THE EFFECT OF FOREIGN INVESTMENT - CANADA, 1946-1951

by

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Preface

The topic of this thesis was suggested to me by my Director of Research, Professor Donald B. Marsh. The original suggestion was to make a study of the relationship between foreign investment in Canada and Canadian economic policy in the post-war period. However, this topic was abandoned because of the complicated and often indeterminate nature of significant variables and parameters.

Instead, an attempt has been made, in the first place, to isolate and analyse some of the more important theoretical problems which arise when foreign investment plays a significant role in economic development. The theoretical analysis has yielded certain results which are then applied to Canadian economic expansion and development. Throughout the writing of this thesis, I have received considerable help from Professor Marsh. I would venture to say that his corrections and suggestions in matters of style and analysis are responsible for any value contained in this thesis.

William J. Woodfine.

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CHAPTER 1

The Role of Investment and the Limits to Economic Development in a Closed Economy

The development of any closed national economy from an agricultural, extractive economy to a highly industrialized one is dependent on the proportion of its national income (in real terms) which it is willing to devote to investment or capital accumulation. There are many definitions as to what constitutes investment but there is substantial agreement among economists as to the types of flows of goods and services covered by the term investment: "(1) expenditures on durable physical assets by entrepreneurs which (expenditures) consist of a) outlay on construction projects and the purchase of machinery and equipment; b) outlay on new house building including major improvements and alterations made by both home-owners and landlords; and c) outlay by governments on public buildings, engineering works, installations, resources development, and machinery and equipment; (2) expenditures which effect a net change in the volume of inventories held by the business community; (3) payments and receipts which result in a net change in foreign assets held by residents of the country.[1]

Thus we see that investment covers many economic activities but the point to be made here is that the types of investment which bring about long-run structural changes in the economy are of a more particular nature. The long-run structural changes

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[1] cf. Private & Public Investment in Canada, 1926-51 Department of Trade and Commerce, Ottawa.

are, for the purposes of this paper, those which contribute to the economic development of the economy as measured by the degree of industrialization. Thus it would seem that the type of investment most conducive to economic development through industrialization is given by the first of the three groups outlined above; that is, by expenditures on durable physical assets made by entrepreneurs which consist of a) outlay on construction projects and the purchase of machinery and equipment; b) outlay on new housebuilding, including major improvements and alterations by both owner-occupiers and landlords;[2] and finally c) outlay by government on public buildings, engineering works, installations, resources development and machinery and equipment. It is precisely this type of investment which produce changes in the real capital stock of the economy and which permanently alter the economic structure by enhancing its productivity.[3] Certainly, from the point of view of cyclical fluctuations in economic activity, all three types of investment play an important role but even here it seems that the business cycle is associated mainly with fluctuations in expenditures on durable physical assets. The most important characteristic of investment in the trade balance seems to be the positive income effects associated with a favorable trade balance and the induced effects

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[2]This type of investment would contribute to the industrialization to the extent that it would give rise to further investment in complementary industries: e.g. building material industry.

[3]Buchanan speaks of 'Development Investment' and 'Industrialization Investment'. Buchanan, Norman, S., International Investment and Domestic Welfare, New York, 1945, p. 79.

which this might bring about owing to the influence of the income effects on investment in durable physical assets due to the acceleration principle. Furthermore, the highly volatile and often accidental nature of this type of investment may be a deterrent to economic stability both internally and externally.

The investment problem is an example of the general problem of the allocation of limited means, which have alternative uses, among competing ends. The 'limited means' and the 'competing ends' give rise to what we call the 'physical' and 'psychological' limits to investment.

Empirical evidence suggests that industrialization which requires a high level of investment in productive capacity is a condition of economic progress and higher standards of living. Thus if an economy wishes to maximize its wealth through economic development, then it is necessary to undertake a high rate of investment in productive capacity. It is precisely at this point that the economy will be faced with the problem of limited means or resources. It is the scarcity of resources within an economy which imposes the first limitation on investment through which industrialization and economic development are to be achieved. A country with very meagre mineral resources cannot expect to improve its standard of living by undertaking investment projects in the extractive industries. The physical limitation to investment is conditioned not only by the relative scarcity of natural resources but also by the relative scarcity of human resources. This latter type of resource would include such factors as the size and skill of the labour force and all those things which come under the term 'technological know-how'. If any one of these factors is scarce, then the extent to which

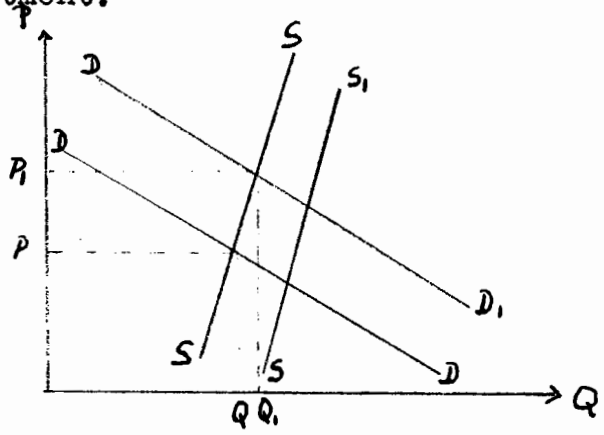
the closed economy might develop is limited.

The foregoing limitations to economic development might, for the sake of convenience, be treated as 'the physical limit'. In an economy completely closed to foreign trade, this limit would so restrain economic growth as to render practically impossible economic development through industrialization. In many economies, however, the physical limits, as outlined above, are not always the main factors which inhibit economic development. Thus, in an economy with abundant natural resources and investment opportunities, it is possible and often probable that the investment necessary for the desired level of industrialization will not be forthcoming owing to a certain unwillingness to invest on the part of the inhabitants of the economy, the reason being that the desire to invest more involves the decision to consume less. This is the crux of the matter: a high rate of capital accumulation in a closed economy necessitates reduced consumption in order that resources, both human and material, might be diverted from the production of consumer goods to the production of capital goods.

This unwillingness to sacrifice present consumption imposes what we shall call 'the psychological limit' to development. In a closed economy, therefore, investment will be further limited by the level of savings. If entrepreneurs plan to increase the level of investment while, at the same time, the public does not save more, then the necessary adjustment will bring inflationary forces into play and the result will be forced savings which will offset the increased amount of investment.

The extent of this inflation will vary inversely with the availability of unemployed resources and factors of production. If employment has been at a high level (that is, if supply is inelastic), then the increased investment will bring about general price increases thus restoring the equality of savings and investment - a condition of equilibrium.[4]

However, there is a limit to increased investment financed by inflation and forced savings, and this limit is more clearly understood in real rather than monetary terms. A point will eventually be reached in this inflationary spiral, when the price and income elasticities of supply will practically be zero; that is, a point where all the available resources and factors of production are operating at full capacity in the production of consumer and capital goods. When this point is reached then any desire to increase investment will lead mainly to increased prices with little increase in output as shown in Fig. 1 where DD_1 represents the increased demand for resources and factors of production due to the entrepreneurial plans to increase investment.



[4]Savings, here, is defined as monetary savings.

This situation is not only of academic interest but rather does it describe vividly conditions which existed in belligerent economies and also certain underdeveloped countries where all the available resources were necessary to maintain a subsistence standard of living. A closed economy of this sort desiring increased real investment must sacrifice some of its consumption so that resources and factors of production may be diverted from consumption goods industries to capital goods industries. This diversion of productive effort and the consequent reduction in consumption is the real cost of capital accumulation and industrialization in a closed economy. The extent of development in a closed economy will depend on the willingness of the community to pay this real cost. "The sacrifice of present satisfactions for future satisfactions which people undergo in order to reap the advantages of capitalistic production is not something done once and for all; it is a continuous sacrifice."[5]

Thus in a closed economy, it can be seen that there are essentially two limitations to industrialization: one physical, the other psychological. If the 'psychological limit' is reached in a closed economy, then accumulation must cease. However, if the 'physical limit' is reached first then capital accumulation might continue (although slowly) due to increased productivity occasioned by technological innovation and Marshallian "internal and external economies". This would cause

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[5]Iversen, International Capital Movements, p. 24.

the SS curve to shift to SS_1 and the new curve may or may not be more elastic depending on whether or not the innovations are 'factor-saving'.

So far in this chapter, we have dealt with the broad forces which might limit the economic development of a closed economy. The explicit assumption which has rendered the above analysis most unreal and abstract has been, of course, the assumption that the hypothetical economy has been completely closed to foreign trade; that is, our economy could not import capital equipment from abroad and, furthermore, it could not borrow capital funds or what Iversen calls "buying power" from abroad in order to supplement its own supply of savings. In the next chapter these limiting assumptions will be removed step by step until, it is hoped, our model will bear a close approximation to conditions as they exist in the real world.

CHAPTER 2

Foreign Investment and Economic Development

In this chapter too, it will be necessary to make rather strict assumptions in order to examine the sequence of events which would occur if the closed economy were gradually opened to foreign trade. In the first part of this chapter, we shall drop the assumption that the developing economy cannot import capital funds from abroad; but it is now able to draw on the savings of foreign countries; that is, it can now import capital funds to supplement its own level of savings. Furthermore, the stimulus to this foreign investment can come either from abroad which would be the case if foreigners desired to invest their capital in the developing economy because of the high return available there; or the initiative might still come from the domestic entrepreneurs who, unable to obtain investable funds at home, seek these funds in foreign capital markets. Let us further assume that the "psychological limit" has been reached. In other words, inhabitants of the developing country are unwilling to increase the supply of domestic savings by further reductions in consumption. What will be the result when a new source of capital funds become available through foreign investment?

Since the level of domestic real savings is at a maximum, real investment cannot be increased unless foreign capital funds are made available. Thus the first effect of foreign investment in the developing country is to remove the barrier to capital accumulation which was imposed by the "psychological limit".

This inflow of capital funds when spent on capital accumulation will exert an expansionary influence on the economy. The favorable income effects associated with the increased investment will add still further to the inflationary pressure. The increase in real national income will depend on the availability of unemployed resources and factors of production; that is, on the closeness of the economy to the "physical limitation".[1] Real income will continue to rise until the unemployed resources and factors of production are absorbed into the productive process after which further increases will only reflect higher prices and the phenomenon of inflation.

However, when this point of full employment is reached and, if planned investment still exceeds planned savings (including foreign investment), then competition operating through the price mechanism will cause a reallocation of resources and factors of production from consumer industries to capital industries. The movement will be smooth with little structural unemployment if the factors of production and resources are characterized by some degree of mobility which will prevent 'bottlenecks' from developing. This process will aggravate the inflationary pressure because consumers with increased effective demand are unwilling to reduce consumption voluntarily and so they too contribute to the inflation. The supply of consumer goods will be reduced due to the withdrawal

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[1] Implicit in the analysis is the assumption that domestic credit expansion is at the limit imposed by the banks' reserve ratio. Otherwise, all the effects discussed above could develop from domestic credit expansion.

of resources from the consumer goods industries and this will manifest itself in rising retail and cost-of-living price indexes. The inflationary forces might be reduced considerably if the developing economy were allowed to increase imports for consumption. Such imports would be financed by the foreign exchange provided by the capital inflow. This process of inflation might continue unabated unless the government through its fiscal and monetary policies seeks to restore 'internal balance' to the economy. 'Internal balance' will consist of restoring stable equilibrium to the economy by the adoption of those fiscal and monetary policies which will curb the inflationary spiral. Such policies will consist of increased tax rates (both direct and indirect), restriction of credit through higher interest rates, deferred depreciation charges, etc. Thus we see that the process of capital accumulation and the consequent inflationary pressures have been arrested by the government's policy of internal balance.

Now let us turn to an examination of the effects of the imported capital on the economic development of the economy. These effects, for our purposes, can be divided into two broad categories: first, the effect on the internal economy (the internal effect) and secondly, the effect on the balance of payments (the external effect). The main internal effect of the inflow of capital from abroad has been to supplement the domestic savings devoted to economic development; that is, to remove the restrictions to economic development imposed by the psychological limitation. Thus the "primary expansion" beyond this limit is completely dependent upon the inflow of foreign

capital without which accumulation must cease. Now this primary expansion financed completely by foreign investment will cause, through the multiplier process, an increase in income which (increase) will be greater than the amount of foreign investment.[2] If we assume that the marginal propensity to save remains constant during this process of moving from one equilibrium to another, then the absolute level of savings will also increase thus raising the "psychological limitation" and thereby enabling the economy to contribute more to its own economic development.[3]

What conclusions can be drawn from the preceding analysis? Too much consideration is often given to the significance of the ratio of foreign to total investment in an economy. This ratio has been used to describe the extent to which an investment boom is financed by foreign investment. If the ratio is high, then it is argued that foreign investment has been the dominant factor in economic development. If, on the other hand, the ratio is low, it is argued that the boom has been financed mainly from domestic capital and that foreign investment is of little importance. Now the preceding analysis seems

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[2]Cf. fn. 1, p. 9.

[3]The assumption that the marginal propensity to save remains unchanged envisages the worst possible case. Empirical evidence suggests that the marginal propensity to save will rise with increased income. In other words, the savings function is not a straight line but a curve of increasing slope. The extent to which the marginal propensity to save will rise will limit the expansion of income since the multiplier is the reciprocal of the marginal propensity to save.

to cast some doubt on the significance of a low ratio of foreign to total investment. It was shown above that foreign investment not only supplements domestic savings but is also a potent force in raising the 'psychological limit' due to the favourable income effects associated with the increased expenditure of foreign funds. It is conceivable, therefore, that without foreign investment, economic development might be impaired considerably.

Throughout this paper, we have been assuming that the only investment taking place is in durable physical assets and furthermore, that all the foreign capital is being directed to this end. Clearly, this is not a true picture of reality but it is hoped that the problem at hand justified the assumption. At the beginning of the paper, it was shown that investment, besides expenditure on durable physical assets also consists of net changes in foreign assets held by the residents of the country and also of changes in inventories of stocks held by the business community. Now the latter two might account for a considerable part of total investment much of which have little effect on economic development. In fact, it might be said that net changes in inventories are dependent to a certain extent on investment in durable physical assets because this latter type of investment will, through the multiplier process, increase economic activity and the increased consumption will prompt the business community to increase their inventories. Investment in a positive trade balance will probably vary inversely with the level of foreign investment according to

orthodox theory although this is not always so and will be discussed later.

Now an over-all ratio of foreign to total investment is of limited value even if the ratio is concerned entirely with investment in durable physical assets. This is so because such expenditures can also be classified into several categories. If this is the case, then a ratio of foreign to total investment (i.e. all three types) will be of still less use in analysing the effects of foreign investment on economic development. The magnitude of the ratio will depend on all three types of investment; in other words, the greater is investment in inventories and a positive trade balance, the smaller is the ratio of foreign investment to total investment. This may cause some confusion. It is not possible to invest in a trade balance and, at the same time, be a net importer of capital since, if this were the case, the balance of payments could not possibly balance. What is meant, however, is that foreign investment in the developing economy takes the form of long-term portfolio and direct investment while investment in the trade balance is in the form of short-term capital movements such as the increase in the reserves of foreign exchange and gold which are invested in short-term paper in foreign exchange markets. The short-term capital movements perform the balancing function and enable the developing economy to have a surplus on current account and also to import long-term capital for development purposes. Of course, the short-term capital exports will be extremely large since the overall capital account,

on balance, must show a deficit if balance is to be maintained in the balance of payments. This possibility is not merely theoretical but applies quite well to the Canadian balance of payments in 1950. Now the ratio of foreign investment in durable physical assets, although limited in value, is of much greater significance as a guide in analysing the importance of foreign investment to economic development. For when we consider foreign investment in durable physical assets and total investment of the same sort, then the ratio between the two will be higher and the importance of foreign investment for capital accumulation can be understood more clearly.[4]

Even though the developing country is unable to import foreign goods, still the import of capital funds is of immense importance for economic development. One aspect of the importance has been considered above and now another possible consequence of equal importance will be examined and it is hoped that this latter consequence will add further proof to the contention that the ratio of foreign to total investment (in durable physical assets) is not too significant. The assumption appropriate to the following analysis is that neither the

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[4]We are assuming for the moment that the total amount of foreign investment consists of expenditure on durable physical assets and thereby contributes directly to the development of the economy. The assumption will be abandoned later in the analysis since it does not give a true picture of reality. Indeed a great amount of foreign capital is often of the short-term, speculative variety. Moreover foreign capital might be used for the purpose of purchasing sinking fund debentures which is of little value for economic development. Cf. Carl Iversen, opus cit., p. 56-7.

'psychological limit' nor the 'physical limit' has been reached, which might be due to the fact that domestic capitalists are conservative by nature and are unwilling to undertake any large-scale investment in projects which involve too much risk and therefore require speculative capital. This assumption and its rather arbitrary cause is not unrealistic but certainly seems to describe adequately much of Canadian economic history especially the earlier stages of that country's development.

Now since, by assumption, the 'physical limit' has not been reached, there are still many profitable outlets for investment in the development of natural resources; but, as assumed above, their development is characterized by some degree of speculation and risk. The initiative necessary for the development of these resources must come from foreign investors who respond favorably to the stimulus of the high rate of return offered by undeveloped resources. The burden associated with these risky ventures is absorbed by the foreign investors who are completely responsible for the initial development of some particular industry. The main effect of this initial and apparently profitable foreign investment will be to dispel the element of risk hitherto involved which has been the main factor preventing domestic investment in this project. The removal or the reduction of the element of risk will cause domestic capital to flow into this industry and this domestic capital will take two forms: part will be "complementary"; part will be "competitive".

By "competitive capital", we mean that some of the domestic

capital will flow into identical fields and the competition between the two will bid up the prices of those inputs necessary for the development of these natural resources. It seems justifiable to assume that this competitive domestic capital will form a relatively small proportion of the total domestic capital attracted to the new industry. On the contrary, it seems more likely that much of the domestic capital will join the foreign capital and the former's participation in the new venture will be more in the form of equity stock in the existing corporations rather than in the emergence of a large number of additional firms. The reason for this is that the entry of new firms into the industry will be impeded by two factors: (1) the amount of capital necessary to begin operations and (2) the extent to which institutional forces restrict freedom of entry. If the initial outlay is large, then entry might be free but not gratuitous. If political and other institutional forces restrict the availability of such things as mineral rights, patents, licenses, etc., then the freedom of new firms to enter the industry will be seriously curtailed. The extent to which these two factors limit the entry of new firms will determine the degree of competition for those factors of production necessary for the development of the new industry. If a large number of firms enter the industry then the higher prices of the factors of production will be caused more directly and the effect will be more easily discernible.

The problem must be raised regarding the cost conditions of the new industry; that is, whether costs are constant,

decreasing, or increasing. This will depend on three factors: (1) the degree of competition in the factor and commodity markets; (2) a. the availability of unemployed factors of production and b. the amount of excess capacity existing in complementary industries and (3) the stage of development of the economy as manifested "by the growth of knowledge and the progress of the arts (which) depend chiefly on the volume and diversity of production".[5] This third condition might be regarded as the position of the economy with respect to the historical, long-run average cost curve. These three forces may be considered as the main factors affecting the real cost conditions of an industry.[6]

Since the latter part of this paper will be concerned with an empirical problem (the first part is but an attempt to establish a theoretical framework which will be capable of statistical verification), it seems unwise to make too many strict assumptions the purpose of which is to facilitate the analysis but the effect of which is to remove the theoretical framework further from reality.[7] More specifically, the

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[5]Marshall, Alfred, Principles of Economics, London, 1952, p.220.

[6]By real costs, we do not mean costs in the sense of sacrifice (Marshall and Cairnes) but rather prices that have been deflated to a base period in order to overcome the difficulty raised by fluctuating price levels.

[7]Galbraith, J.K., American Capitalism - The Concept of Countervailing Power, Boston, 1952, Chapter IV.

assumption of perfect competition in the factor and commodity markets is unrealistic and without justification for an analysis which purports to describe reality. The fact that the great majority of industrial labour is unionized and thus monopolistic is too obvious; moreover, most product markets are monopolistic with few exceptions. Any economic analysis which does not recognize these facts is severely limited in value. In conformity with reality, therefore, the appropriate assumption to make is that the supply curve of labour is less than perfectly elastic. The elasticity of the supply curve will, vary to some extent with the quantity of unemployed labour; and even unemployed labour will not render the supply curve more elastic if the 'union shop' is prevalent. Thus the net effect of conditions prevailing in the labour market - especially during a period of post-war expansion and strong unions - will most probably be characterized by increasing costs.

What can be said about the amount of excess capacity existing in complementary industries? It seems fair to assume that in a period of intense economic activity, there will be little excess capacity and therefore increased production will entail increased costs and higher prices. This conclusion is reinforced by the fact that competition is definitely not perfect in the capital goods industries due, it seems, to the large-scale plant necessary for profitable and efficient operation. Furthermore, the capital goods industries most complementary with the developing industry will probably be

faced with an inelastic demand curve in conjunction with an inelastic supply curve so that an increased demand (due to a shift of the demand curve to the right) will cause prices to rise and this characteristic will be dominant even if the complementary industry is experiencing decreasing costs for the relevant range of output.

The first two factors affecting real cost conditions and which, in this specific case, contribute to increasing real costs, can be considered as the short run factors and may be said to characterize the non-historical, static, average-cost curve. They are called short-run factors because their effect is felt during a period when certain parameters such as productivity of labour can be assumed constant. It is the influence of these parametric constants which form the content of the third and final factor affecting real costs, that is, the level of development of the nation as manifested by "the growth of knowledge and the progress of the arts (which) depend chiefly on the volume (and diversity) of production". This factor can be considered as the basis of the long-run, historical average cost curve describing the effects on real costs of the secular development of the economy. Now it seems justifiable to assume that this historical average cost curve has been falling over time. This is particularly true of the present position of the Canadian economy; and, since this analysis is undertaken with regard to its application to Canadian conditions, the assumption is well-founded in reality.

Now the question to be raised is whether, in post-war Canada,

this third force affecting cost conditions is strong enough to offset the tendencies to increasing costs associated with the two short-run factors. It is contended here that the two short-run factors will be dominant and this for two reasons. In the first place, the historical conditions affecting costs operate slowly and their contribution in the short run to decreasing costs through increased productivity and technological innovation is very slight and almost negligible. In the second place, the influence of the monetary factors must be considered. The monetary factor will accentuate the effects of the short-run factors and may neutralize or even reverse the long-run tendency towards decreasing costs. In a period of economic expansion, credit will be expanded to the limit imposed by the banks' reserve ratio and, with an inflow of foreign capital, the amount of credit will be even greater owing to the effect of foreign investment on bank reserves.

From the preceding analysis, therefore, it follows that the intense economic activity associated with the high rate of investment will lead to higher costs and prices thereby aggravating the inflationary process. The consequent inflationary pressure (that is, the "internal effect") is substantially similar to the one which was produced when the economy was unable to import capital funds. Furthermore, the economic policy of "internal balance" will differ only slightly in method from the policy suggested in Chapter I. In the latter case, the solution of the problem will be more difficult since

the forces contributing to inflation are stronger(owing to the presence of foreign capital), still the difference between the two positions is one of degree and not of kind.

It has been argued above that the main effects of the inflow of capital has been the development of certain natural resources and that the peculiar characteristics (e.g. risk) of these projects precluded the possibility of their development by domestic capital. Thus the foreign entrepreneurs are the true "Schumpeterian innovators", and furthermore their contribution to the economic development of the nation cannot be measured by a mere ratio of foreign to total investment. Nor does the important influence of foreign investment end here. In the discussion of complementarity, that concept was used in the rather strict and orthodox fashion of regarding as complementary those industries which are technically essential to the exploitation of the natural resources whose development is being sought. It is possible, however, to think of other economic activities which, although not essential in a technical sort of way, still facilitate the development of the main project. This is particularly so in the case of newly discovered natural resources which might be situated in rather remote parts of the country where transportation, housing facilities, schools, the availability of power, etc. might be non-existent or at best very primitive. Now the development of these facilities requires a considerable amount of investment in durable physical assets. These projects may be financed by the government or by the private sector of the economy; some projects, (e.g. hydro

power) whose marginal private productivity is low but whose marginal social productivity is high must be financed by the government.[8] Nevertheless, these complementary or subsidiary projects, be they financed by the government or the private sector, still contribute to the economic development of the nation and are, therefore, of fundamental importance. This whole cumulative process is something which is not and cannot be revealed by a simple ratio. Even the investment in inventories can be and probably is influenced to some degree by the intense economic activity associated with the autonomous foreign investment.

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[8]Pigou, A.C., Economics of Welfare, London, 1950, p. 188-189.

CHAPTER 3

The Balance of Payments and the External Effect

In the two preceding chapters, we considered the effects of increased investment (i) without foreign investment and (ii) with the assumption that foreign funds but not foreign goods might be used to finance economic development through industrialization. This assumption (that is, that only foreign funds were available) was, to say the least, very unrealistic. As long as this assumption was maintained, no analysis of the external effect was possible because no economy can engage in external trade only on capital account. Indeed, the absence of an external effect would mean that the foreign investment is tantamount to domestic credit expansion without foreign investment. In order to analyse the 'external effect', it is, therefore, necessary to abandon this rather unrealistic assumption and thereby allow our hypothetical economy to enter into trade with other countries on both capital and current or merchandise account.

Any analysis of the effects of capital movements on the balance of international payments (that is, the external effect) necessitates a treatment of the mechanism of transfer. A satisfactory theory of the mechanism of transfer should explain the means by which 'purchasing power' or 'buying power' (as Iversen describes it) is transferred from one country to another. The treatment of this topic has played a prominent role in the study of international trade since the days of Ricardo and

Thornton.[1] Agreement does exist to some extent when the mechanism of transfer is studied on the assumption that the gold standard is operative but once this assumption is abandoned in favor of inconvertible paper standards, there is a conflict of opinion as to the mechanism of transfer. If international trade theory is to be of any practical significance, an adequate theory explaining the mechanism of transfer must be developed. It seems highly unrealistic to treat the matter under the assumption that the gold standard is still operative. Such is not the case and it is very unlikely that the gold standard will become anything more than a phenomenon of historic and academic interest.

One of the main reasons for the utter confusion which seems so prevalent as far as this topic is concerned is that the mechanism of transfer is such a complex affair. As Iversen ably points out, the mechanism of transfer "is a process, a dynamic evaluation constantly changing as time goes on, even if the capital flow is continued at a constant rate".[2] The difficulties have been accentuated by the fact that many economists have sought to develop deductive theories and, only after this, were the resultant theories subjected to inductive

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[1]Compare, for instance, Iversen's treatment with that of Haberler and Taussig; Ricardo's with Thornton's; or Keynes' with Ohlin's.

[2]Iversen, C., op. cit., p. 486.

verification. This does not mean to say that the theories were without reference to empirical data. This point might be made more clearly by way of example. Ricardo and Mill probably developed their highly deductive theories always keeping in mind the empirical data of their own period or previous historical periods. When an attempt is made to test these theories many years later, it is no great surprise that the deductive theories do not hold completely. It is highly unreasonable to assume that identical forces and influences are present in the two periods. Ricardo's or Thornton's theory of transfer might well have been the product of early 19th century England which is quite unlike 20th century Canada or Argentina.[3]

The conclusion to be drawn from the above discussion is that it is extremely difficult to develop an adequate theory of the mechanism of transfer under inconvertible paper since each case is, to some extent, unique owing to the varying and dynamic characteristics of economic phenomena. However, it is not impossible to develop a theory explaining the fundamentals of the transfer process. This chapter will consist, in part, of an attempt to develop such a basis for the theory of transfer in order that the balance of payments' difficulties associated

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[3]This statement might not be accepted too willingly by those who accept Professor Jacob Viner's verification of the classical theory of international trade. Viner, Jacob., Canada's Balance of International Indebtedness, 1900-1913, Cambridge, Mass. Although this is a scholarly work, still the criticism of Iversen is not without some justification.

with foreign investment might be more clearly understood. The method will consist of a synthesis of existing treatises on the subject rather than a thoroughly original deductive analysis.

As mentioned above, a theory describing the transfer process must explain how the purchasing power obtained from foreign borrowing is transferred from the lending country to the borrowing country. When a foreign loan is obtained, part of that loan might be spent in the lending country (or in any other country) and the goods so purchased will enter the capital-importing country as commodity imports. However, it is very probable that a large amount of the loan will be spent on the goods and services produced in the capital-importing country and it is this part of foreign investment which raises the difficulties and which necessitates a theory of the mechanism of transfer. In other words, the transfer mechanism becomes a problem only to the extent that part of the loan is not spent on imports either from the capital-exporting country or from any neutral country.[4] It might be pointed out here, that it is highly unlikely that capital movements are completely one way; that is, that the country importing capital does not also export capital. However, it is

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[4] "In the extreme case...if the addition to the means of payment (i.e. receipt of the loan) resulted in an equal additional expenditure on internationally traded commodities and the decrease in the means of payment (i.e. payment of the loan) in an equal decreased expenditure on such commodities, the disruption of international equilibrium would not occur." Cf. Yntema, T.O., A Mathematical Reformulation of the General Theory of International Trade, Chicago, 1932, p. 61.

the purchasing power associated with the balance of indebtedness which must be transferred to the borrowing country.[5]

Another point which has provoked much discussion has been the autonomous or equalizing nature of capital movements on which there is some difference of opinion. There does not seem to be any doubt that short-term capital movements except in cases of capital flight are of an equalizing nature but there are some economists - the most notable being Keynes - who have argued that the income account in the balance of payments is the 'independent variable' and that the capital account is the 'dependent variable'. The supporters of this thesis argue that even long-term capital movements adjust themselves to the balance of trade. As Keynes says: "Historically, the volume of foreign investment has tended, I think, to adjust itself - at least to a certain extent - to the balance of trade rather than the other way around".[6] Ohlin notes that, if by 'a certain extent' Keynes means 'a very small extent', then Keynes may be

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[5]One must be careful here lest confusion arise regarding the distinction between a country's balance of indebtedness and the total amount of foreign investment entering that country. Some writers and many public officials often conclude that, because the balance of indebtedness is small, the amount of foreign investment is negligible. The balance of indebtedness, in itself, is of no importance in measuring the significance of foreign investment and, because an economy is exporting a considerable amount of capital, it certainly does not follow that foreign investment is not important. The balance of indebtedness derives its importance from the fact that it indicates difficulties (past and present) which might arise in the balance of payments and indirectly affect the internal economy.

[6]Keynes, J.M., "The German Transfer Problem", Economic Journal, XXXIX, March, 1929.

right but this seems to be too liberal an interpretation of Keynes' writings on the subject. In any case, this view that the long-term capital account is the 'dependent variable' cannot be accepted as the general rule in international trade. Of course, there are instances where long-term capital movements are of an equalizing nature. This was the case of the Anglo-American Financial Agreement of 1945 involving a $3.75 billion loan from the United States to the United Kingdom.

The most important causes which might produce long-term capital movements are described by Meade. Of the seven causes given by him, only one - and in a small way at that - can possibly be due to variations in the current account. Although Meade's causes are not purely autonomous in the sense that they are not induced by an economic factor, still they are autonomous in the sense that the incentives leading to the transfer of capital do not originate in the balance of payments although the balance of payments might very well be affected (indirectly) by these causes.[7]

There might be certain cases in which the long-term capital account would be the 'dependent variable'. For a short period this might have been the case with the Canadian balance of payments just before the Canadian dollar was freed of all controls. It was generally believed - especially by American speculators - that the Canadian dollar was under-valued

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[7]Meade, J.E., The Theory of International Economic Policy Vol.1 The Balance of Payments, London, 1951, p. 61-62.

and this caused an inflow of American capital which, to a large extent, was speculative capital taking advantage of the discount on Canadian securities due to the ten per cent premium on American exchange. Now if the 'inherent' strength of the Canadian dollar was due to balance of payments factors then the inflow of American capital might have been more closely dependent on the balance of trade. However, it seems that even here there were many factors external to the balance of payments (internal to the economy) which helped to strengthen the Canadian dollar. Most notable among these would be the unprecedented development of Canadian resources which is a purely internal factor. Furthermore, even though the investment was in long-term securities, the flow of capital was essentially short-term, since the securities were not new ones and the intention was to hold them for a short time only. Thus even where conditions are most favourable for the capital account (long-term) to adjust itself to the current account, there are always other factors present which militate against this assumption. It is contrary to the facts to advocate such a thesis and we are, therefore, left with the orthodox theory which maintains that long-term capital movements are in the main autonomous in the sense that they are not dependent on the balance of trade.

To return to the problem associated with the mechanism of transfer. At first, it is necessary to make a rather simple but extremely important distinction between the gold standard and an inconvertible paper standard. Under the gold standard,

the flexibility of the exchange rate was confined within the limits of 'gold points' and the necessary adjustment to a disturbance to the equilibrium operated mainly through changes in relative prices. However, the surprising rapidity and smoothness of the adjustment was due also to the income effects induced by price changes. The Classical School did not attach sufficient importance to the income effect. The classical theory may be shown by means of a simple mathematical formula. Let R be the exchange rate of currency A in terms of currency B; let P_a and P_b be the general price levels in countries A and B respectively. Then $P_a = P_b.R.k$ where k represents the difference between the value of money in A and B respectively. Thus $R = \frac{P_a}{P_b.k}$. Now under the gold standard R is fixed within the 'gold points'. Therefore, it is largely variations in the ratio $\frac{P_a}{P_b}$ which restore equilibrium. However, under inconvertible paper, R is free to fluctuate widely while $\frac{P_a}{P_b}$ will remain relatively constant.

Thus under inconvertible paper, fluctuations in exchange rates are the main factors tending to restore equilibrium.[8] The variations in exchange rates are still price changes but they derive further importance from the income changes which they induce. The disturbance to equilibrium with which we are concerned takes the form of capital transfers. In the first

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[8]Haberler, G., The Theory of International Trade, New York, 1936, p. 35, 36.

place, there is the monetary transfer which must take place and, secondly, there is the real transfer which must be completed before equilibrium is restored. As mentioned above, the monetary transfer arises when part of the loan is spent in the capital-importing country. On this point, Iversen writes as follows: "If borrowed capital is spent abroad, then no monetary buying power is transferred; no foreign transactions are involved; the goods move at once without critically disturbing the equilibrium in the foreign exchange market".[9]

A most important characteristic of the balance of payments is that it is always in balance. In other words, total credits must always equal total debits so that the over-all balance is zero.[10] However, in no way can this necessary day-to-day balance be identified with equilibrium in the balance of payments. Balance is a necessary but not sufficient condition for equilibrium and the balancing or equalizing items must be of a special type if equilibrium is to be maintained. The balance of payments can be considered to be in equilibrium when the necessary balance is achieved without net movements (other than seasonal) in the short-term capital account which includes monetary gold movements. It should also be noted that this external balance must not be achieved at the expense of serious unemployment or hyper-inflation. Furthermore, the

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[9] Iversen, op. cit.

[10] In this respect, the balance of payments resembles double-entry book-keeping.

balance must not be maintained through the undue restriction of trade or through exchange control.

The initial effect of large capital transfers on the balance of payments is to disturb equilibrium or, if equilibrium did not obtain, the capital transfers will aggravate the existing disequilibrium.[11] When purchasing power has to be transferred to the borrowing country, then, as mentioned above, two aspects of this transfer must be completed before equilibrium will be restored. First, the monetary transfer must be completed and secondly, the real transfer must be completed since all capital must eventually enter the capital-importing country in the form of goods and/or services. Under the gold standard, the two main media by which buying power was transferred were: (i) the shipment of gold to the borrowing country and (ii) the granting of short-term credits by the borrowing to the lending country. Iversen says that "these were the means by which the immediate day-to-day equilibrium in the foreign exchange market was maintained in the face of disturbances upsetting the previous equilibrium in the balance of payments".[12] The objection to this statement is based on what seems to be a confusion in Iversen's exposition. The fact is that Iversen seems to identify equilibrium with balance which, as shown

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[11] If however, the disequilibrium was caused by an import surplus which led to a loss of foreign exchange reserves, then the foreign investment might restore equilibrium.

[12] Iversen, op. cit., p. 313.

above, is fallacious. Equilibrium is destroyed by the transfer of purchasing power and it is restored (albeit temporarily) only when there develops on current account a deficit equal to the rate of foreign borrowing for it is the deficit on current account which permits the real transfer to take place. One of the criteria of equilibrium is that the necessary balance is not achieved through net movements on short-term capital account. There is substantial agreement among economists that the transfer of purchasing power must ultimately involve a transfer of goods and services which is accomplished only when the deficit appears in the current account.

Under inconvertible paper the mechanism of transfer is not completely unlike the mechanism under the gold standard. One criterion is that the necessary balance must be maintained and that equilibrium will be obtained at the end of the mechanism of transfer; that is, when the deficit develops. The order of events is as follows: (i) there is a creation of short-term bankers' loans made by the borrowing to the lending country; (ii) shipments of such securities as have an international market; (iii) shipments of commodities (notably gold).[13] The most important factor maintaining balance (but not equilibrium) is the creation of short-term bankers' loans made by the borrowing to the lending country. It is this factor which

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[13]Iversen emphasizes the fact that gold moves under inconvertible paper as a commodity and not as a monetary medium. This is not necessarily so for even under inconvertible paper, gold is accepted as a medium of payment in international transactions.

is completely ignored by Taussig in his exposition of the mechanism of transfer under inconvertible paper. Assuming that the United States is to borrow from England an amount equal to twenty-five per cent "of the amount which British importers had previously been paying to Americans (remitting to New York) for merchandise bought", Taussig concludes that the price of dollars in sterling will "rise exactly in proportion to the increased quantity of sterling offered".[14]

Unfortunately, the matter is not as simple as Taussig would have us believe. Completely ignoring the possibility of short-term credit, Taussig must argue that the exchange rate should vary to such an extent; but short-term credit granted by the borrowing country to the lending country involves a demand for the currency of the lending country and, therefore, the rate will not vary as much as it would have had it not been for the short-term credit transactions. These short-term loans, while maintaining balance in the balance of payments, also serve the purpose of postponing the real transfer which must take place before equilibrium is restored. The capital-importing country is enabled to build up its holdings of foreign exchange reserves and also of gold. The short-term loans are created by whichever agency (either the banking system or the central bank). In the period 1900-13 studied by Professor Jacob Viner,

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[14]Taussig, F.W., International Trade, New York, 1936, p. 34 ff.

there was a great increase in the outside reserves of Canadian banks (held mainly in New York).[15] Now this increase in outside reserves is nothing more than an extension of short-term credit by the borrowing country to the lending country. The reason that gold did not play an important role in the mechanism of adjustment was due for the most part to the fact that the adjustment was accomplished mainly through the creation of short-term credit. Thus, even under the gold standard, do short-term capital movements play an important role in the mechanism of transfer. Equilibrium is maintained when the real transfer has taken place; that is, when a deficit on current account develops. When this happens, the short-term loans will tend to be reduced in order to provide the foreign exchange necessary to pay for the deficit. This is precisely what happened between 1909 and 1913 although the reduction in outside reserves was also the result "both of greater purchases abroad than were warranted by the volume of borrowings and of the withdrawal into Canada of part of the outside funds for use as a basis of credit expansion in Canada."[16] The short-term capital movements arise mainly from the desire of the investors in the lending country to spend part of their investment in the borrowing country. The banking system of the borrowing country, by buying the currency of the capital-

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[15] Viner, op. cit., Chapter VIII.

[16] Ibid., Chapter VIII.

exporting country, enables the investors to secure bank deposits in the borrowing country. The result of this process is that bank deposits are increased in the borrowing country (provided, of course, that the monetary authority is not following a highly deflationary policy).

The real transfer (that is, the deficit on current account) was accomplished under the gold standard by opposite movements in sectional price levels. This theory stated that prices would rise in the capital-importing country due to the inflow of gold and that prices would fall in the capital-exporting country due to the loss of gold. This process will affect the prices of internationally traded commodities as well as purely domestic commodities causing shifts in demand which, it is argued, will restore equilibrium by enabling the real transfer to be accomplished. The borrowing country will experience higher prices and incomes due to the increased economic activity associated with the increased investment while, it is argued, the lending country will experience the opposite; that is, deflationary forces will develop. This analysis of the process of adjustment is extremely oversimplified. General equilibrium theory would find it unacceptable. As Mosak writes: "An autonomous increase in capital exports is likely to represent an increase in the demand for foreign securities in terms of money rather than in terms of commodities. The direct effect of the capital export is therefore likely to be limited to the markets for securities - i.e. domestic interest rates are likely to rise. This will tend to depress the demand for durable

goods in the lending country, but,...the effect of a rise in the interest rates on the demand for goods is likely to be small...the effect of the capital movements will be inflationary on both the lending country and the borrowing country."[17] It is more likely, however, that the inflation will proceed at a more rapid rate in the borrowing country than in the lending country and therefore relative prices will be higher in the former than in the latter. If the process of adjustment is to work, it is necessary that prices be flexible and that the relevant elasticities of excess demand and excess supply be of such magnitudes that exchange rate variation will be effective in helping to restore equilibrium.

It is too unrealistic to assume that prices are, in general, highly flexible. The prevalence of monopoly, trade unionism and government interference in the economic system has caused most prices to be quite rigid especially as far as downward movements are concerned. If prices are rigid, the equilibrating mechanism must operate through variations in the exchange rate and through induced income flows. Partly because of this rigidity in prices and also because of market forces (i.e. an excess supply of the currency of the capital-exporting country) there will be a strong tendency for the currency of

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[17] Mosak, Jacob L., General Equilibrium Theory in International Trade, Bloomington, Ind., 1944, p. 172. The demand for capital for investment in fixed plant and equipment might be interest-inelastic but it would seem that the demand for capital for investment in inventories and in other short-term projects is interest-elastic.

the capital-importing country to appreciate in terms of the capital-exporting country. This will, to some extent, overcome the difficulties associated with rigid prices.[18] Of equal and perhaps greater importance for the restoration of equilibrium is the government's economic policy. Under classical economics, the government was assumed to be a neutral observer as far as the economy was concerned; this assumption was well founded in fact. In present conditions, however, it would be great folly to pursue any economic analysis without considering the role played by the government in the economic system. A government which seeks to maintain employment and income at high levels through inflation is partially responsible for the chronic disequilibrium characteristic of so many economies at the present time. The greater the degree to which the economy is controlled by arbitrary decisions often motivated by vested interests the more difficult becomes the attainment of equilibrium both internally and externally and the result is often a wasteful misallocation of resources.

When internal prices and incomes fail to move in the necessary direction, the burden of restoring equilibrium falls upon a flexible exchange rate. The currency of the capital-importing country will appreciate and the variation in the exchange rate, by affecting the prices of all internationally

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[18]That variable exchange rates form the main market force for restoring equilibrium in the face of price rigidity is one of the main economic factors leading to the breakdown of the gold standard.

traded goods, will help overcome the difficulties caused by rigid prices. However, the effectiveness of exchange rate variation (appreciation or depreciation) as a means for restoring equilibrium will depend on the price and income elasticities of excess demand and excess supply. Up until recently, it was generally assumed by economists that elasticities of excess demand were substantially above unity so that exchange rate variation would cause the necessary changes in earnings of foreign exchange and thereby restore equilibrium. In spite of the conclusiveness of the above argument, economists continued to study the problem of elasticities not making any new discoveries but rather qualifying and refining their analysis. Economists studied more intensely the limiting cases in which exchange rate variation would be effective. If the elasticity of demand for exports from A is greater than unity, then A's balance of payments will be improved through depreciation, and, if less than unity, the result will be a worsening of A's position for there will be an increase in imports more than proportionate to the increase in exports thus leading to a loss of foreign exchange. When the numerical sum of the elasticity of demand for exports and the elasticity of demand for imports is unity, no change will take place in the foreign exchange earnings of A. Throughout the literature on the subject, there was occasional reference to the actual magnitudes of the elasticities but the preponderance of opinion was that the elasticities were quite high although no one had yet attempted to discover their 'true' values by inductive

analysis.[20]

Therefore when numerous articles[21] began to appear which contradicted the assumption of high elasticities of demand, the basis of much orthodox theory became quite shaky and this criticism of the deductive theory was fortified by the statistical and mathematical conclusiveness in which the statistician and econometrician find so much delight. That the various elasticities of demand in international trade had been proven to be much lower than the classical and neo-classical school had imagined seriously undermined the theoretical basis of exchange rate variation as a means of restoring equilibrium to the balance of payments. If these measurements were correct, the depreciation of currencies during the inter-war period could not have possibly alleviated balance of payments' difficulties.

Furthermore, since the statistical calculations of the various elasticities were claimed to be applicable to the post-war period of world trade, the depreciation of the pound sterling could not have helped offset the dollar shortage. This empirical

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[20]For some of the literature on elasticities in foreign trade, cf. Lerner, Abba P., The Economics of Control, New York, 1944, Chapter 28; Robinson, Joan, "The Foreign Exchanges", Essays in the Theory of Employment, Oxford, 1947; and Machlup, Fritz, "The Theory of Foreign Exchanges", Economica, VI, 1939, 1940.

[21]Chang, T.-C., Cyclical Movements in the Balance of Payments, Cambridge, 1951; also Tinbergen, J., "Some Measurements of Elasticities of Substitution", XXVIII, 1946.

analysis did not criticize orthodox theory as being illogical but, by questioning the assumptions of high elasticities of demand, its relevance to reality was seriously impaired.

Thus the problem becomes clear and can be stated in the following manner: on the one hand there is the deductive theory which assumes rather high elasticities and takes the stand that depreciation is an effective weapon for curing balance of payments problems. On the other hand, there are the empirical, inductive studies of the statistician and econometrician who, having 'proved' the real elasticities to be low, now argue that exchange rate depreciation cannot be effective in restoring equilibrium to the balance of payments. Indeed their results seem to imply that depreciation might aggravate the difficulties. The problem is a real one and must be solved if economic theory is to have any significance for policy and the fact that so many countries are experiencing balance of payments' difficulty gives to the problem an air of urgency.

An attempt will be made to show that the inductive, empirical type of analysis is not particularly well adapted to the problem of elasticities in foreign trade because the results obtained by such analysis are not as accurate as their authors would have us believe.

Essentially, the method of calculating the relevant elasticities consists of the analysis of time series of real national income, export prices and quantities of exports and imports. Furthermore, in order to calculate the effect of substitution it is necessary to know the prices of goods which

might compete with imports for the purchasing power of consumers. Thus there are three determinants of the elasticities which give us three elasticities: (i) the price elasticity of demand; (ii) the income elasticity of demand; (iii) the elasticity of substitution. These three elasticities are calculated by the statistical device known as multiple correlation which consists of the measurements of the relationship or association between a dependent variable and two or more independent variables. The partial correlation equation with the trend of all these series eliminated is of the form

$$\log x_1 = b_{12.34}\log x_2 - b_{13.24}\log x_3 + b_{14.23}\log x_3.$$

Here, $b_{12.34}$, $b_{13.24}$, $b_{14.23}$, give respectively the income elasticity the relative price elasticity and export elasticity of demand for imports of a country. Chang then points out that the whole error variation is concentrated in the dependent variable and that "the estimates are not the best estimates of the true structural relationships existing in the data"; he then suggests "that the error is probably not large; but the method is simpler".[22]

It is not proposed to question the validity of the statistical method employed by Chang. Any criticism of methodology should come from the statistician. But an attempt will be made to learn whether Chang and others are justified in claiming that their results give the 'true' elasticities and

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[22]Chang, op. cit., p. 41.

the contention is that the results are not reliable and, in fact, are misleading.

The problem of measuring demand elasticities is not a new one. Most of us are familiar with Henry Schultz' work on this subject.[23] The most fundamental difficulty is that the demand function is considered to be a function covering a stationary period of time, that is, a length of time in which the parameters do not change. This certainly was a serious obstacle to Schultz in studying a closed economic system and the difficulty takes on much greater significance when we come to its study in international trade where the complex issues determining demand are so variable between nations.

We can study the significance of the curve fitted to the scatter diagram to see whether the points obtained from the historical price and quantity data fall along the demand curve.[24] This is not so because there is not only a demand relation but also a relation between prices and the amount producers are willing to supply. For instance, if the amount demanded depended solely on prices while the amounts supplied depended on one or more independent variables, then the points would fall along the demand curve. Conversely, if the amount demanded depended on one or more independent variables while

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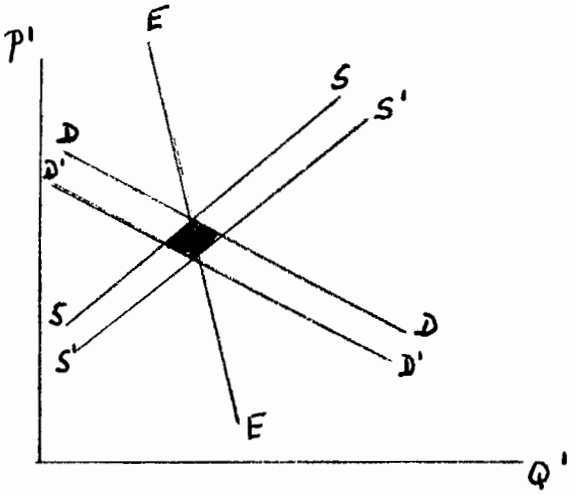
[23]Schultz, Henry, The Theory and Measurement of Demand, Chicago, 1938.

[24]Orcutt, Guy H., "Price Elasticities in International Trade", Review of Economics and Statistics, XXXII, May, 1950.

supply depended solely on price, then the line fitted to the scatter would give us a supply curve. If both supply and demand depended on more than one independent variable, the resulting points would have little if any significance. The period analysed by Chang is from 1924 to 1938, a period of fourteen years consisting of an unprecedented boom and depression; there are many indications to show that this period was far from normal. It is fair to assume that during these years there was more than one variable - probably many non-economic variables - which influenced both supply and demand. From this difficulty, it is easy to see why Schultz limited his attempts to the estimation of demand elasticities of American agricultural commodities for, because of the large part played by the weather, he could be somewhat assured that the historical price and quantity variations were due to shifts in the supply schedule.

This criticism is somewhat impaired by the introduction of income and its influence on imports and, in any case, we have still not shown that the estimated elasticities are too low. To do this, let us plot that part of quantity variation, Q^1, not explainable by income against that part of price variation, P^1, not explainable by income. This is shown by Fig. 1.



It can be assumed that during the inter-war period the demand schedule shifted up and down - say between the limits imposed by DD and D_1D_1 - and let us also assume that the supply schedule shifted between the limits imposed by SS and S_1S_1. Thus during the inter-war period, the intersections of the shifting demand and supply schedules will fall within the enclosed parallelogram. It is precisely these points which will be given by the historical price and quantity series. Furthermore, if we fit a line, EE, to these points in such a way as to minimize the sums of the squares of deviations in a horizontal direction, we then have a demand schedule steeper than the slope of the 'true' demand curve.

"The position, then, is that any world-wide shifts in demand or in technology will cause demand and supply schedules for imports to shift up and down together, and so make misleading even the very limited information that might have been relevant. To predict the effect of non-competitive depreciation we need to know the true demand schedules, since presumably only the supply schedule will be shifted by depreciation. However, over the historical period used both the supply and demand schedules must have shifted and they most likely shifted up and down together. Because of this our estimated elasticities of demand for imports are probably much lower than the true values and so far as this evidence goes we would not even be justified in saying that the true values were less than infinity, however unrealistic such a figure might be on

other grounds."[25]

The validity of this method depends on the strength of the assumption that demand and supply, during the period under study, shifted in the same direction. If this assumption is untenable, the analysis breaks down for if demand and supply shifted in different directions, then the curve fitted to the points of intersection generated by the shifts might be more elastic than the EE curve. Let us consider two very large trading areas, say the dollar and sterling areas. It is not unfair to assume that in both these areas, economic trends were substantially alike. For example, a rise or fall in the demand for certain types of commodities in the sterling area was probably matched by a corresponding rise or fall in the demand for similar commodities in the dollar area. Now if one area, say the sterling area, imports large quantities of this commodity from the dollar area, then the dollar area, faced with an increased foreign and domestic demand, will experience a rise in the supply schedule of the commodity. Thus demand and supply schedules have shifted in the same direction. This is probably the case with most manufactured goods and certain types of raw materials such as coal and ores.

In any statistical analysis of time series, there are always present certain errors and bias due to errors of observation and such errors will, in any case, impair the reliability

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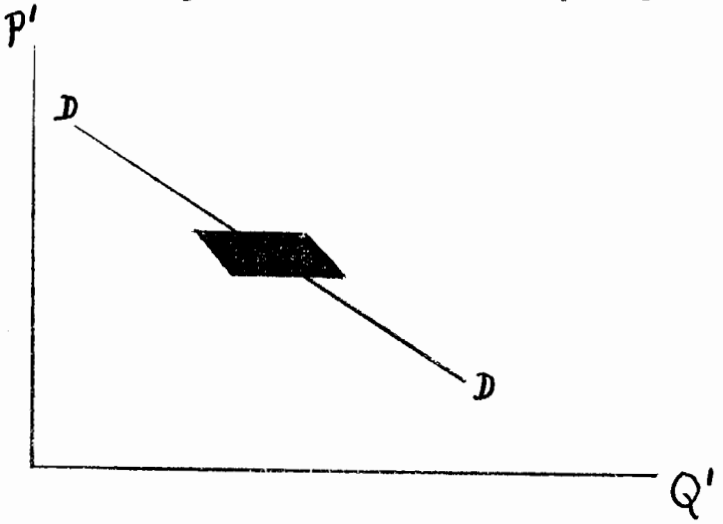
[25] Ibid., p. 123.

of the resultant estimates. Not only are these errors present owing to the falsification and misclassification of data, but there is the possibility that certain types of error are cumulative and, towards the end of the period under study, their cumulative effect might invalidate any reliability claimed for the estimates. These errors certainly force us to question the accuracy of the elasticities and Mr. Orcutt has shown that the errors might well have resulted in substantial under-estimates of the elasticities. "If there were no errors in the price variable but only in the quantity variable, then the situation might be illustrated by Fig. 2.



Here DD represents the line along which the true points would lie. Since the observed points are assumed to be correct, each observed point will be the same distance up from the Q_1 axis as the corresponding true point on the line DD. On the other hand, the observed quantities are assumed to be in error, so the observational points will be scattered in a horizontal direction about the line and would fall in some such parallelogram as shown in the diagram. In this case,

fitting a line so as to minimize the sums of the squares of deviation of the points from the line would result in obtaining an unbiased estimate of the line DD. The estimate would be subject to a wide margin of error with only twenty observations but the line obtained would at least be just as likely to be too steep as too flat."[26]

Furthermore, because we dealt with total elasticities for all imports, it seems that the estimated elasticities have been substantially lower owing to the presence of different classes of exports. For instance, we expect raw material and agricultural prices to have low elasticities. Since these price changes were associated with small quantity variations, the estimated price elasticities of all imports might be low. Another difficulty and obvious source of error is that current quantity variations are associated with current prices with no allowance made for lags. Now in the long run, the price elasticity of supply for domestic competitors will be quite high because of the chance to readjust production to meet the new situation. Since the demand for imports will depend considerably on the price of domestic substitutes, we can expect the demand for imports to be quite elastic in the long run. The argument applies to foreign substitutes as well as to domestic substitutes.

At one point, Chang seems to imply that trade between

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[26] Ibid., p. 124.

one nation and the rest of the world is, in a way, fixed and rigid and, because of this inflexibility, substitution between markets will be substantially reduced thus contributing to low elasticities of demand. However, this is true only in the case where price changes are relatively small and the costs of shifting from one market to another are not covered by the expected price variation. Thus for small price changes, the price elasticities will be much smaller, while for large changes, the elasticities will be larger.

What can be said about the usefulness of this inductive analysis even if it were assumed to be correct? The measurements of elasticities in foreign trade and the laborious work entailed in that task have not been undertaken solely that we might know more about the inter-war period. Rather, I am sure, were they specifically studied so that the results might serve as a guide to present and future economic policy.

However are the results of these studies really applicable to the present day? The inter-war period seems to have been a period unique in economic history - especially with regard to international trade. Are we not stretching the imagination a bit too far in assuming that the demand for imports depended solely on incomes and prices? Undoubtedly, these are the main determinants; but there are a multitude of other factors which operated - so to speak - behind the scenes, such as: technological change, changes in the distribution of income both in one country and in the world, changes in tastes, etc., all of which seriously impair the validities of elasticities calculated

for a fourteen-year period. The various restrictions on trade imposed by tariffs, quotas and embargoes seem to give the problem of elasticity measurement an air of futility. Certainly, in calculating the elasticities of world demand for exports, Chang recognized the problem of trade restrictions and overcame this obstacle by simply ignoring it.[27]

It cannot be considered too presumptuous if we assume that the demand for a single country's exports is quite elastic because the demand schedule for the product of an individual producer has greater price elasticity than the aggregate demand.[28] Furthermore, the demand for imports is usually a demand for products which are either produced domestically or at least have close substitutes which are so produced.[29] This is particularly true if one is considering depreciation of most of the non-dollar area versus the dollar area, since each group is large and very diverse and imports are usually small relative to the domestic production of the same products or of close substitutes.

So far this analysis of elasticities has dealt with the 'mechanical' difficulties in measuring the elasticities of

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[27]Chang, op. cit., p. 49.

[28]This, of course, assumes that the country is a relatively small one.

[29]This assumes that the country is relatively large.

demand in foreign trade. Any value, which these studies might have, derives only from their degree of applicability and usefulness in the formulation of international economic policy. If the estimated elasticities cannot help us in this respect, they have value only because they help us to have a better understanding of the inter-war period; thus their value is in economic history and not in the realm of economic theory which should form the foundation of any economic policy.

It might be worthwhile to note that most empirical studies are a product of their environment and, by abstracting from that environment, the usefulness might be seriously undermined. This seems to be one of the chief criticisms against the usefulness of the estimated elasticities. They have been calculated for a special period and, if they are to have any relevance for current economic problems, we must assume that present conditions have not undergone any fundamental changes. To accept such an assumption is unrealistic and not justified in fact. Most certainly the parameters have changed owing to technological innovation and to the other factors mentioned above. Furthermore, it is not improbable that the relative importance of the independent variables, that is, price and income, have also shifted.

It is not too presumptuous to suppose that implicit in Chang's work are certain directives for international economic policy - the most essential being that, because elasticities are low, exchange depreciation is not an effective means for restoring equilibrium to the balance of payments. It has been

shown that the inductive analysis by which low elasticities were calculated was liable to serious criticism. Another point which must be raised is that regarding the 'critical' value; for, if the 'critical' value[30] is not correct, even low elasticities of demand will not necessarily mean that exchange rate variation is ineffective.

The theorem of the critical value rests on the assumption that elasticities of supply are infinite. That is, its supporters assume that the foreign prices of imported goods remain unchanged after changes in the volume of imports and exports. As Machlup says: "The theorem of the critical value of the demand elasticities in international trade says nothing about the elasticities of supply of the goods traded. But it is logically impossible to 'neglect' the supply elasticities... The theorem of the critical value refers to demand elasticities which are numerically below unity, indeed so much so that the sum of the two elasticities is said to be unity in the borderline case between 'normal' and 'perverse' effects. But since this borderline case was deduced from assumptions which included infinite supply elasticities, a correct critical value of demand elasticities for more realistic conditions, that is, for situations with lower supply elasticities, must lie below unity".[31]

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[30] I.e. that the sum of the foreign elasticity of demand for imports and the domestic demand for imports is unity.

[31] Machlup, Fritz, "Elasticity Pessimism in International Trade", Economia Internazionale, 1950, p. 123.

It is common knowledge in economics that primary products (both agricultural and mineral) which form a considerable proportion of world trade are definitely produced under conditions of increasing costs (that is, the elasticity of supply is less than infinity). It is not possible, however, to say the same thing about manufactured commodities where, because of the technological conditions of production, decreasing costs might prevail. But if there is any degree of monopoly in the production of these commodities, the domestic price will not fall with increased output which is the same thing as having a low elasticity of supply.

CHAPTER 4

Balance of Payments Problems and Economic Development

In this chapter, we propose to consider the general effect of foreign investment on the internal conditions of the capital-importing economy. An attempt will also be made to discover some of the structural changes which might occur in the balance of international payments of the borrowing country owing to the types of industry into which the foreign investment has gone. Most of the analysis in the preceding chapters was pursued under extremely unrealistic assumptions. These assumptions will be dropped for the remainder of the analysis, and the capital-importing economy will now be able to import both foreign funds and capital goods from abroad.

In the event of an investment boom in an economy attempting to become more industrialized, foreign investment is of tremendous importance in enabling the economy to develop beyond the limits imposed by the psychological and physical limits. We have already discussed the manner in which the import of capital funds helps to overcome the obstacles imposed by the psychological limit and the effects of this on general economic conditions. However, it was pointed out that, as long as the economy could not import capital goods, there would be a strong tendency to inflation because of the strain on resources and on the factors of production. The ability to import capital equipment, consumer goods, and services also enables the real transfer to be completed. However, the importance of importing on current account is derived not so much from its effect in facilitating

the real transfer as from its effect in helping to suppress the inflationary forces associated with the investment boom.

It is common to speak of any 'leakage' from the economic system as deflationary while any 'injection' is usually considered to be inflationary. Expenditure on the goods and services of other countries is definitely a leakage and is, therefore, deflationary. Thus imports in general are an important factor enabling the economic development of the nation to continue without the necessity of 'forced savings' through hyper-inflation, and, during the period of economic expansion, imports should be considered in this light. An economy that is experiencing an investment boom, whether through foreign investment or through domestic investment, should be allowed, to some extent, to develop a 'relative deficit' in order to maintain internal stability in the economy.[1] This relative deficit should develop in the expanding country through higher prices and higher incomes depending, of course, on the magnitude of the marginal propensity to import.

There is always the danger, however, that the government, through its economic policy, might attempt to prevent the development of a relative deficit, probably because of some superstitious and unjustified fear of anything deflationary.

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[1]By a 'relative deficit', I mean that if, for instance, a country usually had a surplus on current account, then, in the event of an investment boom, this surplus should become smaller. If such a country were historically a deficit country, the deficit should become larger during the investment boom.

This, of course, would be a grave mistake for it would not only aggravate the strong tendencies to inflation but it would also prevent the rest of the world from sharing the benefits of economic development through increased exports to the countries enjoying the investment boom. Thus we see that such a policy would aggravate the disequilibrium in the developing economy with little, if any, compensation to the rest of the world. Not only would such a policy be harmful as far as internal balance is concerned but it would seriously affect the external balance of the developing country; for, in order to maintain the relative surplus, it would be necessary for the authorities to peg the exchange rate at a level lower than the one which would maintain both internal and external balance. Such a policy would not only destroy equilibrium in the balance of payments but it would aggravate internal disequilibrium by permitting strong inflationary forces to develop.

There are some qualifications to the above analysis, the most important of which is concerned with the general health of international trade during the development period. If, as is the case at present, there is inconvertibility of some of the key currencies, a developing economy may be forced to accept a policy that would seek to prevent the relative deficit from occurring. The reason might well be that the economy experiencing the investment boom will not have the necessary reserves of foreign exchange and gold necessary to finance the deficit - especially if the foreign investment did not provide sufficient funds. However, this problem would not arise if large-scale

imports of capital were occurring.

In the forgoing analysis it was mentioned that imports are deflationary. However, some economists have argued that it is possible to vizualize cases in which this is not true but the opposite holds; in other words, it is possible to think of certain types of imports as being inflationary. Often in a developing economy, it is argued that there are certain investment projects, the initiation of which necessitates the import of certain essential inputs and without these highly essential materials the project could not be developed. For instance, the construction of a plant might require a specific type of machinery or type of steel which can only be obtained from a foreign country. Once this is obtained, the project may then require labour and other domestic resources. As A.O. Hirschman states: "In the short run... imports can exert, paradoxically, an inflationary effect on the recipient countries. This is true, in particular, when the net imports, because of their 'bottleneck' nature, permit the use of large quantities of hitherto unused domestic labor and raw materials in construction and investment activities while individual savings are still at very low levels. In fully employed economies additional investment resulting from 'reconstruction imports' will attract already employed domestic factors of production and will therefore result in an upward pressure on wages and prices".[2] Doctor Hirschman concludes,

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[2]Hirschman, A.O., "Disinflation, Discrimination and the Dollar Shortage", American Economic Review, December, 1948, p. 887.

therefore, that in some special circumstances imports are inflationary. However, this conclusion seems to be based on the logical error of identifying the decision to invest with the decision (or necessity) to import. It is the decision to invest and not the decision to import which exerts the inflationary pressure on the economy. Expenditures on imports are, unequivocally, a leakage from the economy and therefore, by definition are deflationary. In the special case envisaged by Doctor Hirschman, it so happens that the inflationary effects associated with the decision to invest are stronger than the deflationary effects associated with the need to import and thereby cause a net inflationary effect. It is logically incorrect to impute this net inflationary effect to the expenditure on imports.

The ability to import on current account, therefore, is of tremendous importance in enabling the developing economy to expand still further. Not only does the ability to import enable the economy to continue its development with more stability but, of equal and perhaps greater importance, it enables the expanding economy to purchase necessary capital equipment wherever that equipment is most cheaply produced, thus taking full advantage of the international division of labour. This is actually the antithesis of the attempt to achieve economic self-sufficiency, which always results in a misallocation of resources and a consequent fall in real income. Furthermore, through foreign trade, expansion is more likely to be balanced in most sectors of the economy, thus helping to avoid the structural disequilibrium associated with 'forced savings' and monetary

inflation.

This, of course, does not mean that multilateral trade is neutral in its inflationary or deflationary effect on the developing economy. Indeed, the investment program, whether financed domestically or from abroad, will eventually be inflationary if it is superimposed upon an economy which is at or near full employment. The point to be made, however, is that the consequent inflation will not be of the sort envisaged by the Hayekian explanation of the upswing of the business cycle. In this latter case, there is complete structural disequilibrium resulting from extreme changes in the roundaboutness of production. It is the contention here that the economy would be more liable to such a plight if an exceptionally high rate of industrialization were attempted without the restraining and balancing elements which come into play when foreign trade is an important factor in economic development.

Having discussed some of the general effects of large-scale foreign and domestic investment on the internal conditions of the developing economy, we might now proceed to analyse some of the possible structural changes in the economy which, directly or indirectly, will bring about basic changes in the balance of payments. In order that the investment boom may have long-run effects on the structure of the balance of payments the investment program must ultimately affect the commodity trade of the developing country. This is different from the short-run effects which foreign investment will have on the balance of payments. Indeed, the short-run effects can be considered as those which

are associated with the mechanism of transfer. Such effects, by their very nature, do not cause fundamental changes in the structure of the balance of payments unless, of course, foreign investment becomes a permanent characteristic of the developing economy which is rather unlikely. Foreign investment seems to be of a highly volatile nature and it is probable that it occurs spasmodically.

It is possible to distinguish two classes of long-run effects, one direct, the other indirect, which an investment program might exert on the structure of the balance of payments. Whether these effects will operate smoothly without seriously affecting the equilibrium of the balance of payments will depend, to a large extent, on the direction which the indirect effect takes.

The direct effect can be described in the following manner. When the foreign investment comes to an end and the economy has become rather highly industrialized and prosperous, a period may begin during which the developed economy will seek to change its status from that of a 'young debtor' economy to that of a 'mature debtor' economy. In other words, when and if this occurs, the developed economy will attempt to repay the indebtedness associated with the large amount of foreign investment and, instead of having a positive balance of indebtedness and a deficit on current account, the developed country will have a negative balance of indebtedness and a surplus on current account. The result will be the repatriation of the securities of the developed economy.

One aspect of foreign investment which deserves consideration is the form which foreign investment takes. The distinction to be made is that between 'portfolio' and 'direct' investment. The test question for dividing long-term investment into portfolio and direct is "whether a given investment is of a character that presumably carries with it the rights and duties of commercial control. A portfolio investment involves no acquisition of commercial control, while a direct investment does".[3] Portfolio investment includes mainly those securities issued or guaranteed by a foreign government, and, in many instances, the securities of large and well-known corporations. The securities of such well-known corporations as the Canadian Pacific Railway, International Nickel, United States Steel Corporation, etc. enjoy an international market and make up most of the non-governmental portfolio investments.

If the proportion of portfolio investment to total foreign investment is relatively large, serious problems may be encountered when interest charges and amortization begin. The chief characteristic of portfolio investment is that the rate of return is a fixed rate thus imposing on the debtor nation fixed obligations. "In good years and bad, the borrower is committed to meet payments on the outstanding bonds. In depression years, this presents difficulties even for debtors whose loans are held

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[3]Lewis, Cleona, The United States and Foreign Investment Problems, Brookings Institution, Washington, D.C., 1948, p. 14.

locally. But greater difficulties are involved for those whose loans are held by foreigners. This is because in years of depression the exports of all countries are likely to decline - in value, if not in volume. The debtor country, therefore, has fewer dollars with which to meet interest obligation on dollar loans, while its obligations remain the same as in good years. In fact, foreign borrowing may be a strain on the borrower's foreign-exchange resources even in good years. Unless the net effect of borrowing is to increase the debtor country's exports of goods and services - and its receipts of foreign exchange - the payments required at regular intervals on interest and principal account, put a burden on the future balance of payments of the country."[4]

The direct investments of any country are made up of (1) foreign subsidiaries, branches, and other foreign properties owned and controlled by its domestic enterprises; (2) companies controlled by its nationals but organized to operate exclusively abroad; (3) holdings of individuals and groups of individuals of important equity interests in foreign corporations; and (4) real property owned by nationals of the country, such as mines, timberlands, and plantations.[5] Although the borrowing country may well prefer to have most of its foreign indebtedness made up

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[4] Ibid., p. 17.

[5] Cf. Sammons, Robert L. and Abelson, Milton, American Direct Investments in Foreign Countries, U.S. Dept. of Commerce, Ec. Series No. 20 (1942).

of direct investment, still there are certain factors which often affect adversely the owners of direct investment. As long as purely economic motives govern the investment, there is little danger but, in a world of exchange controls, subsidies and other man-made restrictions on multilateral trade and international investment, it is quite possible that the owners of direct investment may not be able to receive the earnings of their investments. As a result, there is often an increase in direct investment caused by the involuntary accumulation of earnings.[6]

Another important aspect of the distinction between portfolio and direct investment is the consequent effects on the volume of imports. Although there is no neat functional relationship between the volume of imports and direct investment or between the volume of imports and portfolio investment, still it seems highly probable that direct investment is more likely to involve increased imports than is portfolio investment.

The first reason may well be that all types of direct investment will entail real production of either goods or services or both. The owners of such enterprises will, in all probability, be partial to buying in their own country whenever possible thus increasing imports into the debtor country. Portfolio investment, on the other hand, may often be of a type which will never require imports. The bulk of portfolio investment

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[6]Marsh, Donald B., World Trade and Investment, Harcourt, Brace & Co., New York, 1950, Chap. 30.

is made of government or government guaranteed securities which have little, if any, effect on imports. The only exception to this is, of course, the large inter-governmental loans during and since the Second World War. These were definitely of the portfolio type and, as in the case of the Anglo-American Financial Agreement of 1945, were for the payment of imports. However, these arrangements are of a highly special type and should not affect the general argument which is more applicable to private investment than to inter-governmental financial arrangements.[7]

All the investment projects, upon their completion, will increase the flow of final goods and services. It is possible to distinguish the types of goods and services which will be the result of the investment program. In the first place, products might be produced which were previously imported. Such products might not only replace imports but might also be exported and such products can then be considered as earners of foreign exchange. The second type of investment and their resultant products can be identified as those which will not affect directly the export-import trade of the developing economy. This type consists of "goods sold on the home market replacing goods previously sold on home market and goods sold abroad replacing goods

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[7]The danger is, of course, that such arrangements will become more and more common as public agencies tend to displace private initiative in many of the national economies in investment as well as in other activities.

previously sold abroad". The third type of product consists of "goods sold on home market in addition to those previously sold, and in excess of the increase in demand owing to the rise of incomes".[8] The contribution of type II "to the foreign balance is indeterminate since new products sold abroad or consumed at home may be cheaper or more expensive than those they replace. It seems best to assume that such investments are neutral in terms of their effect upon the foreign balance".[9] We are thus concerned with investments of types I and III where the effects on the balance of payments are more definite and capable of analysis.

The effects which different types of investment (whether financed by foreign or domestic capital) will have on the balance of payments can be conveniently grouped into (i) direct and (ii) indirect effects. By direct effects, we mean that the investment project itself might require imports therefore leading to a drain on reserves of foreign exchange and gold. If a large amount of capital employed in this investment project comes from abroad then the foreign exchange will be provided and there will be no serious loss of reserves. Indeed, there might well be an increase in the reserves of foreign exchange if a large proportion of the project requires domestic resources and

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[8]Polak, J.J., "Balance of Payments Problems of Countries Reconstructing with the Help of Foreign Loans", Quarterly Journal of Economics, February, 1943.

[9]Buchanan, Norman S., International Investment and Domestic Welfare, Holt, New York, 1947.

factors of production. Furthermore, if the investment takes place in industries of type I, there will be a net increase in the reserves once operation is commenced, since the products of type I will either replace products previously imported or will themselves be exported. The direct effects are therefore easily discernible and are likely to be forcast with more precision.

By indirect effects, we mean those which develop due to various functional relationships within any economy. When there is increased investment in an economy, there is often an increase in real income proportionately greater than the original increase in investment owing to the investment multiplier, which is a familiar concept in modern economic analysis. Now the increase in income leads to an increase in total expenditure, whether on consumption goods or on investment goods, the increase in expenditure being dependent on the magnitude of the marginal propensity to consume. However, some of the increased income is spent on increased imports as well as on domestic goods and services. The relationship between changes in real income and changes in imports is called the marginal propensity to import and is somewhat similar to the marginal propensity to consume, the former being applied to international trade while the latter is applied to the domestic economy.[10] This relationship is characteristic of all economies although the magnitude of the

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[10]There is, however, a fundamental difference between the marginal propensity to import and the marginal propensity to consume. The operation of the former will result in a negative income effect while the latter will result in a positive income effect.

coefficient depends to a large extent on the nature of the individual economies.[11]

The seriousness of the indirect effects (that is, the gain or loss of foreign exchange reserves) is dependent on the qualitative nature of the total investment program. The greater is the ratio of foreign to total investment, the less will be the drain on foreign exchange, because a large amount of exchange will be made available immediately. In Chapter 1, it was pointed out that it is investment in durable physical assets which affects the real development of the economy. However, when attempting to analyse the direct and indirect effects of investment on the balance of payments, we must consider total investment, since investment in inventories etc. also gives rise to increased incomes from which imports might be purchased. Nevertheless, the investment in fixed durable assets is still of tremendous importance. It permanently alters the structure of the economy and, because of this, its effects on the balance of payments will be more permanent. It is in this connection that we must deal with the various types of products which will result from the operation of the new investment projects, whether financed by domestic or foreign capital.

Although there are three types of industry into which investment might flow, it is only the first and third which raises concern, since type II is probably neutral, and, in any case, indeterminate. We are thus left with (1) goods additionally

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[11] Chang, op. cit., p. 37.

sold for export or sold on the domestic market in place of goods previously imported; and (2) goods sold on the domestic market in addition to those previously sold, and goods which are in excess of the increase in demand (the increase in demand being caused by the rise of incomes). The first type of investment is definitely the more suitable as far as it affects the reserves of gold and foreign exchange. This is so because exports will be increased and imports will be reduced leaving, on balance, a favourable effect on the balance of trade.[12] It is the latter type of investment, the initial construction and operation of which might contain serious threats to future balance of payments equilibrium. This type of investment would include all those expenditures which, by their very nature, do not provide international goods and services, but definitely provide rising incomes part of which will be spent on imports. The actual expenditure on industries of this type might exert an immediate drain on the reserves of gold and foreign exchange should their construction necessitate the import of essential goods and services. This type of investment would consist of such projects as welfare institutions (hospitals, schools, etc.) public works (roads, parks, public utilities, etc.). For the developing economy, future balance of payments difficulties (or their absence) will, therefore, depend on the relative

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[12]Providing, of course, that "As more exportable products become available at a sufficiently low price, a market can be found for them." cf. Polak, op. cit., p. 462.

magnitudes of investments of type I and type III. If type I is the larger, difficulties will not develop; but if type III is the larger, there will be strong forces tending to upset equilibrium in the balance of payments.

It has been contended that the inherent threats of type III investment to balance of payments equilibrium are grossly overstated and that the definition itself is tautological. The argument is based on "the apparently surprising contention" that the marginal propensity to import is not greater than zero.[13] The justification for this unorthodox assumption is based on two further assumptions: (1) that real income may increase while money income remains stable and (2) that money income may increase "to the extent of the incremental output".[14] In connection with the first assumption, Professor Kahn argues that as real income increases, the factors of production responsible for the increased output might themselves consume the increment and, as an example, Prof. Kahn suggests that "if better tools enable Chinese peasants to increase their production of food, they will undoubtedly first eat better". This may be true but certainly it cannot be applied unequivocally to all developing economies; in fact, it is applicable only to exceptionally backward countries with a very large peasantry. Furthermore, even in this extreme case, the assumption might not hold since

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[13] A.F. Kahn, "Investment Criteria in Development Programs", The Quarterly Journal of Economics, Vol. LXV, No. 1, p. 38-61.

[14] Ibid., p. 44.

the peasantry might well have guaranteed themselves an adequate consumption standard before marketing any surplus. If their productivity is increased through increased mechanization, it would not be unreasonable to assume that a large proportion of the increased output would be marketed, especially when we consider the very low income elasticity of demand for food. The increased real income will definitely lead to an increase in the consumption of luxury items which often must be imported because of the extreme backwardness of the economy. The argument might then gain some validity if the nation under study is one in which a large proportion of the population do not enter a market economy. Such is the case in some of the undeveloped countries. Thus, Kahn's argument is, at best, a very narrow one and is without significance when considering countries which, while relatively industrialized, are attempting reconstruction or further industrialization.

Professor Kahn further argues that the increment in output might force down the general price level, "increasing real income without increasing the (money) distributive shares and there is no presumption here that imports will rise, despite the customary assumption that imports are a function of real income. On the contrary, lower domestic prices are likely to result in a reduction of imports."[15] Professor Kahn's argument is based on his explicit assumption that imports are not a function of real income. Lower domestic prices will actually

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[15] Ibid., p. 43.

result in a reduction of imports if (i) real income has actually fallen or (ii) there is an extremely great possibility of substitution of the lower-priced domestic goods or (iii) both possibilities occur together. Since Professor Kahn explicitly assumes that that real income has increased, the basic assumption left is that the price elasticity of substitution of domestic goods for imports is extremely high. Now it seems that Professor Kahn is arguing an extremely special and unique case which will hold only under very rigid assumptions. The rise in real income effect due to the fall in prices of domestic goods will have a positive income and a positive substitution effect. The positive income effect of lower priced domestic goods will tend, ceteris paribus, to increase expenditures on all goods (home-produced goods and foreign-produced goods). The substitution effect, on the other hand, will tend to increase expenditures on domestic goods at the expense of imports. We can now see the unique nature of Professor Kahn's argument; for it is tenable only when we assume that the substitution effect is far greater than the income effect. There is no a priori reason for these assumptions to hold true nor is there any empirical evidence to justify the assumption. The conditions which would enable such a situation to develop are too unrealistic, for it would require that the majority of goods can be obtained from domestic production and that most industries have ample excess capacity so that increased output can be achieved without increased prices. Certainly, this would not be the case in a developing country whose reliance on foreign industry is extremely great.

In the same connection, it is argued that the enhanced income of the factors (F)[16] producing type III products is dependent on the sale of their product to other income recipients (G). It is then argued that G will have to reduce their expenditure on other products whose factors of production (H) now suffer a reduction in income thus reducing their expenditure on domestic goods and imports. Professor Kahn then concludes that the net effect on imports is indeterminate and that "there is no a priori presumption one way or another, despite the fact that national money income is higher".

This analysis is extremely over-simplified and its partial validity rests on the assumption that "G do not purchase the new products ... in an inflationary manner (by reducing their customary rate of savings, by borrowing or by activating idle balances)".[17] This assumption is itself unrealistic since most economic development programs are not entirely free from inflation especially in the case of countries which already have some degree of industrialization. More specifically, the economic expansion of the post-war period was, to some extent, inflationary because the high level of savings accumulated during the war were used thus aggravating the inflationary pressure caused by economic development. If this is true (and it does not seem unlikely), then G might not have to cut their purchases of H's

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[16] "F" are initially paid with the proceeds of a bank loan thus increasing M sufficiently to sustain prices.

[17] Ibid., p. 44.

products which will, in all probability maintain the existing pattern of expenditure distribution. Furthermore, if F represents a relatively large proportion of the total population (say industrial workers) then their expenditures on imports will undoubtedly rise but they will also increase their expenditure on the products of H and G thereby preventing the incomes of H and G from falling to the extent visualized by Professor Kahn. In this not unlikely case, it would not be unreasonable to expect the net effect to be an increase in imports since the enhanced income of F would not be matched by an equivalent reduction in the incomes of G and H assuming, of course, that the marginal propensity to import of the various groups are roughly equal.

We are able to see, therefore, that the qualitative nature of total investment is extremely important from the point of view of future balance of payments equilibrium. To reject this would be to ignore one of the most important lessons of economic history. The experience of Central European countries with investment projects during the inter-war period are striking examples of the failure to employ reputable investment criteria. Indiscriminate investment in imports will present serious obstacles to the achievement of external balance and the ultimate cure might well involve drastic changes in the structure of the economy.

This section concludes the deductive analysis of Part I. In the first four chapters, an attempt was made to analyse some of the problems associated with industrialization and foreign

investment. In the first place an attempt was made to learn the true significance of foreign investment and, secondly, there was an analysis of some of the effects which foreign investment might have both on the internal structure of the economy and also on the balance of payments of the developing country. In Part II, the theory developed here will be applied to the actual economic conditions of Canada during the post-war period of economic development. The object of this inductive study is threefold: (1) we shall discuss the relative importance of foreign investment to Canadian economic development. In other words, we shall attempt to learn whether foreign investment has provided the venture capital which has enabled Canada to develop beyond the physical limit and, more important still, beyond the psychological limit to investment. In this case, we shall apply to Canadian economic conditions the analysis developed in the first two chapters. (2) we shall also discuss some of the problems which might be expected to develop in the Canadian balance of payments because of the qualitative nature of both domestic and foreign investment. This discussion will revolve about (i) the form of foreign investment (that is, portfolio investment versus direct investment) and (ii) the types of industry which have been the result of both domestic and foreign investment. (3) Finally, an attempt will be made to estimate the inflationary effect, if any, which might have been caused by the Canadian investment program.

CHAPTER 5

Foreign Investment in Canada

Foreign trade and capital movements have always played an important role in helping to determine the significant characteristics of the Canadian economy. Up until the Second World War, the Canadian economy could be described as an extractive, agricultural economy with a scanty manufacturing industry but largely dependent on world markets which, of course, made the Canadian economy particularly vulnerable to the cyclical fluctuations so characteristic of the major economies during the nineteenth and twentieth centuries.

One of the dominant historical features of the Canadian balance of international payments has been the large, at times spasmodic, inflow of foreign capital into Canada. The first great inflow of capital occurred during the period of 1900-1913 when approximately $2,546 million entered Canada.[1] One of the dominant features of foreign indebtedness during these early years of the twentieth century was the large amount of government and corporate bonds and debentures held abroad. Although statistics for the 1900-1913 period are not as reliable as those for later periods, an estimate has been made by Professor Jacob Viner. Of a total foreign investment of $2,546 million, probably no less than $1206 million was in the form of bonds and debentures. Included in this latter figure is the $767 million

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[1] Viner, op. cit.

invested in the railways with the assumption that most of the capital in this industry was acquired through the issues of bonds and debentures. A breakdown of the various types of investment is given in Table 1.

Table 1. Investments in Canada by Classes of Investments, 1900-13 (millions of dollars)

Type of Investment	United Kingdom	United States	Total
Dominion & Provincial Governments	175	4	179
Municipal Governments	200	60	260
Railroads	670	50	767
Industrial Investments	420	180	630
Mining	65	60	125
Insurance Companies	32	50	82
Land & Timber	80	145	305
Miscellaneous	111	81	198
TOTAL	1753	630	2546

Source: J. Viner, Canada's Balance of International Indebtedness 1900-1913.

Besides the dominance of funded debt, both public and corporate, the distribution of ownership is also significant during the period 1900-1913 since a fundamental change has occurred in recent decades. Of a total investment of $2546 million, $1753 million or 68 per cent was held in the United Kingdom while $630 million or 24 per cent was held in the United States. Both the dominance of funded debt and the distribution of ownership of foreign indebtedness have undergone substantial changes since the first World War. At the end of 1951, of a total non-resident investment of $9489 million, portfolio investment accounted for

$4643 million or 48 per cent.[2] During this period there has been a very great increase in this form of debt from approximately $10,000 million in 1939 to an estimated $21,729 million in 1949. Most of this increase was caused by the great rise in funded debt of the Canadian government during the Second World War. Practically the whole amount was financed in Canada thus tending to reduce the percentage held abroad. Furthermore, during this period, there was considerable repatriation of outstanding Canadian bonds - especially of those held in the United Kingdom. This is shown in Table 2.

Table 2. Estimated Distribution of Funded Debt of Canadian Governments and Corporations, End of 1952
(millions of dollars)

Items	Amounts Outstanding	Distribution of Ownership			
		Canada	United States	United Kingdom	Other Foreign Countries
Dominions - direct & indirect excluding railways	14,719	13,851	747	68	53
Provincials - direct & indirect excluding railways	2,926	2,104	782	38	2
Municipals	1,436	1,091	307	36	2
TOTAL - Government Bonds	19,081	17,046	1,836	142	57
Per cent distribution	100.0	89.34	9.62	0.74	0.30
Steam Railways	1,127	478	308	309	32
Other Corporations	3,050	2,190	705	129	26
TOTAL Bonds and Debentures	23,258	19,714	2,849	580	115
Per cent distribution	100.0	84.77	12.25	2.49	0.49

Source: The Canadian Balance of International Payments & Foreign Capital Invested in Canada, DBS, Ottawa.

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[2] The Canadian Balance of International Payments, 1952, Dept. of Trade and Commerce, Ottawa, p. 29.

In the last chapter of Part I, some mention was made regarding the theoretical significance for future balance of payments problems which might arise when a large proportion of a large funded debt is held abroad. The argument was that when funded debt formed a large percentage of total foreign indebtedness, the economy might experience balance of payments difficulties because of the fixed interest and amortization payments which accompany funded debt. The difficulties would be greater in the case of a country whose debt obligation are expressed in foreign currency and whose own currency might suffer some depreciation during any recession. This certainly was the plight of Canada in the 1930's, who contracted funded debt obligations in foreign currency and who, because of the relatively high proportion of exports to national income, would feel the full brunt of any world recession thus aggravating the difficulties caused by externally held funded debt. The experience of the 1930's is a vivid testimony to the truth of this argument. In 1930, about 40 per cent of all capital invested in Canadian business and government securities was owned abroad. Over one-half of this total Canadian capital was in the form of bonded debt of which about two-thirds was held in Great Britain and foreign countries. In 1928-29, external interest obligations and dividends absorbed less than one-sixth of the total receipts from the exports of goods and services; in 1932-33 they took one-third.

Although this danger has not been removed completely, more optimism seems justified at the present, since there is now a relatively small percentage of funded debt held abroad. As long

as the Canadian capital market is able to meet the financial needs of governments and corporations in the field of bonds and debentures, the balance of payments of Canada should be relatively free from any problems arising in this connection and, furthermore, if the trend towards repatriation of outstanding Canadian funded debt might be projected into the future, there does not seem to be any need to express concern over this matter. However, serious difficulties would be encountered if foreign investment was abruptly terminated. New issues sold abroad plus direct investment adds $500 million annually to the credit side of Canada's balance of payments. The main hope is, however, that both Canada and the United States will be able to maintain those economic conditions favourable to international investment.

Another significant change which has occurred in the pattern of Canadian foreign indebtedness has been in the distribution of ownership of foreign investments in Canada. Up until the early 1920's, the United Kingdom was the main supplier of foreign capital in Canada. At the beginning of the First World War, British capital constituted the largest part of total foreign capital invested in Canada. Portfolio investments in government, railways and utility securities were particularly important. Since then, little change has occurred in the total until the recent world war when repatriations greatly reduced the total. In the present decade, the proportion has fallen sharply while United States capital investments have risen considerably. By the early 1920's, the value of United States investments in Canada exceeded the value of British investments and by 1926

United States investments totalled $3636 million. Large increases occurred between then and 1930. This latter growth was widely distributed among industrial investments as well as among large flotations of government and other bonds. During the 1920's, many United States corporations established branch plants in Canada in the manufacturing field as well as in other fields of business activity including mining and smelting and financial institutions.

Because of this growth in United States investment and because of the repatriation of Canadian securities held in Britain, the relative position of British capital in Canada is now much less important than in previous periods. At the end of 1950, British investments were 19.9 per cent of total non-resident investment in Canada compared with 36 per cent in 1939 and 43.9 per cent in 1926. The growth of United States investments in Canada continued during the recent world war and by the end of the war, these investments had reached a new peak. Further growth has occurred since then, and by the end of 1951, United States investments in Canada totalled $7303 million.

Table 3. Non-Resident Investment in Canada, End of 1951
(millions of dollars)

Types of Investments	United Kingdom	United States	Total
Government Securities			
Dominion	70	887	1013
Provincial	38	732	771
Municipal	38	279	319
TOTAL	146	1898	2103
Public Utilities			
Railways	704	687	1467
Other	56	503	588
TOTAL	760	1190	2055
Manufacturing	484	2594	3136
Mining & Smelting	60	695	787
Merchandising	103	270	388
Financial Institutions	142	355	572
Other Enterprises	10	106	120
Miscellaneous Assets	65	195	328
TOTAL INVESTMENT	1770	7303	9489

Source: The Canadian Balance of International Payments & Foreign Capital Invested in Canada, DBS, Ottawa.

Not only have there been significant changes in the geographical distribution of non-resident investment in Canada but there have also been changes in the Canadian balance of payments which, when studied superficially, tend to underestimate the large-scale inflow of capital during the post-war era of expansion in the Canadian economy. The fact is that Canada, since 1945, has not had large balances of indebtedness and because of this, the importance of foreign investment is often overlooked. One of the main reasons for this, it seems, is that, except for the years 1950, 1951 and 1952, the Canadian balance of payments has shown a surplus on current account although there will probably be a deficit in 1953. However, notice must be taken of the great increase in official holdings of gold and United States

currency by the Canadian monetary authorities. There has also been a considerable increase in the holding of United States dollars by private persons and corporations. These holdings can be expected to come into the market on the demand side should the Canadian dollar fall. Indeed such increases form the equalizing function of short-term capital movements discussed under the mechanism of transfer in Part I.

To appreciate the importance of foreign investment in Canada during the post-war period, it would seem worthwhile to concentrate on the new inflows of capital during that period and because we are mainly interested in the significance of foreign investment to Canadian economic development, emphasis should be placed on the new inflows of United States capital for direct investment in Canada.

Table 4. United States Direct Investment in Canada 1948-1952.
('000,000)

Inflow of New Capital	1948	1949	1950	1951	1952
Petroleum exploration, development & refining	23	59	98	140	124
Transportation	-	-	18	10	50
Mining	5	10	30	37	90
Pulp and Paper	14	3	9	31	7
Finance	2	3	8	8	-[1]
Other manufacturing and miscellaneous	35	39	80	83	70
NET CAPITAL INFLOW	81	101	217	304	446

[1]Included with other capital movements.

Source: The Canadian balance of International Payments & Foreign Capital Invested in Canada, DBS, Ottawa.

One of the main factors contributing to the low balance of foreign indebtedness has been the tremendous growth of Canadian assets

abroad largely due to the various loans and gifts made by the government of Canada to her overseas allies during and since the Second World War. During the war, there was a gift of a billion dollars and also a loan of $700 million to the United Kingdom. After the war, there has been a $1250 million loan most of which had been drawn by the end of 1949. The increase in all government credits was from $31 million in 1939 to approximately $2 billion in 1949. Furthermore, investments of Canadian capital abroad have been large. A particularly large proportion of Canadian private investments abroad has taken the form of direct investment by Canadian businesses. Investment in all countries has more than doubled in the last two decades, having increased from $397 million in 1926 to $893 million in 1949. More than three-quarters of this investment is in the United States. Other extensions of Canadian industry abroad have been for the acquisition of wider markets through exports.

Table 5. Summary of Canadian Investments and Other Assets Abroad, At Selected Year Ends, 1939-1952.
(thousands of millions of dollars)

	1939	1948	1949	1950	1951	1952
Direct investments abroad	0.7	0.8	0.9	1.0	1.2	1.3
Portfolio holdings of foreign securities	0.7	0.6	0.6	0.6	0.6	0.6
Government of Canada credits	-	1.9	2.0	2.0	1.9	1.9
Government of Canada subscriptions to IMF and IBRD	-	0.4	0.4	0.4	0.4	0.4
TOTAL - Canadian long-term investment abroad.	1.4	3.6	3.9	4.0	4.1	4.2
Government of Canada official holdings of gold and foreign exchange	0.5	1.0	1.2	1.9	1.8	1.8
Other Canadian short-term assets abroad	-	-	0.1	0.1	0.1	0.3
Gross Assets	1.9	4.7	5.2	5.9	5.9	6.4

Source: Canada's International Investment Position, DBS, Ottawa.

The fact that the Canadian balance of international payments has a relatively small balance of foreign indebtedness is of considerable theoretical significance for the smaller this balance, the less the purchasing power, on balance, which has to be transferred thus minimizing and perhaps even reversing the operation of the mechanism of transfer. This is because, as discussed in Part I, the mechanism of transfer involves the transfer of net foreign indebtedness and not total foreign investment.

Together with this large inflow of capital into Canada, there has been a tremendous growth in total domestic investment in durable physical assets, all of which is causing the Canadian economy to acquire greater economic maturity as far as industrialization is concerned. Because of this overall growth in investment, the ratio of foreign capital in Canada to total investment has become much smaller than in previous periods of economic expansion and this is another reason for the tendency to underestimate the importance of foreign investment to Canadian economic development. It is extremely difficult to express the importance of foreign investment in any simple ratio because the relevant factors depend, to a large extent, on selection. A calculation for 1948 suggests that direct investments of United States capital in that year accounted for less than 15 per cent of the net private home investment in plant and equipment in the business sector of the economy including the accumulation of inventories.

Such a ratio certainly detracts from the importance of foreign investment in Canada. It is the argument of this paper

that the overall ratio of foreign to total investment (15 per cent in 1948) is irrelevant. Instead, we must look at those industries whose development is most important for economic growth and maturity. When an examination is made of the non-resident ownership of Canadian manufacturing companies, the importance of foreign investment becomes quite apparent. Non-resident ownership in Canadian manufacturing varies widely in different branches of industry. In some industries, like the automobile industry, most of the capital is non-resident owned or controlled, while in industries like the textile industry or primary iron and steel most of the ownership or control is Canadian. In manufacturing as a whole the total non-resident ownership was about 40 per cent at the end of 1949 and United States ownership was about 33 per cent including investments in petroleum development by companies engaged in refining. In mining and smelting, including only investments in petroleum exploration and development by non-refining companies, the non-resident owned percentage has risen in 1950 to 45 per cent and the United States investment to 39 per cent. In 1950, the United States investment in all branches of the petroleum industry in Canada amounted to 54 per cent of the total book value. In steam railways, non-resident ownership in 1950 was 42 per cent while with other utilities, the percentage was 16 per cent.

It is the contention of this thesis that it is precisely this large investment (much of which is risk capital) in Canadian manufacturing, mining and smelting (including petroleum exploration, development and refining) which is contributing to Canadian

industrialization and thus to economic maturity. Furthermore, it is argued that much of the other investment - especially in public utilities - is partially due to the expansion in the former types of economic activity. Not only is such investment mainly responsible for the changing structure of the Canadian economy but such investments, upon their completion and operation, will indirectly and directly affect the Canadian balance of international payments.[3] If these contentions prove sound, then foreign investment assumes far greater significance during the period of post-war capital accumulation and economic growth.

But are we justified in assuming that such industries as manufacturing, mining and smelting, etc. are the main causes of the tendency of the Canadian economy to achieve a new maturity? Such an assumption has no a priori justification and, therefore, it becomes necessary to devise some method by which we may estimate the relative importance of various industries to the national economy. It is possible to measure the relative importance of an industry to the national economy by the net contribution of the industry to the national economy in terms of (1) the amount of employment provided by the industry; and (2) the amount of capital invested in the industry. Since in many cases, an industry's importance to the national economy might be relatively small on both counts, we might be inclined to write off such an industry as unimportant. However, great care must be exercised lest we underestimate the regional importance of such an industry.

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[3]Cf. supra, p. 65 ff.

This is particularly applicable in the case of Canada where there are several economic regions some of which are dependent to a large extent on one industry which, when considered on the national scale, is not too important. The relative importance of any industry might also be measured to some extent by its contribution to the foreign trade of the country. If a certain industry is developed mainly for the export market, it becomes a net earner of foreign exchange, especially if the product of the industry was previously imported.

An attempt will now be made to study some of the significant industries in the Canadian economy from the twofold aspect outlined above.

The distribution of the civilian labour force has undergone tremendous changes since the turn of the century. The Canadian economy has developed from a predominantly agricultural and extractive economy to a more commercialized community. This process of change has continued during the second half of the twentieth century until at the present time, manufacturing industries are Canada's chief source of employment and income. In 1921 agriculture was Canada's major industry, providing employment for 37 per cent of the total civilian labour force. However, in 1950 manufacturing occupied this position providing employment for 26 per cent of the total civilian labour force while the trade, finance and commercial service group expanded until it about equalled the number of persons working in agriculture.

Table 6. Civilian Employment - Thousands

Year	Business			Trade, Fin. & Comm. Services	Community Service & Government	Total Civilian Labour Force
	Manufacturing	Utilities	Primary Industries			
1921	562	190	262	512	335	3168
1931	657	284	334	714	438	4105
1939	710	252	390	847	512	4598
1949	1315	419	519	1025	617	5121
1950	1314	414	509	1003	619	5118
1951	1361	1	1	1	1	5286

Manufacturing expressed as a percentage of total civilian labour force.

1921	17.7 %
1949	25.6 %
1950	25.6 %
1951	25.7 %

1. Not available.

Source: Private and Public Investment in Canada, 1926-1951, Dept. of Trade and Commerce, Ottawa.

It can easily be seen from Table 6 that the manufacturing sector of the economy has become the dominant feature of Canadian economic development employing the largest proportion of the civilian labour force. The manufacturing industry is of further importance from two other points of view: i) the total amount of investment in that industry and ii) the net contribution of manufacturing to the gross national product.

Table 7. Net Value of Production of All Manufacturing as a Percentage of Gross National Product
(millions of dollars)

	Net Value of Production in Manufacturing (1)	Gross National Product (2)	(1) as a Percentage of (2)
1926	1305	5,294	24.0
1946	3467	12,026	28.8
1947	4292	13,768	31.1
1948	4940	15,613	31.6
1949	5311	16,462	32.2
1950	6029	18,029	33.4
1951	-	21,000	-

Source: Private and Public Investment in Canada, 1926-1951, Dept. of Trade and Commerce, Ottawa.

The greatest expansion in the manufacturing sector of the economy has occurred during and since the Second World War and was undertaken mainly by corporations with large retained earnings. There were two main factors which contributed to the growth in manufacturing. The first was the persistent high prices which stimulated expansion of the industry. This was caused to a large extent by the high domestic demand due to the high level of savings accumulated during the war and also due to the increased foreign demand for processed materials, machinery and equipment. Between 1946 and 1950, there was a great increase in the number of new firms in manufacturing. Of an increase of 1031, 834 were domestic enterprises while 147 had their origin in the United States, 34 in the United Kingdom and 16 in other countries.

We are now able to appreciate the true significance of this tremendous growth in the manufacturing sector of the Canadian economy; and from the statistics given in Tables 6 and 7,

manufacturing industry becomes important on both counts. Therefore, it is precisely this growth in the manufacturing sector which has changed the structure of the Canadian economy from an agricultural-extractive combination to a more balanced and diversified economy. Of further importance is the fact that in absolute terms agriculture and the extractive economies have also expanded considerably which is further testimony to the balanced and diversified nature of Canadian economic growth.

Now foreign investment has been greatest in the manufacturing industry and it is here that non-resident ownership is largest. In these enterprises, foreign investment has been the main cause of the expansion - in some cases, accounting for as much as 72 per cent of total investment in the industry. For example, the non-ferrous metals industry, which employs 51,235 persons is 72 per cent owned by foreign capital. Foreign control of the chemical industry which employs 51,148 persons has also been high amounting in 1948 to 58 per cent. The following table gives a good indication of the importance of foreign investment to Canadian economic development.

Table 8. Per Cent of Non-Resident Ownership of Canadian Industry, End of 1939, 1950.

Type of Industry	1939	1950
Manufacturing	42	40
Mining & Smelting	40	45
Steam Railways	57	42
Other Utilities	27	16
Merchandising	9	9
Total of Above Concerns	38	31

Source: Canada's International Investment Position, Dept. of Trade and Commerce, Ottawa.

Another interesting feature of Canadian economic development is the geographical distribution of investment in the manufacturing industries. The main concentration has been in Central Canada although there have been substantial increases in the western provinces.

Table 9. Investment in Manufacturing, By Selected Provinces, 1948-1951.

Province & Year		Manufacturing	Utilities	Other	Gov't.	Total
Quebec	1948	185.7	141.9	142.2	327.0	797.0
	1949	164.2	167.1	146.1	316.0	793.4
	1950	155.1	148.1	165.9	375.5	844.6
	1951	166.6	202.5	156.6	418.2	943.9
Ont.	1948	289.4	229.4	281.7	382.4	1182.9
	1949	240.2	279.9	312.0	465.9	1298.0
	1950	239.3	307.4	359.0	524.4	1430.1
	1951	404.7	382.4	354.7	602.5	1744.3
Man.	1948	10.9	42.8	58.6	73.0	185.3
	1949	13.5	43.1	69.2	73.3	199.1
	1950	17.7	67.1	65.7	76.1	226.6
	1951	16.7	66.9	64.6	104.9	253.1
Sask.	1948	5.2	17.5	90.6	52.7	166.0
	1949	10.5	30.7	117.1	53.4	211.7
	1950	8.4	51.5	111.8	55.2	226.9
	1951	14.0	46.6	110.3	71.5	242.4
Alberta	1948	16.5	29.8	128.3	110.0	284.6
	1949	12.9	41.7	146.5	150.6	351.7
	1950	20.2	55.1	164.1	170.5	409.9
	1951	30.4	52.9	183.3	220.6	487.2
Br. C.	1948	43.5	66.8	77.1	158.2	345.6
	1949	64.4	76.0	169.3	169.3	379.9
	1950	57.7	69.9	100.3	181.0	408.9
	1951	47.2	87.3	81.6	196.3	412.4
Total Canada	1948	579.0	565.6	823.9	1206.7	3175.2
	1949	535.8	678.9	916.0	1370.6	3501.3
	1950	519.4	743.7	1028.8	1530.7	3822.6
	1951	715.9	892.3	1026.7	1770.3	4408.2

	'49	'50	'51
Total Investment in Quebec as a Percentage of Canadian Total	22	22	24
" " Ontario " " "	37	37	39
" " Alberta " " "	10	10	11

Source: Private and Public Investment in Canada, 1926-1951, Dept. of Trade and Commerce, Ottawa.

Although the percentage shares of the three main provinces (Quebec, Ontario and Alberta) experiencing most of the investment boom are approximately constant, this should not detract from the tremendous increases which have occurred in Alberta and other western provinces which is more easily seen when consideration is given to absolute values. Total new investment in Alberta alone has gone from $284.6 million in 1948 to $487.2 million in 1951, an increase of over 70 per cent. It is not suggested that foreign investment has been completely responsible for this increase. Nevertheless, it is necessary for us to attribute much of this increase in total investment to the expansion of the petroleum industry in that area. It is extremely difficult and perhaps impossible to estimate statistically the complementarity of various types of investment activity. However, it is reasonable to assume that part of the increase in non-business investment in Alberta and other provinces has been due to the development (mainly by foreign capital) of the resources of those provinces. Indeed this might also be said of the total non-business investment in Quebec and Ontario which, in the former province, has gone from $327 million in 1948 to $418.2 million in 1951 and in the latter from $382.4 million to $524.4 in the same period. To deny this possibility of positive correlation between the different segments of economic activity is to deny the mutual interdependence of economic forces which in most cases will be nothing short of a denial of reality.

We have now shown that much of the investment which is

changing the structure of the Canadian economy has been dependent to a large extent on foreign capital - especially on capital from the United States. It is difficult to make any distinction between domestic and foreign capital as to which is the "innovator". However, it seems likely that foreign capital has assumed the role of innovator in those enterprises where 40 per cent or more of the firms are controlled by non-resident capital and that such industries form a substantial proportion of all manufacturing industries. In concluding this chapter, it might be worth while to speculate on some of the future possibilities of foreign capital (especially United States capital) in Canada.

As long as there are certain tax differentials which make investment more profitable in Canada than in the United States, American investment will remain an important part of the Canadian investment pattern. Most notable among the tax differentials is the absence in Canada of a capital gains tax which provides a strong incentive to the exploration and development of Canadian natural resources, although in the United States, as in Canada, depletion allowances are quite generous. In this respect, certain policy changes might be desirable in order to attract more capital into the mineral industries. The Paley Commission points out that "on balance, considering all the aspects of the income taxes as they apply to the mineral industries, it appears that the oil and gas industries receive more generous treatment under the United States law than under the Canadian law while the opposite is true for the metal

mining industry".[4] The high rate of corporate income tax is a matter of further significance; undoubtedly, there are many considerations both of a political and economic nature which often demand high income taxation. However, in a period when investment tends to be high and when some inflation is also evident, corporations are often forced to cut down on necessary expansion because of the high corporate income tax which leaves retained earnings at very low levels. The condition is aggravated to a considerable extent by the large amounts of distributed profits, much of which in a period of inflation, are mere book profits. It is no wonder that corporations often find themselves without sufficient retained earnings to undertake further expansion.

Of further significance for the future is the abundant Canadian supply of many basic raw materials which, as the Paley commission points out are being rapidly depleted in the United States. The exploration and development of these natural resources in Canada will further stimulate foreign investment in Canada and these commodities should enjoy a high demand in world markets.

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[4] Resources for Freedom, A Report to the President by the President's Materials Policy Commission, June, 1952, Vol. V, p. 32.

CHAPTER 6

The Qualitative Nature of Investment in Canada (1945-1951)

In chapter 4, an attempt was made to classify total investment into three main types depending on the ultimate effect which such investment will have on the balance of payments once it has been completed and commenced operation. Unfortunately, this is another type of analysis which does not give reliable conclusions for inductive analysis. For instance, one might argue that the construction of public utilities (except international transportation) is of the type which, because of the positive income effect of its construction, will lead to increased imports without any direct effect on the export market. Such a conclusion, however, would encounter many objections. In the case of hydro-electric developments, there may be an incentive to take advantage of the abundant and inexpensive power which will lead to further expansion in manufacturing, mining, and other industries requiring abundant and cheap power. This case is much more than an hypothetical example for it seems to be quite applicable to certain areas of Canada. Cheap power in Canada presents one of the main attractions to industries and often these industries become net earners of foreign exchange, as in the case of the Canadian aluminum industry.

Table 10. New Investment in Durable Physical Assets and Repair and Maintenance, Private and Public Central Electric Stations and Gas Works, 1946-1951

	New Investment		Repair and Maintenance		Total
	Construction	Machinery & Equipment	Construction	Machinery & Equipment	
	('000,000)				
1946	57.0	11.4	15.1	10.6	94.1
1947	82.0	40.5	15.8	7.6	145.9
1948	164.9	69.1	16.5	12.1	262.6
1949	228.1	91.8	20.1	12.6	352.6
1950	252.0	92.5	22.3	11.4	378.2
1951	266.5	121.9	23.5	12.5	424.4

Source: Private and Public Investment in Canada, 1926-1951, Dept. of Trade and Commerce, Ottawa.

Certainly the great increase in investment, repair, and maintenance in the electricity and gas-works section of public utilities has been both a cause and an effect of the expansion experienced in other sectors of the economy especially in the field of manufacturing. The difficulty of ascertaining, statistically, the influence of public utilities on other industries seems to revolve about the problem of distinguishing between cause and effect and thus we must be content with the consideration of such projects as both cause and effect. The same analysis applies with little difference to most public utilities and public works which facilitate the development of private industry.

We are therefore able to see that it is quite difficult to place certain public utilities into specific types of investment from the point of view of their effect (or lack of effect) on the balance of payments. Such a classification would necessitate exact knowledge as to the types of industry which are developed

owing to the presence of certain public utilities. While it would not be impossible to calculate the income effect of the construction of public utilities, still it would be a very formidable task to determine with any degree of accuracy the values of a dynamic investment multiplier and a dynamic marginal propensity to import. As Professor Polak says, "The marginal propensity to consume is not a constant; neither is the marginal propensity to import. The magnitude of both depends on a host of special circumstances. The geometrical progression over time produced by dynamical multiplier analysis is artificial and probably rather unrealistic."[1] However, the difficulty of discovering the magnitude of the multiplier and various propensities should not lead us to the conclusion that such functional relationships do not exist or are not operative in any national economy boasting some degree of industrialization. The erection of public utilities would exert a strain on the balance of payments owing to the positive income effect of their construction and the consequent action of the marginal propensity to import. This strain would be outweighed by the favourable repercussions which may develop owing to the consequent increase in other enterprises (such as manufacturing) whose products would be exported or would replace commodities previously imported. The eventual outcome would, of course, depend on the magnitude of these two forces. If the income effect and the

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[1]Polak, op. cit., p. 404.

marginal propensity to import are relatively high, then balance of payments difficulties will probably develop. If, on the other hand, many industries of type III are developed either as a consequence to (or simply along with) the erection of public utilities, then balance of payments difficulties will probably not develop. One might well argue that the development of a diversified manufacturing industry will be a powerful force in reducing the marginal propensity to import since many developing economies often spend much of their enhanced incomes on the manufactured products and luxuries of highly industrialized economies. With a diversified manufacturing industry, these products would now be available from domestic production.

It is the opinion of the author that Canadian development, especially since the late war, has been of a type which will tend in the long run, to reduce the magnitude of the marginal propensity to import. Emphasis is placed on the long run because, in the early stages of industrialization and general economic expansion imports might rise substantially owing to the high requirements for materials such as machinery and equipment which would be indispensible to economic development.

The type of investment which might well lead to balance of payments difficulties (owing to the relationship between enhanced real income and imports) are such projects as schools, churches, hospitals and other such institutions. Investment in such projects have been quite substantial in Canada since 1947 as the following table shows.

Table 11. New Investment in Durable Physical Assets and Repair and Maintenance, All Private and Public Institutions, Canada, 1926, 1946-1951 ($'000,000)

Year	New Investment		Repair and Maintenance		Total
	Construction	Machinery & Equipment	Construction	Machinery & Equipment	
1926	33.3	4.2	10.4	2.3	50.2
1946	64.7	9.6	16.2	3.7	94.2
1947	76.3	12.5	17.4	4.8	111.0
1948	123.6	21.3	27.5	7.9	180.3
1949	167.5	22.4	27.6	6.9	224.4
1950	185.6	26.3	28.2	6.6	246.7
1951	241.1	31.6	34.3	7.4	314.4

Source: Private and Public Investment in Canada, 1926-1951, Dept. of Trade and Commerce, Ottawa.

To this type of investment might also be added investment in residential housing which has also figured prominently in the post-war Canadian economic expansion.

Table 12. New Investment in Durable Physical Assets and Repair and Maintenance, Housing, Canada, 1926, 1946-1951 ($'000,000)

	Public		Private		Total
	New Investment	Repair and Maintenance	New Investment	Repair and Maintenance	
1926	-	-	211.9	49.3	261.2
1946	56.6	3.6	355.7	101.7	517.6
1947	36.6	1.9	503.8	128.9	670.8
1948	68.3	2.6	599.9	159.3	830.1
1949	72.8	2.1	703.2	173.9	952.0
1950	53.0	2.0	792.3	189.0	1036.3
1951	41.0	2.0	866.0	194.0	1108.0

Source: Private and Public Investment in Canada, 1926-1951, Dept. of Trade and Commerce, Ottawa.

Table 13. Total Investment, Housing, Institutions, All Enterprises.

	Housing	Institutions	Sub-Total	All Enterprises	(3) As a Percentage of (4)
	(1)	(2)	(3)	(4)	(5)
1926	261.2	50.2	311.4	1415.0	21.9
1946	517.6	94.2	611.8	2783.0	21.9
1947	670.8	111.0	781.8	3733.0	20.9
1948	830.1	180.3	1010.4	4636.0	21.7
1949	952.0	224.4	1176.4	5042.0	23.3
1950	1036.3	246.7	1282.7	5408.0	23.7
1951	1108.0	314.4	1422.4	6053.0	23.4

Source: Private and Public Investment in Canada, 1926-1951, Dept. of Trade and Commerce, Ottawa.

The two foregoing tables show quite clearly that much of the investment boom in Canada has consisted of expenditures on durable physical assets which will not directly benefit the Canadian balance of international payments.[2] Indeed, the substantially large percentages given in column 5 of Table 13 are a good indication that the relatively high investment in housing and institutions might, through the income effect, cause much difficulty in the balance of payments. Even the positive contribution to the balance of trade of substantial investment in the manufacturing and extractive segment might not be large enough to compensate for the large negative effect which might well be caused by such relatively large investment in housing and institutions. If balance of payments difficulties do not

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[2]It is possible, however, that in a mutual-dependence economy, there may be indirect benefits. For example, savings from the enhanced income may be invested in industries of type III. However, it is doubtful if this would be large enough to compensate for the possible drain on foreign exchange reserves.

arise to the extent indicated by the relatively large investment in housing and institutions, then it would seem that the marginal propensity to import for Canada is relatively small because of the increased and diversified industrialization. The problem would, of course, be seriously aggravated if there were to be abrupt stoppages in the flow of foreign investment which, above all, contributes to the reserves of gold and foreign exchange.

The large expenditures in housing and institutions, besides creating a strong income effect which might seriously complicate balance of payments equilibrium, might actually exert a direct drain on reserves of gold and foreign exchange. This would occur if the investment in these segments required foreign machinery and equipment. However, in the case of housing, such an effect might conceivably be negligible since much of the materials are available from domestic sources of production. At first, one might think that the large investment in housing received a stimulus after the war when materials become more readily available and restrictions on non-essential construction were removed. If such were the case, we could expect a large increase in housing construction during the post-war years and an eventual slackening off of such activity. However, this is not entirely correct since the number of families without homes of their own has increased from 1946 to 1948. For instance in 1946, there were 411 thousand families without their own homes; in 1947 this increased to 434 thousand and in 1948 there were 642 thousand while in 1949 the total was down to 474 thousand.

An attempt will now be made to estimate the significance of

any changes which might have occurred in Canada's balance of international payments on current account in order to discover the effects, if any, which Canadian economic development has had on Canadian trade with the rest of the world. We are not so interested in the changing geographic distribution of Canadian foreign trade. Of considerably greater interest is the composition of Canada's commodity exports and imports. This analysis is still in line with the classification of investments into types according to the effect of such investments on the balance of payments. Admittedly, this methodology is somewhat illogical since we are seeking to understand the nature of Canadian investment by studying the operation of the investment projects rather than by making a priori classifications of the projects themselves.

In studying total values of foreign trade, great caution must be exercised lest erroneous inferences be drawn from certain aggregates. This is certainly true for any statistical analysis but it is of much greater significance in the study of foreign trade statistics for here, more than in other internal segments of the economy, there are often substantial variations in price which cause great changes in total values while there may not have been any significant change in the volume of trade. This is especially true of Canadian foreign trade where raw materials and agricultural products form a substantial part of the total. The combination of extremely low price elasticities of supply and demand operate to induce wide variations in price whenever there are relatively small changes in demand or supply.

The first aspect of Canadian foreign trade to be considered involves the degree of manufacture of Canadian imports and exports. Such an analysis is of considerable importance, for any change in the composition of Canadian exports will reflect changes in the internal economic structure of Canada. In other words, as the Canadian economy becomes more industrialized owing to the growth of a diversified manufacturing industry, it would be natural to expect Canadian exports to consist more largely of partly or fully manufactured commodities. The 'degree of manufacture' classification shows quite clearly the relative importance of manufactures in exports and imports.

In 1950 and 1951 about 28% of Canada's exports were classified as raw and processed materials even though such fully processed materials as newsprint paper and wheat flour fall into the "fully or chiefly manufactured" classification. If these two commodities are deducted from that category, then only 21% of exports remain in this group. Imports are predominantly manufactured goods although raw and semi-processed industrial materials and foodstuffs accounted for over 30% of the totals in 1950 and 1951. Since Canada has a low ratio of population to resources, international trade reflects the fact that Canadian exports have a low labour content while imports into Canada have a high labour content.

Table 14. Percentages of Raw, Partially, and Fully Manufactured Goods Exported from Canada, Selected Years, 1914-1951.

Year	Raw Materials	Partially Manufactured	Fully Manufactured
1914	63.2	10.1	26.7
1926	46.1	14.7	39.2
1946	26.1	22.1	51.8
1947	23.2	26.0	50.8
1948	26.4	26.6	46.9
1949	32.4	24.4	43.1
1950	28.0	31.3	40.7
1951	29.6	32.2	38.2

Source: Canada Year Books, 1946-51 and Trade of Canada, Vol. I, 1950, 1951.

The percentages given in Table 14 are admittedly approximate values, expecially for the post-war years of 1948 and 1949, since they were estimated by the author. However, they do seem to fit into the general trend and, therefore, are of some value. The substantial increase in the manufacturing segment of the Canadian economy is reflected in these percentages to a certain extent but not quite as much as one would expect when consideration is given to the importance attached to the growth of manufacturing in Canada. This does not mean that the trend of exports of fully and partially manufactured goods is not of considerable significance; for the percentages show substantial increases from the ones given for the earlier stages of Canadian economic development. However, as cautioned above, the percentages do not appear to be constant or even to change at approximately constant rates. For instance in 1910, exports of full manufactured commodities formed 32.7% of total exports while in 1951, fully manufactured exports formed only 38.2% of total exports. Since the percentages are calculated on the basis of

values (quantities and prices), it is no wonder that there are wide fluctuations due to wide price variations. The divergence would be accentuated by opposite movements in the prices of manufactured commodities and raw materials, a condition which cannot be ruled out completely. Commodity imports into Canada by degree of manufacture, as shown in Table 15, are also of some interest.

Table 15. Percentages of Raw, Partially and Fully Manufactured Materials Imported into Canada, Selected Years, 1914-1951.

Year	Raw Materials	Partially Manufactured	Fully Manufactured
1914	21.8	9.2	68.9
1926	27.6	10.0	62.3
1946	26.8	6.3	66.8
1947	23.8	6.2	69.9
1948	27.9	7.3	64.7
1949	25.0	7.1	67.8
1950	26.8	7.8	65.3
1951	24.6	7.4	67.9

Source: Canada Year Books, 1946-51, and Trade of Canada, Vol. I, 1950, 1951. (Percentages were constructed from the values of imports by degree of manufacture. cf. Trade of Canada, Year ended Dec. 31/51, Vol. I, Dept. of Trade and Commerce, Ottawa, p. 88).

A significant feature of Table 15 is the relative consistency which is found in the column giving the percentage of fully manufactured commodities imported into Canada. This feature was certainly lacking from Table 14 for exports. It is extremely doubtful that this consistency is a coincidence without any reflection on Canadian economic development. It seems, rather, that the industrialization of the Canadian economy, especially through the expansion of manufacturing industries, has substantially reduced the need for Canada to import partially

and fully manufactured commodities. From this, it is safe to conclude that the expansion in the manufacturing sector of the Canadian economy falls into investments of type III which, by replacing products previously imported, contribute indirectly to a positive balance of trade and thereby tend to increase reserves of foreign exchange and gold.

Undoubtedly, some criticism might be expressed about the validity of such percentages. The justification of their use is based on the fact that while the Canadian economy has undergone substantial changes during the last two decades, bringing to the country unprecedented development and maturity, still the proportion of expenditure on partially or fully manufactured commodities has remained more or less constant. Of course in absolute terms, the expenditures on such commodities has increased considerably which is what we would expect in an expanding economy. Of further significance is the fact that the composition of total commodity imports has remained substantially the same although the geographical distribution has undergone fundamental changes with a strong bias towards concentration in the United States market.

On the export side of Canada's balance of trade the main increases seem to have been concentrated in the following industrial groups (1) wood products and paper; (2) iron and its products; (3) non-ferrous metals and products and (4) non-metallic minerals and products. All of these industries are substantial contributors to Canada's export trade, and indications are that the exports of these industries will become increasingly important

as Canadian industrial expansion continues. The following tables indicate the large amount of investment which has taken place in these industries.

Table 16. New Investment, Repair and Maintenance in Selected Industries, 1946-1951.

Year	Pulp & Paper and their Products	Iron and its Products	Non-Ferrous Metals and its Products	Non-Metallic Minerals and its Products
1946	88.7	68.1	40.8	34.9
1947	124.7	97.4	61.3	78.3
1948	143.8	106.7	87.0	99.3
1949	141.3	103.6	83.6	77.3
1950	128.6	106.4	89.2	75.7
1951	153.8	184.3	100.1	119.6

Source: Private and Public Investment in Canada, 1926-1951, Dept. of Trade and Commerce, Ottawa.

Such increases in investment as shown above have formed a substantial proportion of the expansion in the manufacturing sector of the Canadian economy and it is reasonable to assume that these industries in the near future may well become the pillars of Canada's export trade. The following table (table 17) shows the contribution of these industries to Canada's foreign trade balance.

Table 17. Exports of Canadian Produce of Selected Industries, 1946-1951.

Year	Pulp & Paper and their Products	Iron and its Products	Non-Ferrous Metals and its Products	Non-Metallic Minerals and its Products
1946	625,591,155	227,472,426	247,810,065	57,360,525
1947	886,192,034	273,156,202	303,937,240	74,614,188
1948	953,673,527	281,464,706	395,948,211	94,914,548
1949	875,317,680	292,864,223	426,607,610	73,710,209
1950	1,112,945,061	251,108,538	457,262,306	103,654,760
1951	1,399,076,131	342,298,703	569,870,193	131,529,446

Source: Trade of Canada, 1949, Vol. I.
Trade of Canada, 1950, Vol. I., Dept. of Trade and Commerce, Ottawa.

Table 18. Prices and Physical Volume of Domestic Exports, 1946-1951. Interim Indexes, 1948 = 100

Year	Wood & Paper and their Products		Iron and its Products		Non-Ferrous Metals		Non-Metallic Minerals	
	Volume	Prices	Volume	Prices	Volume	Prices	Volume	Prices
1949	93.8	97.9	82.6	114.4	101.8	105.8	69.1	112.4
1950	111.8	105.0	66.2	113.7	100.3	115.1	90.7	120.4
1951	119.9	122.4	76.6	125.9	104.0	138.3	105.2	131.7

Source: Review of Foreign Trade, 1951, Dept. of Trade and Commerce, Ottawa.

The increase in value of the exports of these crucial industries has been due both to increased prices and increased volumes as shown in Table 18. However, it is clear from the various indexes that the increases in prices have played the major role in increasing the value of the exports of all these industries. While these commodities are essential to any expanding economy, some caution is necessary; for a recession in the United States and the consequent fall in demand would result in substantial price reductions thus reducing the aggregate value of exports by considerable amounts.

It seems wise to conclude this chapter with some mention of Canada's growing dependence on the United States market. In 1952, the United States took 53.6 per cent of Canada's domestic exports, a smaller proportion than in 1950 and 1951 but greater than in earlier post-war years. Since 1946, there has been an increasing concentration of Canadian trade in the United States market. This is of tremendous significance for the economic welfare of Canada. "It is only by maintaining her role as an important trader that Canada can maintain anything near her

present standard of living and can support the great capital investment which has been made to equip her for this role. Success in this matter will depend not only on her own skill and efforts but also on the continuation of an interdependent and integrated system of international trade."[3] Therefore, it seems necessary to express some concern over the growing dependence of Canadian exports on the American market which, up until World War II has been characterized by chronic instability - both economic and political - and by a host of arbitrary trade restrictions.

In one very important respect, this great increase in Canadian exports to the United States is beneficial; for, in a world of inconvertibility of currencies, it enables us to obtain the foreign exchange to pay for the many essential imports into Canada from the United States. In this sense, therefore, the opening of the American market to Canadian products has been of considerable benefit to the Canadian economy. However, the question which begs an answer is this: has the Canadian economy become more vulnerable to the cyclical fluctuations in economic activity so characteristic of the American economy prior to the Second World War? One of the chief causes of vulnerability to economic fluctuations in the United States has been the lack of diversification of the Canadian economy. Many of Canada's basic exports to the United States, in the past, have been highly susceptible to changes in business conditions there; for

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[3]Report of the Royal Commission on Dominion-Provincial Relations, Bk. I, p. 178.

example, lumber and metals have depended on the widely fluctuating level of the construction industry; newsprint has depended on the volume of advertising; and so forth.

It is the opinion of the author, however, that the tremendous growth in the Canadian economy during and since the Second World War has given to Canada a greater diversity and a more solid foundation. The result of this is that Canada has achieved greater economic maturity which will make her less vulnerable to possible recessions coming from the United States. This does not mean to say that Canada will be completely isolated and self-sufficient. This would be impossible for any two economies as interdependent as the United States and Canada. As Professor D.B. Marsh has said:

"Clearly a country which, like Canada, exports products equal in value to 24 per cent of her national income, and has current-account credits equal in value to 31 per cent, is in some danger of importing booms and depressions from abroad. There are, I think, three main reasons for a higher degree of economic autonomy than Canada has enjoyed in the past. First, Canada's floating exchange rate tends to-day to offset price and income changes in other countries, as these changes might affect Canada. A slump in a neighbour country could tend to weaken the Canadian dollar; but a weaker Canadian dollar might be expected to stimulate Canadian exports, and limit imports, both of which would tend to inflate the Canadian economy. Capital flows to Canada would also tend to be countercyclical with a free rate: a fact well illustrated in 1950.

Second, the composition of Canada's commodity and invisible trade has tended in recent years to run to 'insensitive items'; i.e., items unlikely to be affected by changes in U.S. business activity which are not large or long-lasting. For example, we were not affected adversely in 1949...

Third, in the long-run, a developing industrial nation such as Canada is bound to become less sensitive to foreign slumps as her own market develops, with increased population geared to the increase in secondary industry. This is properly something that still belongs largely to the future; but its impact can already be felt to a degree, and should become greater with every step forward in the march of economic progress."[4]

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[4] Marsh, Donald B., from "A Talk to the Furniture and Floor Covering Industry Credit Group of the National Association of Credit Men", Montreal, May 19, 1953.

CHAPTER 7

The Inflationary Effect of Investment in Canada, and Conclusion

It is an exceedingly difficult task to calculate with any degree of precision the effect of foreign investment on general economic conditions from the point of view of the inflationary effect of foreign investment. The reason for this is, I think, that in post-war Canada, as for that matter, in any relatively industrialized country, the intervention of the fiscal and monetary authorities form an integral and extremely important part of the general economic system. The result is that the free play of economic forces is eliminated to a certain extent and, furthermore, the level of relevant indexes show not so much the sole result of economic forces but also show the result of government intervention in the economic system.

In attempting to discover the effects of foreign investment on fiscal and monetary policy or vice versa, it is necessary that the aims of government economic policy be clearly understood and also that the methods for achieving these ends are familiar to the economist. Unfortunately, there is no simple and direct causal relationship between economic policy and foreign investment. If such were the case, the problem would lose many of its complicated difficulties. Economic policy seeks to impress upon the economy a certain degree of control and direction in order to achieve and maintain both internal and external balance. Such policy, if it be wise, must itself operate indirectly, that is, mainly through the market forces of income and price effects. When policy is implemented in such a fashion, the frustration of

basic economic forces will be minimized which, in turn, will involve a better allocation of resources.

The nation's balance of international payments also influences the internal structure of the economy through the effects which changes in the balance of payments have on prices and incomes. Foreign investment, like private investment, will cause fundamental changes in the structure of the economy. These changes will affect domestic prices and incomes and, to some extent, the distribution of income. Earlier, it was concluded that, although total foreign investment formed approximately fifteen per cent of total investment in Canada during the post-war years, still such a small percentage did not indicate the strategic importance of foreign investment to Canadian economic development. For it was argued in Chapters 1 and 2 that foreign investment often provides risk capital which enables economic development to continue further. The inductive analysis of Chapter 5 has shown that American direct investment in Canada has been of paramount importance to Canadian economic development. Of equal importance, is the fact that foreign investment and domestic investment are working hand-in-hand in the industrialization of Canada and, because of this, there is no direct competition between them. Thus it would seem justified to study the inflationary effects of total investment and to consider foreign investment only where it involves some special problems.

In the years immediately following the Second World War, inflationary pressure on all prices was quite strong and was

more pronounced in the United States than in Canada. The following table illustrates the percentage changes in relevant price indexes in Canada and the United States.

Table 19. Changes in Cost-of-Living, Wholesale Prices and General Wage Rates in Manufacturing, Canada and United States Selected Years, 1939-1948

(Per cent)

Country and Index	1939-1945	1945-1946	1939 to July, 1948
Canada			
Cost-of-Living	18.0	3.4	55.0
Wholesale Prices	37.1	4.9	102.0
General Wage Rates in Manufacturing	46.5	10.2	109.4
United States			
Cost-of-Living	28.9	8.8	74.2
Wholesale Prices	38.2	13.8	119.1
General Wage Rates in Manufacturing	61.6	5.9	110.4

Source: Investment and Inflation, Canada, 1945-1948, Dept. of Trade and Commerce, Ottawa, 1949.

These world-wide inflationary pressures affected Canada mainly in two ways: in the first place, through increased prices of imported goods entering directly into the structure of domestic costs and prices and, in the second place, through higher prices in exports. Many key commodities imported into Canada have gone up in price. Although in 1952, there were significant reductions in the prices of some imports. These higher prices enter into the domestic price structure whether the imported goods are finished goods or whether they undergo further processing and final assembly in Canada or not. Higher world prices have also

increased domestic incomes and prices through the rate of Canadian exports on world markets. Such price increases illustrate how significant the movement in world prices has been in increasing the Canadian price level through the influence of export and import prices. Since 1949, however, the recession in the United States caused declines in many prices which put a stop to Canada's importation of inflation and also reduced the value of Canadian exports to that country.

One factor which has caused the investment boom in Canada to be mixed with some degree of inflation has been the relatively high level of employment in Canada since the war. When there is a supply of idle labour and productive capacity in the construction and machinery industry, increased expenditure for investment purposes may take place with little or no rise in prices. But when the increased demands are large, the supply of resources may be inadequate which will cause higher prices and incomes. Unless there is a quick and large response in supply, inflation results. In Part I, it was stated that the ability of an economy to import capital equipment enables the economy to develop beyond the "physical limit". This has certainly been true in Canada as the following table shows:

Table 20. Some Leading Imports for Investment and Industry. ('000)

Commodity	1938 Jan.-June	1947 Jan.-June	1948 Jan.-June	1949 Jan.-June	1950 Jan.-June	1951 Jan.-June
Investment Imports	48,044	222,726	242,947	279,597	298,357	397,140
Per Cent of total Imports	14.3	17.7	19.1	19.8	20.5	18.9
Industrial Imports	83,818	316,851	358,385	406,546	392,894	586,397
Per Cent of total Imports	24.9	25.2	28.2	28.8	27.0	27.9

Source: Review of Foreign Trade - First Half Year, 1951, Dept. of Trade and Commerce, Ottawa.

Table 21. Imports of Capital Goods for Investment Projects Controlled Under Schedule III, Emergency Exchange Conservation Act: November, 1947-October, 1948.

Rank	Chief Reason of Essentiality	Total Capital Cost ('000,000)	Value of Capital Goods Requested
1	Replacement of Foreign Imports	99.8	30.7
2	Reduction of Unit Costs and Improvement of Competitive Position	39.3	14.4
3	More Intensified Use of Canadian Natural Resources	140.7	30.3
4	Expansion of Exports	103.7	18.2
5	Maintenance of Essential Public Service	416.2	44.2
6	Production of Commodities New to Canada	44.5	9.3
7	Other Reasons	47.5	6.9
	Total	891.6	154.0

Source: Investment and Inflation, Canada, 1945-1948, Dept. of Trade and Commerce, Ottawa.

Table 21 shows quite clearly how important it was, in 1948, that Canada be allowed to import capital equipment for, unless this were the case, the Canadian economy would be forced to follow a much slower rate of development and might even be forced to produce some of its own capital equipment. With full employment

such construction would probably result in a misallocation of resources because it would be difficult to take full advantage of the international division of labour. Canada has been a large importer of capital goods. Indeed, in recent years she has been the world's largest importer of capital goods. In 1951, she imported more than $1,000 million worth of machinery and transport equipment. Of this, machinery imports amounted to $734 millions.

In Part I, we discussed the view of Doctor Hirschman[1] that there are certain capital goods imports which tend to aggravate the inflationary pressure. Although it is quite difficult to classify them statistically, Table 21, although constructed for a different purpose, gives the types of imports considered by Hirschman. It is highly probable that, in many of the enterprises seeking permission to import capital goods, the projects could not continue without these essential imports. However, the point must again be emphasized that expenditures on these imports are a leakage from the economy and are, therefore, deflationary. We cannot say that these imports were inflationary; for it is the decision to invest which forms the inflationary stimulus.

When the large inflow of American capital began in 1949 and 1940, inflationary forces were given added fuel. In 1950 alone, there was an increase of $625 millions (in U.S. dollars) in Canada's reserves of gold and United States dollars. This great

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[1]Cf. supra, p. 57.

rise in foreign exchange holdings required the provision of Canadian dollar financing on the same scale, and on October 1st, 1950, the Canadian Government suspended the policy of a fixed rate of exchange. To the extent that the Government had an overall cash surplus, this Canadian dollar financing could take place without an increase in the total liquid assets held by the general public. Until the end of July, 1950, the Government's overall cash resources were sufficient to finance the increase in foreign exchange reserves. In August and September, however, substantial 'special financing' arrangements became necessary. Part of the funds required were obtained by the sale of $200 million of Deposit Certificates to the Chartered Banks. Thus the Bank of Canada by open-market operations, was able to reduce the inflationary impact which was due to the inflow of United States capital.

The main threat of inflation did not come so much from the high rate of investment as from the increased defense expenditures which began in 1950. The rapid increase in defense activity took place at a time when the aggregate demands on Canadian resources had virtually produced full employment.

Table 22. Annual Index Numbers of Wholesale Price Groups, 1948-1951.

Year	General Wholesale	Raw & Partly Manufactured	Fully & Chiefly Manufactured	Building & Construc. Mat.
		(1935-1939 = 100)		
1948	193.4	196.3	192.4	222.6
1949	198.3	197.1	199.2	229.2
1950	211.2	212.8	211.0	249.9
1951	240.2	237.9	242.4	289.8

Source: Annual Report, Bank of Canada, 1951.

The most substantial increases occurred from 1949 to 1951 which, it would seem, is due to the outbreak of war in Korea, together with the large-scale investment program. It has been suggested in some circles that the investment boom was not the main cause of general price increases on the grounds that investment activity does not require resources common to the consumption goods industries. This does not seem to be at all tenable in spite of the fact that non-competing groups do exist in the economy. The strong income effect of investment activity is bound to flow over into the consumption goods industries. Both sectors are large employers of labour and because of this, there might well be competitive bidding for the use of this factor of production. This, of course, will result in increased wages and thus contribute to the inflationary pressure. This would seem to have been the case in Canada since 1950.

In the case of Canada, external developments were more important than domestic factors in pushing up price levels during the latter half of 1950. The prices paid for Canadian imports and received for Canadian exports increased substantially. Because of the importance of Canadian trade with other countries import and export prices have a very important direct and indirect influence on the general price level. However, the very high level of domestic demands for goods and services during this period must have been an additional contributing factor in the rise of prices in Canada.

The enactment of the Consumer Credit Act in November, 1950 reflected the growing concern over this method of financing as

one of the main causes of inflation. Its eventual removal, in May, 1952, has certainly stimulated demand in many sectors of the durable consumer goods industries. However, deep concern must be expressed over the large extent to which consumer credit has increased. Implicit in such a method of financing is that general economic conditions will remain quite favorable. However, signs of a recession might lead business men to develop a psychological attitude which will cause them to reduce the amount of credit outstanding. Such action might well be a strong force in causing a cumulative recession. There is some evidence that the end of the Korean war might start such a downward movement. This, of course, would seem to be a grave mistake for the large expansion underway in Canada is not caused by re-armament but by the development of Canadian resources - a development based on sound forsight and justified by purely economic considerations.

The demand for goods and services in Canada towards the end of 1950 and during 1951 was met in part by an increasing volume of imports from abroad. The favourable balance of trade of $262 millions in 1949 became a deficit of $17 millions in 1950 and $122 millions in 1951. To a considerable extent, this trend reflected the increasing size and character of capital investment and defense expenditures in Canada. Owing to this, the full impact of such demands for goods and services did not fall on the productive capacity of Canada. Since the deficit on current account was more than matched by a net inflow of foreign funds on capital account, foreign exchange reserves

increased. The external value of the Canadian dollar at the end of 1951 was about 4 per cent higher than at the end of 1950.[2]

In concluding this thesis, it seems worth while to emphasize again a few of the major aspects of the investment boom experienced in Canada since 1945. The inductive analysis has shown that foreign investment (especially American direct investment) in Canada has figured prominently in the Canadian investment pattern. The importance of foreign investment is not readily seen from any ratio of foreign to total investment. However, on closer examination, we are able to see that foreign investment possesses a qualitative importance far greater than is revealed by its quantitative relationship to total investment. Indeed, foreign investment has been extremely important both qualitatively and quantitatively, in certain industries basic to economic development in Canada. This has been the case in manufacturing, non-ferrous metals, and non-metallic minerals (especially oil exploration and development).

Although the tremendous economic growth in Canada has received considerable acclaim from economist and layman alike, still there are one or two aspects of the investment program which force the economist to express some words of concern. In Chapter 4 of Part I,[3] deductive analysis showed that caution must be exercised lest investment activity be channeled into industries

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[2]Bank of Canada Annual Report, 1951, p. 5-7.

[3]Cf. supra p. 65 ff.

of type III. Such industries, it was argued, would lead to a drain on foreign exchange reserves; for the positive income effect associated with their construction would cause an increase in imports without any compensating increase in exports. The danger would, of course, be accentuated if the construction of these industries required imported materials. The indirect effect (that is, that the enhanced real income would lead to increased imports) is dependent on the assumption that imports are a function of real income. Generally, this is the case although consideration was given to Professor Kahn's argument which, I argued, holds only in a very special case.

The problem which demands solution, however, is whether or not the investment activity will always and immediately increase real income. It is possible to visualize cases in which investment activity will decrease real income temporarily. This would occur when the investment activity is superimposed on a full-employment economy. In such a case, there would be intense competition for factors of production thereby causing higher prices and strong inflationary pressures and a consequent fall in real income. Even in this case, however, there may be an increase in imports since the increase in domestic prices relative to import prices may cause a strong substitution effect in favour of the relatively lower-priced imports.

Although the investment program in Canada was not entirely free of inflation, it is doubtful if Canadians experienced a fall in real income. Canadian investment has been financed from a large accumulation of <u>real</u> savings supplemented by foreign

capital funds; and the growth in expenditure on capital goods has been accompanied by increased production of consumption goods and services. The net effect seems to have been an increase in real income.

Now it seems that much of the increase in real income has been caused by the intense investment activity in housing, educational, and other institutions. The estimates for 1953 are that a total of $1286 millions will be spent on housing, educational, and other institutions. This amounts to 23.7 per cent of a total private and capital investment of $5421 millions. Indications are that the Canadian balance of payments will show a deficit for 1953. This deficit does not appear to be the result of the mechanism of transfer of foreign funds; for the Canadian balance of indebtedness has been quite small owing to the growth of Canadian assets abroad. Admittedly, there are many factors contributing to increased imports but, it is argued here, one of the main factors is the relatively large amount of investment in activities which closely resemble industries of type III.

It is not the intention of the author to condemn the pattern of post-war investment in Canada as a dissipation of resources and energies. Indeed, there are many comforting features of the economic expansion. Great benefit will arise from the unprecedented development of Canadian resources and from the substantial growth in manufacturing. This latter aspect of Canadian economic development can be expected to improve Canada's balance of trade by increasing exports and by reducing the need

for imports. At the same time, it will bring to the Canadian economy greater maturity and diversity thereby enabling her to take her place as one of the leading economies of the world.

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