the same *ad valorem* rate and affect imports of roughly the same value

either does reap, owing to special circumstances, or supposes herself to reap some real advantage from the duty, or the duty is buttressed by vested interests. The real benefit which the home country has to offer the foreign country by reducing her duty must be small compared with this real or imaginary benefit which the foreign country gains by hers. Or, in other words, the *change* in the foreign country's economic conditions which we can offer to bring about by reducing our duty is small compared with the change which she will bring upon herself by reducing a like duty of her own. Such negotiations are therefore doomed to failure.

Of course, if the negotiating countries are prepared to embark on an elaborate system of tariff discrimination against each other, each country having a different tariff against every other, then they could offer each other in bargaining a real *quid pro quo*. But no country would embark on a career of complicated tariff discrimination, which really desired to secure a reduction of foreign tariffs against her goods. For by doing so she would render herself ineligible for Most Favoured Nation treatment in any form by foreign countries; yet this treatment is the most potent weapon by which countries do in fact secure for themselves favourable conditions in foreign countries; for by it they get the advantage not only of those reductions gained by their own bargaining, but of the sum of all reductions gained by the bargaining of all other countries.¹

¹ The view which has recently gained ground that it is desirable to modify the Most Favoured Nation clause, so as to allow some discrimination, follows logically from the rising hope that it may be possible to secure tariff reduction by sectional agreements.

(b) Experience has shown that the imposition of *tarifs de combat* has in fact resulted in a raising and not a lowering of tariff levels all round.

(c) The best hope for securing tariff reductions is the diffusion of a greater measure of international goodwill and appreciation of the mutual advantage of trade. The *tarif de combat* is diametrically opposed to this in spirit and engenders a point of view in all parties which is least likely to be helpful.

It would probably not secure much favour in the popular judgment were it not confused with a quite different and wholly fallacious notion that the benefits which accrue to a country from not having tariffs are in some way destroyed by the existence of tariffs elsewhere. There is no analogy with the question of armament. There is everything to be said for being well armed just because the rest of the world is armed. The existence of foreign tariffs, while in itself an admitted evil for the home country, if imposed on goods which she does or would otherwise export, does not prevent her maintenance of free imports from being beneficial. The reader is referred to the reasoning of pages 47-9. The existence of tariffs elsewhere may reduce the total gain from foreign trade which it is open to the country to secure. Whether there are tariffs elsewhere or not, she can only realize the total gain which is open to her by not having tariffs herself.¹

¹ To quote an admirable analogy given in Beveridge, *Tariffs, The Case Examined*—if foreign countries allowed their harbours to get silted up, thus imposing a severe obstruction to the import of goods, the effect would be injurious to Great Britain. But it would not be a valid argument for allowing her own harbours to get so silted up as to impede the trade which was still possible

§ 3. *Tariffs and the best Distribution of Productive Resources.* For the rest, it may be well to divide the considerations regarding tariffs into two parts. (i) Are tariffs likely to bring about a better distribution among occupations of a given flow of productive resources? (ii) Are tariffs likely to increase the employment of productive resources? This division corresponds with the general division of the treatment of the subject of international trade in this volume.

The broad answer to the first question has already been given in Chapters II and III. Two conditions were shown to be requisite for the best distribution of productive resources among occupations, namely (a) that the ratios of the prices at which home-produced goods are offered should be equal to the ratios at which they are available in the world market and (b) the prices at which home-produced goods are offered should be proportional to their costs of production.

(a) The first condition is completely secured by free trade; for under free trade prices at home and abroad tend not to differ by more than the cost of transport and marketing between the home and foreign centres; the prices of home-produced goods tend to be absolutely equal to those of foreign-produced goods on the frontier of competition whether that frontier lie in the home market or in foreign markets or partly in both.

One limitation to this general doctrine must, however, be recognized. By imposing tariffs on imports, members of a community form themselves into a kind of consumers' monopoly and stint themselves in the purchase of this class of goods. Is it possible that by forgoing some advantageous purchases, they can get a sufficient reduction of the foreign offer price to

compensate them for the loss? This is another way of putting the question—can the foreigner be made to bear a portion of the tax, and will there be a net gain to the community, if he does?

If a tax is suddenly imposed, foreigners may have stocks of goods intended for the protected market which they are willing to dispose of at an exceptionally low price. They may have plant designed for the manufacture of such goods which they will be willing to work at an exceptionally low profit rather than put it out of commission. To estimate the probable effect of the tariff *in the long run*, it is necessary to refer to the underlying forces governing the comparative movement of prices at home and abroad, when channels of trade are opened or closed. These were examined at some length in Chapter II. By far the most important governing condition is the size of the home country's market compared with that of the world market for the commodities in question. Secondly, we have to take into account the elasticities of demand and supply at home and abroad. On the assumption of equal elasticities the ratio of the fall in the foreign price of goods which the home country imports (measured in terms of goods which she exports) to the rise in the home price (so computed) will be equal to the ratio of the size of the home market to the size of the world market. If the home market is one-tenth of the world market, home prices may be expected to rise by $\frac{1}{11}$ ths of the tariff and foreign prices to fall by $\frac{1}{11}$ th. The greater the elasticity of home demand and supply compared with foreign demand and supply, the less the home rise and the greater the foreign fall in price.

In the new equilibrium the price of home goods

exceeds that of the foreign goods by the amount of the tariff (unless the tariff is absolutely prohibitive), whereas in the old equilibrium the home price was equal to the foreign price. (Any difference due to cost of transport will be the same in both situations and may be neglected in computing the incidence of the change.) This change is made up of a home rise of $\frac{1}{2}$ ths of the tax and a foreign fall of $\frac{1}{2}$ th. Consequently the foreign goods which continue to come in after the tariff has been imposed will be available at a price, which will be less than the old price by an amount equal to $\frac{1}{2}$ th of the tariff. The foreigner is in fact bearing $\frac{1}{2}$ th of the tax. The goods will not indeed be cheaper to the consumer, since before they reach him they have to pay the duty. But the duty accrues to government which may remit taxation in other directions. To the community there is a gain of $\frac{1}{2}$ th of the tariff on the foreign taxed goods which continue to come in.

On the other hand the home production of these goods will be stimulated by a rise of price equal to $\frac{1}{2}$ ths of the tariff. Goods produced under the stimulus of the tariff will cost more than the goods of that class formerly produced at home by an amount varying between 0 and $\frac{1}{2}$ ths of the tariff. For simplicity we may suppose the extra cost of producing these goods to be on average $\frac{1}{4}$ ths of the tariff. Put otherwise, the cost at which the protected goods are produced at home will exceed the cost of producing the goods previously exported in exchange for them by $\frac{1}{4}$ ths of the tariff. Thus there is a gain of $\frac{1}{4}$ th of the tariff on the foreign goods still imported and a loss of $\frac{1}{4}$ ths of the tariff on the goods produced under the stimulus of protection. There is consequently a net gain if the

goods still imported exceed five times the quantity of extra goods produced under the influence of protection. Thus a low tariff imposed by a country of considerable importance in the world economy may be made to yield a modicum of gain.¹ The smaller the country the lower the tariff would have to be to satisfy this condition.²

It has been taken for granted that after the tariff is imposed home prices (i.e. the prices of import goods in terms of export goods) will exceed world prices by the amount of the tariff. This must be so unless the tariff is absolutely prohibitive. If it is prohibitive, home prices and costs may not rise by the full amount of the tariff and the loss will not be so great. On the other hand, since no foreign goods are then bought, there will be no gain whatever to set off against the loss.³

It should be noted that any gain that accrues to a tariff-imposing country under this head is made at the expense of the world as a whole. If the tariff provokes retaliation there will be a net loss both to the whole and all the parts.

(b) If prices fail to correspond to costs (second condition for best distribution of productive resources),

¹ The foregoing argument neglects the loss of "Consumer's surplus" due to the tariff; when this is taken into account, it appears that the scope for gainful tariff-making is still further restricted.

² E.g., if the world market was 100 times as great as that of the particular country, the tariff must on the simplest assumption be so low that the quantity of taxed foreign goods still imported is 50 times as great as the quantity of goods produced under the stimulus of protection.

³ The view, often expressed, that an import duty may give protection without raising the price of the protected commodity at home is not deemed worthy of refutation.

factors in certain occupations must be getting higher rewards per unit of service than those in others. Adam Smith held that the natural forces of competition would secure equality of rewards in different occupations and so bring about the best distribution of the factors among them. It may be held, however, that this distribution will not always occur.

In particular it was argued by the German writer, List,¹ that an agrarian country would not spontaneously turn its resources towards industrialization with sufficient rapidity owing to inertia and lack of knowledge. He recommended the protection of manufacturing industry by tariffs during the transitional phase of growth. List's doctrine became known as the Infant Industry Argument and was incorporated by J. S. Mill in his *Principles of Political Economy*. List held that the tariffs should be removed when the country attained a certain measure of manufacturing strength. His argument would not apply to the protection of a particular industry, which happened to be undeveloped; when industrial knowledge and intelligence has reached a certain degree of cultivation it may be expected to discover which infants are worth rearing.

The scene has really shifted since List's day. He lived in the early days of the expansion of what may roughly be classed as the B industries. It is probable that with the growing wealth of the world the day has come, at least in the advanced countries, for a relative expansion of the C industries. These cannot be assisted by protection.

More generally it might be argued, as explained in

¹ Germs of his doctrine are to be found in Hamilton's *Report on Manufactures*, 1794, U.S.A.

Chapter III of this volume, that there is always a lag in the shift of productive resources from declining to rising occupations and that some external stimulus would be beneficial to hasten the transfer. Such considerations must be attended with grave doubt and uncertainty. Tariff-making bodies are fallible; the criterion offered for their guidance is vague; this theory of protection requires them to "spot the winner," which has been overlooked; they are also liable to political pressure which interested parties are not slow to exert. Only when or if tariff-making bodies had very complete knowledge of the internal conditions and costs in particular industries, and, perhaps, some measure of control over their policy, could beneficial results be hoped for along these lines.

It was also shown in Chapter III that insufficient productive resources are employed in industries in which a monopolistic element is present and, more broadly, in those the market for whose goods is incompletely organized.¹ The more complete the monopoly, the more it should, in the community's interest, be whipped into producing more. Protection is a gentle form of castigation.

If the industry which is deemed to require stimulation neither has nor entertains hope of having an export business, a tariff on competitive imports is a certain and effective method of giving it the stimulus. On the other hand the claim of such an industry to merit stimulation is likely to be open to doubt.

Repercussions of the tariff must not be neglected. It is not impossible that some industries which ought to be stimulated are export industries. These, of course,

¹ Cf Ch III, pp 55-58

cannot be stimulated by protection. But the protection given to others may actually impede them, if any of the protected goods enter into their cost of production. That protection will impede certain other industries is admitted in the type of protectionist case that we are examining. But it should not be forgotten that these others may include those which have as good a case for assistance as those protected.

Since in this section we are considering the tariff not as an engine for reducing the real reward to factors, but for redistributing productive resources among their occupations, we may assume that rewards to factors will be raised by a sufficient amount to cover the higher prices of protected goods. The rise in money rewards to factors will further hamper the export industries, some of which may deserve the opposite fate.

There is also the case in which identical commodities are both imported and exported. This may be due to the distance of frontiers and the transporting costs involved (e.g. coal in Germany) or to special conditions of goodwill. In this case protection may intensify competition in the foreign markets.

§ 4. Tariffs and the Full Utilization of Productive Resources. Stress has recently been laid on the claim that protection has power to increase the volume of employment in the country.

A sharp distinction must be drawn according as whether, when a tariff is introduced, money rewards to factors in the country are raised by enough to cover the higher prices of protected articles and maintain the old standard of living, or not.

If rewards are raised, the tariff is not likely, except

in special circumstances, to increase the volume of employment. If, on the other hand, rewards are not raised and the tariff is used as an engine for the illicit reduction of rewards to factors, its power to give increased employment need not be challenged.

In the case of money rewards being raised, the matter may be put fairly simply. After the tariff has been imposed, productive resources will, apart from special circumstances already considered, be employed in a manner that is not the most effective. The total yield of production will be smaller than if an equal quantity of productive resources had been employed in free trade conditions. The amount of total product going as unadjustable rewards is *ex hypothesi* no less than under free trade conditions (money rewards having been raised to cover the higher cost of living). The total product being less and the amount going as unadjustable rewards being the same, the residual rewards must be lower. If the profits in bulk are lower under the tariff, is it likely that the entrepreneur working for profit will undertake more enterprise?

It may be noted in passing that the rise in rewards to factors required to maintain the standard of living is greater than at first sight appears. This may be roughly shown with the aid of symbols. Let t represent the rise in price of such goods as are protected, which results from the tariff (i.e. t is equal to the tariff, less that part of it "carried by the foreigner,") expressed as a fraction of the former value of the goods. Let p stand for the proportion of income devoted to home-produced goods of the protected classes. These cover not only the goods produced at home as a result of protection, but those plus the goods of the protected

classes formerly produced at home. Then to maintain the standard of living, rewards to factors must be raised by the fraction $p \times t$. This rise will, however, affect the price of C goods. Let c represent the fraction of income devoted to the purchase of them. Then for the standard of living to be maintained, a further rise in rewards to factors is required, viz. $c \times pt$, pt representing the initial rise in the price of C goods. There will then be a secondary rise in the price of C goods equal to cpt , which will necessitate a tertiary rise in rewards to factors of $c \times cpt$. This will entail a further rise in the price of C goods, and so on. The total rise in rewards to factors required to maintain the standard is represented by the sum of an infinite series, $pt + cpt + c^2pt + c^3pt + \dots$. This is equal to

$$\frac{pt}{1-c}$$

A numerical example may be offered. Suppose p is $\frac{1}{2}$ and c is $\frac{1}{2}$. Then the required rise in rewards to factors is $\frac{1}{2}t$. In these circumstances the stimulus to production in the protected trades is not represented by t , the rise in price of the protected goods, but by $t - \frac{1}{2}t$, or $\frac{1}{2}t$, namely, the rise in price of the protected goods less the rise in costs due to the rise of rewards to the factors.

On the other hand, producers of world goods in the unprotected class, including of course all the exporting industries, will be subject to a new handicap. They will have a rise in costs of $\frac{1}{2}t$ and have no rise in price to compensate for this. One set of producers will be stimulated by a net rise of price equal to $\frac{1}{2}t$ and the other set will be handicapped by a rise in costs equal

to $\frac{1}{2}$ It does not appear that protection is likely to give any net stimulus to production in industries as a whole

If no rise in money rewards to factors occurs and their standard of living is consequently allowed to drop, a tariff may have a stimulating effect on employment. Since there is no change in the relation of efficiency rewards to world prices, A and B output for world markets may go on much as before. This output will indeed be impeded if the raw materials rise in price owing to the tariff. Let us suppose that a full drawback on all taxed goods used in a productive process is allowed. This supposition goes far beyond what tariff makers are usually prepared to grant, even in theory, to say nothing of practice, by way of drawbacks. They usually think of drawbacks as confined to taxed goods embodied in A and B exports. In principle, producers making A and B goods of the export class for the home market or making A and B goods subject to foreign competition in the home market have an equal claim to them.

A and B output for world markets proceeds then as before. But the tariff raises the price of certain A and B goods in the home market, and this enlarges the possibility of A and B output for that market. Consequently A and B output as a whole and the general level of employment and income in the country rises. An increase of employment has been secured at the price of a fall in the rates of reward of those in employment.

In terms of the argument of Chapter VI, § 2, the value of exports remains the same, but the proportion of income spent on home-made consumable goods is

raised, and consequently the general level of income and employment.

Free-trade controversialists have sometimes gone too far in denying the possibility that tariffs might give a stimulus to employment. Most tariff discussion represents a reversion to such a low type of economic thinking that the party of truth may well be excused for an occasional exaggeration. If, it is claimed, tariffs tend to keep imports away, exports must fall off by an equal amount, and the gain of employment in the protected trades will be offset by a loss of employment in the export trades. But the reason why exports should fall is not clearly stated. Assuming that full drawbacks are allowed, as indicated in the foregoing paragraph, exports will only fall if rewards to factors rise. But the case here considered is that in which rewards to factors do not rise. If it is objected that rewards to factors *must* rise under pressure of the extra demand for them, this implies either (a) that the employment of factors is in process of being increased, which concedes the point at issue, or (b) that there was initially full employment; in this case, naturally, tariffs cannot increase employment.

It is possible that after the tariff a new equilibrium will be reached with exports and imports at their old level, with a smaller proportion of income being spent on imports, but with a larger total income accruing. Alternatively, an active balance may result for a time.

The reader must not fly to the conclusion that we have here a good argument for the imposition of tariffs in a time of unemployment. For there are other and better methods of achieving the same result.

The great defect of the tariff method is that, instead

of distributing the new employment among industries in the proportions which will make that employment yield the largest income, it concentrates it unduly in particular industries. Another defect is that it is a cure for depression which cannot be repeated. Once a country has by tariffs sacrificed all the gain to be derived from foreign trade, it can go no further. And when depression and unemployment continue to recur, as usual, the authorities will have to look round for new recipes. How much better had they adopted those other recipes in the first instance, instead of first imposing on their subjects the great and permanent loss connected with the sacrifice of all the benefits of foreign trade! It should be noted that it is usually considered improper to give as a cure for a temporary malady a medicine which inflicts permanent injury on the constitution. Tariff-doctors should remember that maxim.

But we have forgotten the doctors' stock reply. The tariffs can presently be removed!

What are the other recipes? They all involve, directly or indirectly, some real reduction in the unadjustable rewards to factors. (In a completely collectivist state, where there are no profits, they would involve a reduction in *all* rewards) In many cases it may be argued that it is better to sacrifice the full utilization of productive resources for the sake of maintaining rewards as they are, and to rely on rising productivity to make fuller utilization possible at the existing level of rewards in the course of time.

A fall of rewards may be secured by an outright reduction of money rewards. It cannot be denied that an *all-round* reduction of this kind is not easy to secure in an individualist economy, involves serious questions

of equity as between unadjustable rewards and profits, and should in fairness be accompanied by a legal revision of all contracts.¹ The other recipe, an adjustment of the foreign exchange rates, has already been discussed in the two preceding chapters *Defensive*

The serious and apparently insuperable difficulty of getting an equitable all-round reduction in money rewards throughout the community on the one hand, and our gold fetters on the other, suggested in the years 1930-31 that tariffs might, after all, be worth adopting as a last desperate expedient to stimulate employment in an unparalleled depression. With the fall of the gold standard in September 1931, the arguments in favour of tariffs as instruments for relieving unemployment disappeared into thin air. The authorities had *carte blanche*. They could fix the foreign exchange at whatever rate would put the home level of rewards into a reasonable relation to world prices

✓ Monetary policy is the appropriate instrument for securing full utilization of productive resources. It lacks the two major defects of tariff policy. It does not concentrate employment in unsuitable occupations, and its efficacy is not exhausted by use.

It might be objected that it is dangerous to put into the hands of possibly unsympathetic authorities the power of reducing real rewards to factors by "monkeying with the currency." This objection may be met. At a time when there is every prospect of real productivity continuing to rise, the rule could be laid down that when operating their policy the authorities are never to reduce real rewards.² It will be sufficient that

¹ Cf the arguments of Ch VIII, § 2

² Some modification to this rule should perhaps be allowed in a period of world slump, cf Ch VII, §§ 6 and 7

they should be authorized to prevent such fortuitous increases as exceed the limits which they regard as allowable. The details of this have already been discussed. One proviso, however, is necessary. If the authorities are to work their system properly, the starting point must be a time of full employment. To secure such a starting point in the first instance some initial reduction of real rewards may be unavoidable. Such a reduction should be definitely recognized as an extraordinary expedient, necessary to usher in a new regime. In the absence of a gold standard there can be no case for reducing real rewards by the tariff method.

§ 5. *Conclusions.* To sum up, the best distribution of productive resources and the best utilization of the opportunities offered by foreign trade are secured if (i) home offer prices are equated to foreign offer prices at the margin of competition, whether at home or abroad, and (ii) home offer prices are proportional to the costs of production at home. The first of these conditions is secured by free trade. But it is necessary to add the limiting clause that a low tariff in a large and important country may, by turning the ratio of international exchange in the country's favour, bring in a gain which more than offsets the loss due to the maldistribution of her resources which it causes. A tariff to secure this object is in truth predatory, since the loss due to the maldistribution of productive resources is absolute, while the national gain due to the turn in the terms of trade is offset by foreign loss.

Free trade encourages but does not secure the proportionality of home offer prices to costs of production.

The protection of trades, rewards in which are at a relatively high level, might be favoured as a means of inducing them to produce more. The fair working of such a system would, however, be attended with great difficulties. Objections might also be raised to it on the score of equity.

✓ Tariffs may be favoured as a method of increasing the volume of employment in the country. They are not likely to do this if money rewards to factors are raised sufficiently to cover the higher cost of living. But, if real rewards are allowed to fall, the flow of employment may be increased. This effect could, however, be more easily and more equitably effected by a reduction in the par of exchange. This expedient is free from the two major defects of the tariff method: it does not divert the productive resources of the country into less profitable channels, and it does not exhaust its own efficacy by use.

APPENDIX

THE principles on which the calculations in Chapter II are based may be explained as follows.

When the output of one commodity, B, is increased in England by an amount Q, it is assumed that the output of A is reduced in England by an amount equal to $\frac{Q}{r}$, where r is the rate at which B is exchanged for A in the new state of affairs. r is the cost of producing A divided by the cost of producing B and is referred to throughout Chapter II as "the ratio."

If the cost gradient of A is equal to that of B (simplest assumption), and if an increase in the output of B by Q leads to a rise in the cost of B by an amount q , when the output of A is decreased by $\frac{Q}{r}$ its cost falls by $\frac{q}{r}$.

If the initial ratio of costs in England is represented by x ($=1$), the new relation of costs is expressed by the following equation:

$$\frac{x - \frac{q}{r}}{x + q} = r \dots \dots \dots (1)$$

From this it follows that

$$q = \frac{(r)(x-r)}{r^2 + x}$$

If the cost gradients of sources in England are equal to those abroad, and a given amount of output is transferred from England to the outer world, a change in the English cost of a given amount is accompanied by a change in the foreign cost of that amount multiplied by n , where n is a

fraction showing the ratio of England's initial output to the initial foreign output (=the number of sources in England divided by the number abroad).

If the initial ratio of the foreign cost of A to that of B is $\frac{1}{p}$, the relation of foreign costs which accompanies the state of affairs represented in (1) above is expressed by the following equation:

$$\frac{1+n\frac{q}{r}}{p-nq} = r^{(*)} \quad (2)$$

From this it follows that

$$q = \frac{(r)(pr-1)}{n(r^2+1)}$$

From equations (1) and (2) it may be deduced that

$$r = \frac{1+n}{p+n} \quad (3)$$

Example Suppose trade is opened when costs at home are 1 and costs abroad 2 and $n = \frac{1}{8}$ (cf Table X, p 29)

$$r = \frac{1+\frac{1}{8}}{2+\frac{1}{8}} = \frac{1\frac{1}{8}}{2\frac{1}{8}} = \frac{1}{2} = 1 \frac{1}{2}$$

$$\text{and by (1), } q = \frac{(\frac{1}{2} \times \frac{1}{2})}{(\frac{1}{8})^2 + 1} \\ = \frac{\frac{1}{4}}{\frac{1}{64} + 1} = \frac{1}{8} = 0.125$$

Consequently costs relations will be as follows

	In England.	Abroad
A	$\{1 - (0.125) (\frac{1}{2})\} x$	$\{1 + (0.125) (\frac{1}{8}) (\frac{1}{2})\} y$
B	$\{1 + (0.125) (\frac{1}{2})\} x$	$\{2 - (0.125) (\frac{1}{8})\} y$

	In England	Abroad
A	0.625 . x	1.037 . y
B	1.125 . x	1.980 . y

* If cost elasticity instead of cost gradient were used the left hand denominator would run $p(1-nq)$

If cost gradients in England are not equal to those abroad, let g stand for the average English gradient divided by the average foreign gradient over the relevant range.¹ Then a foreign change in costs of nq would be accompanied by an English change of gq , etc. The cost relations would be represented by the equations.

$$\frac{1 - g\frac{q}{r}}{1 + gq} = \frac{1 + n\frac{q}{r}}{p - nq} = r$$

It follows that

$$r = \frac{g+n}{gp+n}$$

Example if $p=5$, $n=\frac{1}{10}$, and $g=2$ (cf. Table XII, p. 32)

$$\begin{aligned} r &= \frac{2 + \frac{1}{10}}{10 + \frac{1}{10}} = \frac{2.1}{10.1} = 1 : 4\frac{1}{2} \\ q &= \frac{(r)(1-r)}{g(r^2+1)} \\ &= \frac{(\frac{2.1}{10.1})(\frac{1}{10.1})}{2(\frac{2.1}{10.1})^2 + 1} = \frac{1680}{21284} = .079\dots \end{aligned}$$

Cost relations will be as follows

In England	Abroad.
A $\{1 - (.079\dots)(2) (\frac{1}{10})\} x$	$\{1 + (.079\dots) (\frac{1}{10}) (\frac{1}{2})\} y$
B $\{1 + (.079\dots)(2)\} x$	$\{5 - (.079\dots) (\frac{1}{10})\} y$

i.e.

In England	Abroad
A .24...x	1.038...y
B 1.158. x	4.992...y

¹ Demand considerations may be neglected by supposing that each demand gradient is proportional to its appropriate cost gradient.

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