THE ROLE OF EXPORTS IN THE ECONOMIC DEVELOPMENT OF CANADA 1868-1914

by

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CHAPTER I

INTRODUCTION

Historically, many countries in the course of their development, have gone through a stage of staple production. In Canada, geographic and economic factors appear to have encouraged regionalism, explaining perhaps the linkage of Canadian history to a variety of staple industries and their effects upon some of the country's major political, social and economic institutions. With a regional economy being only a modest part of an international economy, transportation and communication facilities tend to become important pre-requisites to prosperity. While the particular region's staple production is expanding and is successfully integrating the region with the larger economy of which it is a part, economic growth will proceed. But as soon as a new staple of similar effects emerges elsewhere, attention becomes diverted towards this new staple and its particular region. In this sense, it is perhaps possible to explain the importance of gold and timber to British Columbia, fur and later on wheat to the prairies, minerals to the Lake Superior country,

wheat, timber, oil, and manufacturing to the province of Canada, and coal, iron, fish and forests to the Maritimes.[1]

A number of possible combinations exist in the timing and pace of a country's accelerated growth. This thesis accepts the proposition that while the staple industry for export purposes, though most conspicuous, may not have been the only source of Canada's economic growth, it undoubtedly was the most important source. An attempt will be made here to explain and demonstrate, with the aids of theory and history, the important role of wheat, which from approximately the late 1890's to the first World War was Canada's most important export industry. For Canada, as a part of a larger economic system, opportunities in the field of foreign trade must of necessity be major determinants of the country's rate of growth. The importance of wheat lay in the fact that during a period of less than two decades, it successfully linked domestic aspects of development with international ones and in so doing, helped launch this country on a process of sustained economic growth. Though specialization in the production of wheat

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[1]For a critique of the influence of staple production on Canadian economic development, see K. Buckley, "The Role of Staple Industries In Canada's Economic Development", (Journal of Economic History No. 4, 1958), pp. 439-450.

did not alter the emphasis placed by this country upon the production of a staple for export purposes, it did help enlarge the economy's scope, by giving rise to new methods and techniques as well as to a variety of new institutions.

Before proceeding to deal with the subject in hand, it is necessary to discuss the general problems involved in the study of economic growth.[2] An attempt will be made to explain the significance of the term "underdevelopment", this to be followed by a brief résumé of a few outstanding types of economic growth which have occurred in the past, so as to place the Canadian case-study in broader perspective. Although, generally speaking, certain aspects involved in the process of development will be similar for all developing economies, namely, population growth, urbanization, increased national income and income per capita, increased investment, and so on, the society's cultural inheritance, or its geographic pattern which are unique to it alone will induce different paths of growth, as will be illustrated by the relative nature of the staple-induced growth of the Canadian economy.

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[2]The terms "economic growth" and "economic development" will be used interchangeably throughout this work.

ECONOMIC GROWTH

The subject matter of economic growth has long been of interest. Great thinkers of the past, from Adam Smith to post-Keynsian economists have made considerable contributions to this field, leaving behind numerous conflicting, though often useful models of growth. Problems associated with growth have become of the utmost importance to present day rich and poor countries alike, with the former endeavouring to avoid over and under production in an effort to maintain steady high rates of growth, while the latter, through contacts with wealthy societies, have become imbued with the intense desire for quickly attained national wealth, an end only too often confused with nationalism.

The prime concern of economic growth lies with people and the way in which they make their living. The core of this process will hence lie in the adoption and adaptation of an industrial system, involving the widespread use of and application of modern science and technology to economic production, which is then expected to be translated, with the aid of increased productivity of man and machine, into rising output to satisfy growing diversified wants with limited means, and that with the minimum of effort, so as to permit members of the society involved greater freedom of choice between more goods and services or more leisure,

between higher incomes per capita or larger families, and between higher incomes to-day or tomorrow. In this sense, the human factor becomes the rationale for the above economic activity.

A logical inference from the above would seem to be the assumption that the process of economic growth will involve a transition to a better standard of living in the economic sense, thereby making this process an end in itself.[3] In reality, it is rather difficult to evaluate any advantages or disadvantages incurred in this process of change, since conflicting interests will inevitably result. Still, to determine whether a change to the better has occurred, one must look to the past and then attempt to judge any significant changes which appear to have occurred according to some universally accepted standard of appraisal. It is really impossible to measure one's own well-being, since we cannot compare total or economic welfare, but we can compare, to some extent flows of satisfaction-yielding commodities and services. To do so will require the assumption that economic growth is a material development and this will permit its measurement in terms of gross national product in the form of the society's total output of final goods and services in

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[3]Note: politically or ethically, though, this process can only be regarded as a means to an end.

real terms produced in one year. The economy thus becomes a system of interrelated parts roughly joined together through a market relationship. Though this process gives no complete guarantee that these flows of goods and services are really the true objective counterparts of the society's subjective state of "welfare", the mere fact that they are regarded as such appears to suffice for practical purposes, since it has become customary to assume throughout the world to-day that flows of goods and services are actually accurate indicators of economic welfare, being careful at the same time not to measure the total utility to be derived from various economic activities but only to attempt to measure the extent to which scarce resources will satisfy wants and needs. Hence, on narrow economic grounds, economic growth will be measured in terms of real production or real income, which tend to increase over a relatively long period of time of, say, not less than two generations. To obtain a more complete view of the situation, it becomes necessary to define and enumerate population trends as well, since measures of economic growth and, particularly, of the relative position of each sector within the economy appear to require per capita terms as well. An increase in per capita income is often assumed to imply success of past economic ventures, serving

thereby as an incentive for the further expansion of productive agents. Yet, use of the per capita income figure as a measure of material well-being has many shortcomings, since it neglects costs and sacrifices involved in the process in terms of human effort and natural resources, it assumes an overly aggregative character in measuring total output rather than consumption or levels of living and it disregards the distributive aspect of personal income. Also, as S. Kuznets so ably pointed out,[4] real national income appears to be a more relevant measure of growth, since it is in any case a pre-requisite for the determination of the per capita figure, as well as being the prime interest of wealthy economies, where the per capita figure is already high and the actual problem concerns the maintenance of a steady growth of the total figure, while also poor economies are primarily concerned with the needed excess of the rate of growth of the total figure over that of their population. Still, the per capita figure when taken in a broad sense, as the symbol of a whole socio-economic complex of conditions, it becomes the most widely used measure of the general picture of the

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[4] S. Kuznets, "Problems in Comparison of Economic Trends", (in S. Kuznets, W. E. Moore, J. J. Spengler ed.), Economic Growth, Brazil, India, Japan, (Duke University Press, Durham 1955), pp. 12-13.

developmental process. And indeed, in reality, growth is not merely a quantitative aspect abstracted from the great complexity of the general economic and social experience, but, on the contrary, it tends to embrace the nation's cultural history in its entirety. It is here then that economic history will come in handy to explain what actually lies behind the few quantified key magnitudes involved in this process of growth, concerning the supply of national resources, technology, the organization of markets, psychological attitudes of the population, socio-cultural elements such as types of government, legal system, religion, family life, level of education, state of health and a host of others, all to be considered at the time in question as well as in the past. In this sense, the analytical framework of an economy's "take-off" to sustained economic growth must be in terms of a general equilibrium, whereby variables such as population, technological progress and so on are made an integral part of the analysis and not in terms of partial analysis, since economic growth is the outcome of a conjuncture of a variety of factors which together initiate this process.

A substantial rise in national income will usually be reflected in a general advance in productivity brought about by technological advances, or by movement of employees into occupations of higher net value product. Rising

productivity, measured in terms of output per man-hour will usually raise real income which, in turn, provided institutional factors permit, will create greater and more diversified demand, so as to make room for new investment opportunities. Demand and income evolved in productivity are hence interrelated, while productivity itself presents a neutral measure of great importance, since rising productivity of labor and capital will result in greater output in relation to given inputs in terms of natural resources and human effort.

The process of economic growth will hence tend to change the industrial structure of the economy, partly in response to domestic and foreign market conditions and partly as the result of a new discovery, new resources or an increased domestic use of indigenous resources, entailing a revolutionary change from within the society and by its own initiative. External forces can stimulate and complement but not supplement it, making development a spontaneous, discontinuous process, a sort of permanent disturbance to a formerly existing equilibrium,[5] giving rise to a variety of structural changes within the economy, ranging from shifts in factor demand due to rising population

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[5]For a fuller discussion of this subject, see J. A. Schumpeter, The Theory of Economic Development, (Oxford University Press, New York, 1961), Chapters I and II.

and increasing urbanization, rising incomes and changing tastes, which are often the outcome of the emergence of a more complex and sophisticated modern society, to shifts in factor supply, rising investment outlays, changing techniques, skills, and a trend away from agriculture into industry and into a more sophisticated service sector, the rate and timing of which appear historically to have varied from country to country, depending upon individual national peculiarities.

To sum up then, the actual motivating force behind any successful process of growth will hence tend to lie in the ability of the society involved to improve the quality of its people as productive agents, raise the general level of its productive arts, extend its domestic market and increase both quality and quantity of its producible goods so as to obtain an optimum output from its available productive resources.

UNDERDEVELOPMENT

Speaking realistically, all countries are still developing and in the sense of this process being incomplete, all countries are underdeveloped. But a term such as that can only be relative, since the degree of development and the level attained tend to vary from country to country. Still, in broad general terms, "underdevelopment" could

perhaps be assumed to signify failure of a society to attain a significant measure of control over its physical environment, coupled with a resignation to this state of affairs.

As pointed out earlier, no useful general description can apply equally to all countries, since no two countries are truly alike. Yet, it is still possible to enumerate a combination of economic, social, cultural, demographic, political and technological aspects and characteristics, the possession of which may permit the labelling of their possessor as "underdeveloped". These aspects, though overlapping to a great extent, could perhaps be summed up under the following headings:-[6]

PRIMARY PRODUCING ECONOMIES

Raw materials and foodstuffs - cereals rather than protein foods - dominate production. Industry, if in existence at all, consists of the processing of agricultural products, or the extraction of minerals, a variety of traditional handicrafts and service trades of a simple nature. There is no real identification of the society's economic life with a market activity, since the household tends to

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[6]These are based on H. Leibenstein, Economic Backwardness and Economic Growth, (John Wiley & Sons Inc., New York, 1957), 40-1, and G. M. Meier & R. E. Baldwin, Economic Development, (John Wiley & Sons Inc., New York, 1957), p.273.

dominate all life. With the agricultural sector contributing most of the country's national product, very few employment opportunities exist outside that sector. Low productivity per worker, which characterizes such a set up, may perhaps be regarded as the basic problem of local poverty.

POPULATION PRESSURE

As observed above, a large proportion of the labor force is engaged in agriculture. The following two tendencies appear as probable:-

A. Rural disguised unemployment, encouraged by the employment of too much family labor, often including child labor, the utilization of too much human energy and only too few non-human resources. A highly competitive labor force, whose supply greatly exceeds the demand for its services, resulting in exceedingly low wages, wipes out any incentives to invest in labor-saving capital goods. What appears on the surface to be very cheap labor, becomes in reality most expensive and wasteful, with a non-productive labor force whose marginal productivity is often at zero or even negative, in the absence of appropriate incentives.

B. High fertility rates and greatly reduced mortality rates result in a densely populated countryside, with

> a low ratio of land to cultivator, in many though not all backward countries. But even where land is not scarce, only a small portion of it can be worked by an individual, who is subjected to so many other tasks within his particular environment, and who has at his disposal only crude and limited technology.

The existence of formidable international obstacles to emigration prevent the use of that avenue even as a partial solution.

ORIENTATION TOWARDS FOREIGN TRADE

If any market-type sectors do exist within the economy, they usually depend upon the production of certain primary products of foodstuffs or raw materials, often with only one or two staples accounting for most of the country's earnings. Any modernization in agriculture is confined to production intended for sale outside the country. Any investment in public overhead capital is also confined to sectors related to the export sector. Much of the government's revenue depends upon earnings from foreign trade, and yet, on a per capita basis, this volume of trade is low.

Prevailing high marginal and average propensities to import, especially since the second World War, when better communication facilities have stimulated the demonstration effect, have increased dependence upon imports of manufactured

commodities, light consumer goods and at times, even food. The size of the domestic market is greatly limited and restricted by prevailing low incomes per capita, also by high transportation costs, the result of exceedingly poor local transportation facilities, creating many market imperfections. These have often been accompanied by a much too rapid growth in the export sector relative to domestic output, preventing thereby any carry-over from this export sector to the rest of the economy.

Any country greatly dependent upon foreign trade must have a large export market, favorable terms of trade or, at least, be in a strong competitive position. But volume of trade as such will not compensate for unfavorable prices. Price uncertainties, usually associated with export products of the agricultural type, tend to affect production, reduce efficiency and make the economy most vulnerable to external conditions. It is really the character of the export industry, the strength of its linkage effects, and the manner of disposition of the income derived from this industry which play determining roles in the timing and pace of such an economy's "take-off" into sustained growth, and which in this case tend to act as major deterrants to this very same process.

UNDERDEVELOPED NATURAL RESOURCES

Economic resources are a function of technology. Natural resources become an asset only when in demand and when possibilities for their utilization are available. With lack of scientific techniques the existence of plentiful resources can be useless, only too often misused, as is so frequently the case with soil depletion practices following attempts to attain high yields but resulting instead in low productivity per man and per acre. Available labor, though conditioned to hard work, is only too often not disciplined to any daily routine work and is consequently inefficient.

CAPITAL DEFICIENCY

Even if such an economy suffers no absolute shortage of capital, its available capital tends to be badly distributed, since those who have a larger share of it are inclined to use their wealth unproductively, in activities of hoarding, luxurious consumption or in a variety of speculative deals. These activities seem to conform to the usual market forces existing within these economies, since greater and more certain and faster profits are usually associated with such activities. The government often also provides incentives for non-productive investment, limiting thereby any useful

enterprise and discouraging the emergence of a productive middle-class. As for the rest of the population, life at the margin of subsistence is bound to know no savings.

ENTERPRISE

Since savings and investment activities are often carried out by the same people, the supply of capital and that of enterprise must be interdependent. Here also the relative shortage of specific types of enterprise is attributed to local social and cultural values of the society involved as well as to the above mentioned profits associated with trade, finance and land speculation, all activities discouraging the emergence of any useful enterprising activities within the society involved.

AN ECONOMICALLY BACKWARD PEOPLE

Many ills of feudal Europe exist also to-day with their similar derogative effects upon progress. Ingrained cultural attitudes and traditional influences give rise to a set value system with a built-in emotional security due to strong group solidarity within a relatively small group of interdependant persons, but not to incentives and hence not to technological progress. Status quo is desirable while change is suspected both by the haves and the have not. At times, caste systems, family status, derogative

attitudes by upper social and income groups towards manual or practical work, narrow choice of occupations, cause labor and factor immobility, limit specialization in occupation and trade, all of which often tend to result in a backward sloping supply curve for labor, where even incentives fail to attract workers. Conditions of land tenure, with a few absentee landowners and a custom bound, semi-feudal tenancy with the inevitable excessively subdivided land and a lack of adequate credit facilities act as powerful disincentives to improvement of any sort. Even so, indebtedness is often much too high relative to assets and income. The above conditions result in political and military instability, encouraging government laws and regulations, and official financial and fiscal policies which act as deterrants to progress.

But such a set up is only too often a deliberate choice between alternatives within a particular environment, where the balance between ends and means has become institutionalized, discouraging individuals from maximizing their output and minimizing their efforts, resulting in a vicious circle of poverty or backwardness, basically evident in low labor efficiency stemming from malnutrition, low standards of health, poor housing, lack of training, illiteracy, obstacles to mobility and disdain for work. It is the more fundamental values or ideas of the society which appear to

be at the root of it all, and not an actual absolute absence of available opportunities. The former appear to be the cause of local inability to see and grasp any available opportunities for productive investment and savings. It then perhaps follows that savings, investment, enterprise, and capital, all important causes of economic growth, are at the same time also equally important by-products of this very same process.

HISTORICAL OUTLINES OF ECONOMIC DEVELOPMENT

Problems of different societies are often inherited and can be best overcome by understanding their origin. An aid to a better understanding of the process of economic growth is found in the study of economic history, whereby the genesis of various economic systems is undertaken to determine how man has gained his living in the past and what economic institutions have emerged in the process. But the historical process, with history never really repeating itself, is rather complex, with cause and effect continuously reacting upon each other, permitting no single solution to the problem of historical causation. Man's nature tends to react differently within different environments, determining thereby the success or failure of any technological innovation within that environment. This reaction is important, since technology is both cause and

effect of economic life in general within a particular epoch and historically, economic institutions have often had determining influences upon political, social, religious, educational and juristic attitudes within the society. This is perhaps one explanation of the different features displayed by different societies at any given time or even by the same society over different periods of time.

It has been suggested that the intensity and character of economic growth are conditioned by the society's relative degree of backwardness.[7] Historically, in all industrialized countries there appeared to be certain similar fundamental forces and features of historical course, despite the fact that the actual productive and organizational structure of their industries have shown marked differences and their developmental processes as such also tended to operate through numerous varied institutions. These similar fundamental forces expressed themselves in population growth, in expanding domestic and overseas markets, in capital accumulation and in technological progress. Strong stimuli were often required to break through barriers of stagnation, with strength and type of stimulus depending

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[7]A. Gerschenkron, "Economic Backwardness in Historical Perspective", in B. F. Hoselitz ed., The Progress of Underdeveloped Areas, (Chicago, 1952), 3-29

upon the stage and age of the particular country's backwardness. The later the commencement of this developmental process, the more powerful the ideological incentive required and the greater the penalty the society had to pay in terms of social tensions and political implications.[8]

Any attempt to draw inferences from a variety of historical experiences will encounter difficulties at its best, since in reality, no exact parallel exists between the past and the present. Likewise, any comprehension of the past will be coloured by the interest and viewpoint of the interpreting historian. Hence, no rigid model of economic growth is possible. Motives for development have varied from one society to another, resulting in different ideologies, differences in reliance upon foreign capital, differences in the roles played by governments, differences in the degree to which international trade has fostered development and differences in emphasis placed upon industry and agriculture. And yet, history can still suggest some new ways of looking at numerous current problems, especially in view of the many similarities existing in certain key areas of developmental economic and social patterns of

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[8]For a lucid description of types of incentives employed historically by various European economics, see A. Gerschenkron, ibid.

both past and present, as suggested above, and as will be brought out more clearly in the following brief discussion concerning the modernization of a number of economies in the past.

GREAT BRITAIN

The modernization of Britain, the first of its kind anywhere in the world, serves as a classical example of industrial development. From about the middle of the eighteenth century to that of the nineteenth century Britain's rate of economic growth was most rapid, surpassing any hitherto known rate, so much so, that the events of that era are commonly described as an "Industrial Revolution", characterized by phenomenal social and economic changes, making the transition from a more or less stable agricultural and commercial society to a modern industrial one. New inventions and technological innovations gave rise to a multiplicity of new processes in an already existing specialized but non-factory manufacturing sector, and although technological progress and economic possibilities were kept in harmony as much as possible throughout the period, a host of new conditions resulted. Cotton, Britain's key industry at the time, was revolutionized by the inventions of the flying shuttle, the spinning jenny, the water power spinning frame, the mule and the power loom.

The application of steam power became widespread. The use of coke in the production of iron had far-reaching effects, bringing into prominance England's "Black Country" side by side with Lancashire and Yorkshire, the world's most important textile centers at that time. Significant innovations also occurred in the chemical industry and in ceramics. This points to the fact that while the effects of rapid development tend to be widespread, rarely do they affect every part and every sector of the economy. The most important factor remains for productive investment to be applied at the economy's real "growing points", as seen above. Factories began to mushroom all over the country, forming nuclei for future industrial towns. Transportation and communications were greatly improved by the building of canals, roads, railways and steamboats, while the country's favourable geographic set up, with its coastal configuration and excellent river system permitted industrialization without the aid of railways, a unique example amongst industrializing countries which followed Britain. The usual pattern of the British society became deranged with the emergence of distinct sectors of capitalists and labor; the freeing of economic enterprise from old government restrictions ushered in an environment of laisser faire. Urbanization proceeded at a rapid rate and with it the evils of slums, exploitation, alternate booms and depression, but

also world-wide economic interdependence accompanied by general higher standards of living as indicated by upward trends in real income per occupied person, closely paralleled by rising productivity, pointing to the dual opposing aspects of construction and destruction which usually tend to accompany the process of industrialization.

The transformation of the British society was a gradual process, preparations for it having had their start as early as the fifteenth century. The discoveries of the New World stimulated trade and resulted in a tremendous commercial expansion, saw the beginnings of capitalism and commercial enterprise, but with the greater part of investment going into finance, trade and land purchase, the most profitable outlets at that time. Hence, any economic expansion during the sixteenth to eighteenth centuries was of an extensive rather than intensive nature, causing no significant structural changes within the economy. The existence of an atmosphere of political security, a flowering of literacy and philosophical ideas and ideals encouraged the receptiveness of the people to new and changing ways, stimulated industry and productive investment so much so as to make it a way of life, and in so doing left practically no place for foreign enterprise in England at that time, nor any need for it. Modernization further grew and developed in an international setting, centering upon a world market.

Suitable conditions in a world trading area for mass consumer goods helped Britain become by the middle of the eighteenth century the world's largest free trade area, reducing prices to consumers and costs to British producers, thereby safeguarding markets from unwanted competitors.[9]

Trade and industry thus stimulated and facilitated one another, setting off a chain reaction which was transmitted by growing markets, improved transportation and communications, progressive technology backed up by an intellectual evolution, higher productivity and a centralized political structure which went to establish more general security for entrepreneurship. England's relative advantages for industrialization existed thus both on the supply and the demand side, the former being associated with geographic and commercial advantages as well as with domestic, political and religious security, cultural and intellectual evolution, all to ensure rising productivity and increased security of new productive capital outlays, while on the demand side, growing populations, and spreading receptive domestic and international markets for British goods, perhaps in response to the tremendous improvement in Britain's

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[9]For an interesting discussion of the British transformation to a modern society, see B. E. Supple, "Economic History and Economic Underdevelopment", (The Canadian Journal of Economics and Political Science, Volume XXVII, No.4, November, 1961), pp. 460-478.

commercial practices, also contributed their share to the country's rapid industrialization.

The Industrial Revolution did not end in England. Other countries followed the British example during the latter half of the nineteenth century; some even surpassed the British rate of growth, probably through their ability to enlarge upon "borrowed" technology. These European economies looked to Britain for many things such as capital, methods of production, ideas, entrepreneurs, skilled workers and managers, as well as for engineering experts to help construct their transportation facilities, especially the railways, which played so important a role in their process of modernization.

FRANCE

Although a country with great potentialities for economic development, France was surprisingly slow in realizing this process. Only after the 1830's did development commence to proceed at a fairly steady pace. After a relatively long period of stagnation, encouraged by the restrictive policies of mercantilism, numerous inflexibilities and a thirst for national aggrandizement was an impetus to industrialization introduced by the French banks, who, with the zeal of missionaries, and paradoxically, under the auspices of the socialistic ideology of happiness

and maximum benefits to all through rapid industrialization, proceeded to carry out this task. The importance of foreign capital in industrializing France was minimized at the time, but the role played by international trade in integrating France in a world economy was most significant.

GERMANY

Absence of political and national unity undoubtedly contributed to the importance of nationalism as prime impetus to Germany's industrialization. The German Government played an important part in initiating an active entrepreneurial role. After 1850, the country saw tremendous improvements in transportation. The creation of a zollverein reduced internal trade barriers and helped launch the country upon its developmental process, one which was based upon domestic capital, borrowed technology and international trade.

RUSSIA

A relative late comer to modernization, Russia commenced this process in the 1890's, some three decades after the German "take-off". The obstacles she was forced to overcome were tremendous, what with serfdom lingering on to the 1860's and a virtual absence of both private

entrepreneurs and a skilled and disciplined labor force. It was the task of the government, by means of fiscal and financial policies, as well as entrepreneurial activities in the field of social overhead, to pave the way for private enterprise. A sustained rise in the price of grain in the mid-1890's, together with an upward trend in European demand, stimulated, with the aid of capital imports, a railway boom. In view of the Russian peasant's recourse to handicraft production for many of his necessities, a fact which gave him an excessively elastic demand for industrial goods, a rise in the price of farm products became essential to help induce these peasants to exchange their products and thus help support town dwellers as well as producers of raw materials. Railway construction encouraged the iron and coal industries, cotton textiles and finally Baku petroleum. Russian industrialization was less influenced by the British example and was more of a self-generating nature. Later on, isolation may have helped the country's problems of capital formation.

Delayed industrialization might have been the cause of the country's prevalent social strife. By 1905, the society's leading factions, autocrats, capitalists, bourgeoisie and intelligentia, found themselves at opposing ideological poles. A relatively late ambition to industrialize and secure the rights of the less privileged

finally saw its culmination in the 1917 political revolution and the emergence of a dictatorship.

JAPAN

As Great Britain has helped change the international pattern of underdevelopment, so also Japan, the pioneer of Asian economic modernization, may perhaps be considered to have done the same for Asia, providing a practical case study of a very poor country which has succeeded in shaking off grinding poverty, and perhaps pointing thereby the way of future possibilities for the rest of Asia and Africa.

The Industrial Revolution was introduced into Japan by Europeans in the last years of the nineteenth century and the early twentieth century. In spite of severe population pressure, inadequate natural resources to supply essential materials, scarcity of suitable agricultural land and a variety of restrictive social and political traditions, Japan succeeded in her endeavour to industrialize. The political revolution of 1868 resulted in the Meiji restoration, ushering in agricultural improvements, deliberately utilized to reduce needs for manpower on the farm and create a large number of free hands for industry. A deliberate price inflation of the 1870's shifted savings away from consumption into profitable investment, aiding domestic capital formation and lessening dependence upon

foreign capital. This was made easier by the availability of loanable funds from wealthy merchants and by the establishment of a modern bank. The government, aided by a progressive class of landlords, assumed the vital role of an initiating and active entrepreneur, so much so that by the 1880's the tradition-bound country emerged with a diversified industry, a productive agriculture and a diligent population. Japanese traditions and way of life managed to survive a thorough imitation of Western capitalism and industry, indicating the ability of the old and the new to exist and function adequately side by side.

The above descriptions pretend to do no more than present a bird's eye view of a complex process. Before proceeding to discuss problems associated with "new" countries, it might perhaps be well to attempt a brief summary of certain similarities amidst so many differences which seem to emerge from the foregone description, and attempt, though in full realization of the numerous pitfalls involved, some sort of a superficial comparison of the developmental paths as followed by Russia and Japan with that of Canada, centering primarily around the assumption that agricultural problems and their solutions were perhaps the core of the developmental process of all three economies concerned.

Foreign trade appears to have been the means used to

varying degrees to take advantage of available economic opportunities. Capital, techniques and equipment could all be imported from outside, but the fundamental change, the actual Revolution had to emerge from within the society, and was fashioned in each case by the unique inherited characteristics of the particular society involved.

Like Canada, so also Russia, had to contend with the problem of vastness of area and its climatic limitations. As in Canada, so in Russia, transportation and communication facilities were of utmost importance and the problem of regionalism has affected both countries, but in a different direction with Russia aspiring to attain regional self-sufficiency, whilst Canadian policy was directed towards regional interdependence. As in Canada, so also in Russia, climatic limitations in the form of frost and drought caused fluctuating yields, making technological innovations an important pre-requisite to development. The "take-off" in both countries was aided by the rise in the price of grain stimulated by an increasing demand on the European market, making so much more attractive the heavy investments involved in vast railway nets with their usual linkage effects. Unlike the Canadian example, though, at the time of "take-off", the Russian land was already overcrowded, plagued by problems of disguised unemployment and land hunger, making an upward trend in

productivity an important pre-requisite for the much needed ultimate release of labor for industry.[10]

In Japan, a country so completely different from Canada in practically every respect, agriculture has also played a crucial role in the "take-off" process. Land technical innovations rather than capital intensive ones were responsible for the rise in productivity, enabling the agricultural sector to carry out all those tasks which one has come to expect of it, namely,

a) Supplying needed food for a rapidly growing urban population and helping meet increased food demand resulting from a rise in per capita income;

b) Earning foreign exchange by exporting agricultural products and their processed counterparts. In Japan, these were silk cocoons and raw silks, tea leaves and tea, as well as a host of handicraft manufactures. But in Japan, foreign trade expanded only in proportion to the general economic expansion and its significance lay more in the importation of technology and knowhow;

c) Supplying labor for growing urban centers. This

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[10]Some of the information concerning the Russian example was based upon A. Baykov, The Development of the Soviet Economic System, (Macmillan Co., New York, 1947), A. Gerschenkron, op. cit.

excess labor did not consist of landless peasants or family units, but rather of young, single people lured by the promises of the city, as becomes evident from the insignificant variations in the number of families registered in farming at the beginning and end of "take-off" period;

d) A tremendous rise in savings in the agricultural sector forced by an inflationary process or otherwise and used for industrial purposes. A land tax, mostly on agricultural land, permitted the government to transfer income from the rural to the industrial sector;

e) Once productivity within the agricultural sector increased, rises in income followed, stimulating demand for products of the domestic industrial sector.

In the Japanese case, as distinct from the European examples, the agricultural revolution proceeded side by side with the Industrial Revolution rather than preceding it, permitting thereby greater harmony between the agricultural sector and other sectors of the economy, making the transition a more orderly process of social change.[11]

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[11] Some of the information concerning the Japanese example was obtained from the writings of W.W. Lockwood, The Economic

NEW COUNTRIES[12]

The usual problems facing a "new" country are often penalties of voluntary or involuntary pioneering activities rather than consequences of economic backwardness. New pioneering societies, such as Canada, for instance, are therefore a separate group with their own specific characteristics and should be treated accordingly. Yet, here also, no two countries are truly alike, and yet, it is still possible to distinguish a number of broad, general characteristics which such societies hold in common. Some of these characteristics were so aptly described by Adam Smith when he wrote, "the colony of a civilization which takes possession either of a waste country or of one so thinly inhabited that the natives easily give place to the new settlers, advances more rapidly to wealth and greatness than any other human society". Furthermore, "the colonists

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Development of Japan, (Princeton University Press, Princeton, 1954), and K. Ohkawa and H. Rosovsky, "The Role of Agriculture in Modern Japanese Economic Development", in Economic Development and Cultural Change, (IX, No. 1, Part II, October, 1960). Further references will be made in the Bibliography.

[12]Some of the arguments expressed here are based upon W. A. Mackintosh, "Some Aspects of a Pioneer Economy", Canadian Journal of Economic and Political Science, (November, 1936, No. 4), pp. 457-463; A. F. W. Plumptre, "The Nature of Political and Economic Development", in the British Dominions Canadian Journal of Economic and Political Science, (November, 1937), pp. 489-507.

carry out with them a knowledge of agriculture and of other useful arts superior to what can grow up of its own accord in the course of many centuries among savage and barbarious nations."[13] And indeed, "new" countries where numerous economic opportunities were equally available to all, tended to have a relative abundance of resources to population, settlement and development were carried out not by an indigenous people, but by migrants from older, more advanced industrial societies, with whom they continued to maintain political, economic, cultural and sentimental ties.

It is often claimed that during the nineteenth century, international trade acted as an engine of growth, originating within older industrial centers, where constant technical innovations stimulated productivity, which then together with a growing population, gave rise to the secular expansion of primary production within new pioneering centers. And indeed, historically, development in the latter was not as rapid as in the former, nor was it, in most cases, so much concentrated in industry. Instead, an export staple of one kind or another appeared as the causative variable of their prosperity. Specialization, according to the principle of comparative cost advantages, integrated these

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[13]Adam Smith, The Wealth of Nations, (Everyman's Library, Great Britain, 1958), Volume II, p. 63.

economies into a world market, facilitated mobility of factors, commodities and specie and helped the economies make fuller and better use of their abundant, as well as their scarce factors. International trade, by permitting the production of a larger quantity of goods than would be normally possible with a limited domestic market, helped raise productivity within these economies. Still, the scope of even a good commercial policy tends to be conditioned by the interaction of supply and demand factors and, as such, can only stimulate economic growth but not initiate it all by itself, thereby making the effectiveness of an export staple as an engine of growth dependent upon the flexibility and adaptibility of resources used, the nature of the production functions employed in the export industry, the elasticity of demand for this export product, and the movements in terms of trade. Relative scarcity of labor requires its productivity to be relatively high as well as the availability of reserves of capital, the productive capacity of which will tend to rise with improved techniques to counterbalance any difficulties resulting from a shortage of labor.

But merely increasing the supply of a staple will not necessarily be translated into an increase in demand. Once the basic needs of the population are satisfied, there is danger of a growing portion of capacity remaining idle. It

is hence most important to see that demand will keep pace with capacity, creating great need for a dependable growing foreign demand. The establishment of such a demand will depend upon the nature of the staple, its competitiveness, trends in population and in income. A remunerative price which tends to depend upon the income elasticity of demand, must be maintained for this staple. Since only wealth will help create wants, real income must rise before domestic demand can provide inducement to domestic investment, hence, only an export staple capable of inducing greater growth of the domestic market will be a suitable agent of economic progress. Suitability of an export staple as a catalyst of economic growth can be tested by the strength of its linkage effects upon the establishment of other industries throughout the economy.[14]

Theoretically, international specialization based on the principle of comparative advantages should promote growth of productivity and real income, the latter expected, under certain conditions, to react upon the economy's demand for imports as well as for domestic production. In this sense, subsistence agriculture can have no linkage effects. As for commercial agriculture that will depend upon the

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[14]For definitions of linkages and an analysis of growth in terms of inducement, see Albert O. Hirschman, The Strategy of Economic Development, (New Haven, 1958), Chapter 14.

particular staple involved. Most types of agricultural and mineral produce usually undergo some degree of processing before being exported and with the availability of reliable markets, processing industries which were originally based upon agricultural materials will commence to stimulate other activities, providing the exporting staple can finance, through its foreign earnings, the necessary imports which are to be used as powerful agents for local development, if this be necessary.[15]

The extent to which an export sector induces subsequent development of other sectors depends a great deal on the technological nature of the production function of the export commodity. If the export staple is of a plantation type, which is labor and capital intensive, with significantly increasing returns to scale, any income resulting here, will tend to be unequally distributed and in a manner not conducive to economic growth, what with the relative well-to-do squandering their wealth upon conspicuous consumption ventures, whilst the low income recipients are forced to spend practically all of theirs upon food and other necessities. Resulting urbanization, if any, is entirely devoted to the export staple, whilst the rest of the economy remains practically outside the market economy,

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[15] Ibid.

and any inflow of productive factors, such as capital, will be directed only into the export industry.[16]

If, on the other hand, the export staple is of the type of an agricultural product such as wheat, requiring only small absolute amounts of labor and capable of being produced efficiently on a family size farm, income here will tend to be more evenly distributed. This type of staple will usually require wider organization of markets and will be dependent upon transport and handling services. Pressing demand for the latter will make their operation sufficiently profitable to stimulate the emergence of trading communities in the appropriate places. A multiplier effect will be felt in agricultural processing plants, in port facilities and in other social overhead in warehouses, stores, financial institutions and similar other such activities, all of which will help facilitate external economies and will involve considerable investment outlays. A newly emerged urban population will then create its own demand for housing, public services and the like, requiring more

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[16]The discussions pertaining to a plantation economy as well as to wheat producing regions are based on R. E. Baldwin, "Patterns of Development in Newly Settled Regions", (Manchester School of Economic and Social Studies, May, 1954), pp. 161-179, and the introduction in Douglas C. North, The Economic Growth of the United States, 1790-1860, (Prentice Hall Inc., 1961).

investment and stimulating more income. If this income be spent outside the area of its creation, development will be stimulated elsewhere, adding very little to local well-being. But if it be spent locally, the demand for housing, trading and similar such activities will be greatly stimulated. Though some local demand for industrial goods can be satisfied through imports, so as to leave domestic resources concentrated in primary industries, this may not always be economical and domestically manufactured goods might be preferred in other sectors of the economy. Once income is increased within the latter sectors, a new multiplier-accelerator process will tend to set in and, if sufficiently high, will stimulate the building of new factories there to absorb any increase in population. In this way income of the export producing sector, though a fixed multiple of the particular staple, will require an increase in the domestic market if it is to lead to successful economic growth.[17]

With growing incomes, patterns of consumption and capital requirements tend to alter. Wants have a tendency to change, but will only become significent when backed by

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[17]For an analysis of problems of induced and autonomous investment with respect to economic growth, see J. Duesenberry, "Some Aspects of the Theory of Economic Development", Explorations in Entrepreneurial History, (December, 1950), pp. 96-102.

purchasing power. Present and past levels of income of a particular family, as well as of the community as a whole, tend to influence expenditure patterns. It is generally accepted that income elasticities of demand for foodstuffs and other necessities usually tend to be lower than those of luxury or even comfort items, such as better clothes, houses, recreation activities, longer stay at school, health care and the like. Yet these, in turn, may become necessities at higher levels of income. When this is the case, the proportion of income spent on foodstuffs and simple necessities will diminish with the increase in purchase of more diversified items, and will direct employment of labor and capital away from primary production and into secondary and certain groups of the tertiary sectors, namely, into manufacturing, commerce on a more sophisticated level as well as other service trades, whose share in the national product will also rise proportionately, implying at the same time a greater degree of urbanization.

On the basis of comparative cost advantages, a pioneering economy will, during its early stages of growth, be in the position of a young debtor, with its imports exceeding its exports and with an investment greater than savings, making the inflow of foreign capital essential, to fill this gap, to stimulate development and to increase output and

real income. But the country's absorptive capacity of capital is limited by the availability of complimentary factors of production which are required to co-operate with this capital, as well as by the country's ability to avoid inflation and maintain a balanced balance of payments. This inflow of foreign capital and the consequent state of the economy's balance of trade, will be directed by the pattern of growth of the borrower's real income and by its marginal propensity to consume, or simply by the staple's amount and disposition of income. A balanced relationship must thus exist between the economy's volume of exports with its receipts of foreign investment and between the necessary imports and the ability to service foreign investments.

It would hence seem, that for economic development to succeed, an economy must be able to reorganize its productive services in such a way as to get the maximum output from its available resources. Since commercial agriculture will usually require improved techniques, as explained above, the latter may in themselves help raise productivity in the agricultural sector, and thereby permit the release of labor for other purposes, diversify domestic production and stimulate development in secondary, tertiary and residentiary industries. The direction in which this diversified demand will proceed is important. If it proceed towards ordinary food products, neither production nor employment will expand

since their short run supply curve is inelastic. If towards the building industry, though this be most important in itself, it can only participate in growth but not initiate it, nor can it act as a leading sector, with its tendency towards standardization, lack of mechanization and decentralization. It has been suggested that consumer goods for medium and lower income groups, in view of the steady demand associated with them, their high value relative to their weight minimizing transportation costs, and the relative ease with which their productivity per worker can be raised, are best suitable to spread growth throughout the economy.[18]

Whether growth in national income will be followed by a growing demand is largely determined by institutional factors. An effective government is most important in providing incentives and pressures for suitable economic activity, in utilizing tariffs, fiscal and financial policies to stimulate growth, in providing needed social overhead and in alleviating shortages and removing bottlebecks.[19]

Some of the more outstanding examples of the economies

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[18]The above arguments are based on an article by K. E. Berrill,"International Trade and the Rate of Economic Growth", Economic History Review, (April, 1960).

[19]The above paragraph is based on an article by B. E. Supple, "Economic History and Economic Underdevelopment", The Canadian Journal of Economic and Political Science, (November, 1961), p. 477.

which have succeeded in widening the base of their export industry to sufficiently diversify their economy include New Zealand, which though an agricultural economy relying heavily upon a large exportation of foodstuffs and wool, employs less than one quarter of her working force in her primary industries, a fact which points to the efficiency of her labor in the agricultural sector while the fact that her service trades engage almost one half of her total labor force could be taken as an indication of the country's high standard of living. Similarly for Australia, a country which succeeded to diversify her economy by the accelerated development of the manufacturing of consumer goods, as well as industries to substitute for import products. Likewise, Denmark successfully raised her standard of living through the development of an intensively capitalized agriculture, an act stimulated by proximity to the United Kingdom market, and diversified her economy through a variety of dairy processing industries, which though not considered a manufacturing activity in its "Purest" sense, could perhaps still be included within the broader sense of this term. Finally, the United States, so immense a producer of food to have attained self-sufficiency, still, employs a decreasing number of her population in this sector, whilst the numbers of those engaged in manufacturing, construction and transportation services, increases in proportion

to the total rise in her working force.

In dealing with the Canadian example in following chapters of this thesis, a topical presentation will be adopted rather than proceed in the usual chronological sequence, so as to enable a clearer presentation of comparisons between the "Take Off" period and an earlier period, commencing with Confederation.

Though realizing the significance of Confederation, the various policies leading to it and those emerging from it to the study of Canadian economic growth, the next chapter will deal but briefly with these and will attempt to use them merely as a framework, for Canada's subsequent economic development.

CHAPTER II

NATIONAL UNITY - PROCESS AND POLICIES

That geography has played an important role in shaping the nature and direction of Canadian economic development, is probably a mere truism. For Canada, a rolling country with fertile river valleys, rocky mountains, forested hills and long coasts, it would seem natural to have farming, mining, lumbering and fishing as chief industries. About one thousand miles of sparsely settled shield separates the eastern part of the country from the Western prairies. The Great Lakes waterway system extends some two thousand miles from the Gulf of the Saint Lawrence into the heart of the continent. The Saint Lawrence plains and the eastern Great Lakes form a fertile, valuable agricultural region. The plains extend from the East westward, in three prairie steppes, across the provinces of Manitoba, Saskatchewan and Alberta, forming a vast grain producing region traversed by a large river system. The central plain is separated from the Pacific Ocean by a great mountain area.

Practically the entire population is concentrated into a narrow strip of land extending across the continent and

broken up by barren lands and by rocky mountains into a number of sections. This inhabited territory is situated almost entirely within the cool temperature zone, experiencing persisting climatic irregularities, and is, therefore, not conducive to self-sufficiency. The limiting nature of soil and climate, the vastness of the sparsely settled land, the specialized nature of available resources, tend to affect size and distribution of population and all together make for dependence upon foreign trade. This dependence is further reinforced by availability and cheapness of water transportation facilities to older industrial centers, and by proximity to the competitive and fast-growing United States, which has often set the pace of Canadian development, for better or for worse. As is often the case with dependent or satellite economies, Canada too experienced the feeling of deprivation, in the sense of not being able to derive maximum benefits from trade possibilities. Hence her strong desire for a national system of a politically independent economy.

The existence of sparsely populated, wide open spaces, as well as that of specialized resources tends to promote sectionalism with its disharmonious economic interests, often resulting in uneven development with all its strifes. This led to the need for considerable initiative, under the guidance of a unified, central authority, to bridge such vast, diversified spaces and give them a national identity.

Similarly, the country's comparative cost structure pointed towards the production of foodstuffs and raw materials for export purposes, thus exposing the economy to violent fluctuations, which made adequate planning paramount. The country's trade pattern required the rounding out of the Saint Lawrence system, extending it in an east-west direction, so as to help unite province to province rather than to an often nearer American state. In this manner, a transcontinental economy based upon geographical position, and diversified, yet complimentary natural resources was to be established with the aid of developmental projects, such as an intercolonial railway system from east to west, to help dispense with dependence upon American transport routes so as to preserve national identity and eventually promote domestic secular prosperity, even if initially high economic costs were to be incurred. Eastern Canada was to acquire its much needed outlet to the sea via the Maritimes, and in return supply the latter with a market for its coal, iron, fish and timber. The Prairie provinces were visualized as large suppliers of wheat, flour and meats, and so eventually provide Eastern Canada with a flourishing carrying trade, as well as with a market for the latter's manufactured products. British Columbia was to add its gold and timber and the Lake Superior country its mineral wealth for the benefit of the entire nation. All told, Confederation was

expected to provide the essential fiscal and monetary policies to promote growth of domestic manufactured industries, encourage immigration, enlarge the domestic market to enable large-scale production with its accompanying economies, enhance the competitiveness of Canadian goods on the international market, strengthen the country's bargaining position, improve its credit and facilitate the floatation of bonds to stimulate public and private economic activity. Thus, in a nutshell, autonomous economic development was sought within technological and institutional parameters, based upon a trans-continental network, a prairie agriculture geared to overseas markets, and manufacturing industries in Eastern Canada to be protected from American competition by high tariff walls.

And indeed, on July 1867, the four older provinces of North America, namely, Upper Canada known to-day as Ontario, Lower Canada or Quebec, Nova Scotia and New Brunswick united to form the Dominion of Canada. The New Dominion Parliament was to have control of all general affairs not specifically delegated to provincial authorities, namely, regulations of trade and commerce, customs and excise, navigation and shipping, currency and banking, weights and measures, public debt and borrowing on public credit, public works, transportation and communication, and a host of similar activities. Relations of the Dominion

with the Empire were greatly simplified, the number of local capitals being reduced to one, shifting the center of gravity in local matters from London to Ottawa. National integration and identity were aimed at through social, educational, political and economic cohesiveness.

Generally speaking, a dynamic state assuming leadership of a nation's activities, will hasten its economic progress as well as ease its growing pains. The length to which such a government will extend its strategic responsibilities will depend upon the set-up of each particular nation and upon the relative strength of its various pressure groups. In Canada, the Government has assumed an important entrepreneurial role in initiating and financing the country's economic development and laid down the foundation for subsequent growth by means of,

a) Financing social overhead, especially that of railway construction, to help unite scattered provinces, overcome tremendous distances, create a domestic market and foster national unity;

b) Attractive and liberal land and settlement policies to help open up the country and encourage immigration on a larger scale;

c) A prairie agriculture geared to overseas markets;

d) A policy of high tariffs to encourage and protect a diversified domestic manufacturing industry.

In a "new" country, such as Canada, where rapid development has been associated with a rapid appreciation of the capital value of natural resources, the prevalence of the optimistic philosophy preaching the possibility of quick enrichment stimulated great expenditures which were often accompanied by exceptional prosperity. But such expenditures were not always justified, hence the occurrence of periods of equally exceptional depressions as well, causing a relative cessation of private expenditure. This, as well as a general need for vast sums of capital to initiate and continue a variety of essential projects, called for government activity on a large scale, especially so in view of the fact that reduction in capacity of some such projects, or a discontinuation of their activity, which could have been inevitable when financed exclusively by private enterprise, would have involved much human suffering and high economic costs.

The Canadian process of transition to modern sustained growth, was in part a matter of building overhead capital in the form of railways and other forms of transportation and communications. Given the distances involved and sparseness

of population, comparative advantages appeared to lie in agriculture making constantly diminishing transportation costs a pre-requisite for the successful large-scale marketing of staples. To this end, government initiative and assistance were essential. And indeed, fiscal policy was directly linked to problems of transportation, the Canadian government having undertaken a deliberate policy to stimulate land and water transport services by means of subsidies of money and land. Sectional pressure in Canada has resulted in important changes in freight structure, for the West as guaranteed by the Crow's Nest Pass Agreement and for the East as expressed in the Maritime Freight Rates Act. Extensive financial means for railway construction were made available by government land appropriation and land sales by borrowing on the European market, or by the floatation of securities abroad.

Construction of railways and similar developmental projects helped enhance the value of Western resources. The government's activity of "selling the West" resulted in a variety of policies of land settlement, to facilitate the expansion of population and agriculture.

Historically, agriculture appears to have occupied a central position in the Canadian process of economic development. As early as the seventeenth century, and upon Champlain's initiative to help diversify the French Canadian

economy, wheat became the chief crop of the Saint Lawrence Valley. But the unfavourable climate of the Valley, primitive agricultural techniques, high overhead costs and the reliance of fur traders upon Indian food supplies in the interior country, have all contributed to a weak agricultural system. From mid-eighteenth century to mid-nineteenth century Ontario assumed the position of Canada's dominant wheat producer, but its success in this role was greatly limited both by the international scene and by its inability to withstand competition.

Attention was focused on the Canadian West at an early stage, long before settlement actually materialized there. Although actual agricultural prospects of the Canadian prairies were uncertain for a long time, the fact that the prairies were a natural extension of the American frontier, made settlement there necessary, if only to preserve national integrity. Besides, the American experience, as well as that of the Red River Valley pointed to wheat as a possible export staple. And, indeed, for the semi-arid and subhumid prairies, with their short growing season, deficiency of moisture and variability of climate, wheat, the bread of many nations, seemed the only possibility, since it most easily adapts itself to various conditions and can be grown more readily than any other foodstuff under almost any climatic conditions, as indeed it does practically all over the

world. The remoteness of the Western Prairies from metropolitan centres, in addition to the above-mentioned limitations, made for an early realization that the key to the area's development lay in technological arrangements, such as an adequate railway network to help bring about a favourable price-cost relationship of staple and transport rates; the development of an early maturing wheat to overcome danger by frost, and dry farming practices to overcome moisture difficulties, all involving planning by a central authority. To that end, Dominion experimental stations were set up under the direction of Dr. W. Saunders, to make agriculture possible on the Canadian prairies. This was eventually achieved by popularizing summer fallowing on the plains to conserve moisture, and when settlement in the West was already well under way, the early maturing wheat variety, namely, the Red Fife, became universal there, and the frost resisting superior variety of Marquis wheat was discovered and introduced, adding greater stability. With the establishment of the department of Agriculture, it became possible to increase technical assistance and guidance to farmers. An active land policy was undertaken with Confederation. The Free Homestead Act was suggested in 1862, following the American example, and was passed in 1872. Various loan boards as well as boards for inspection, grading and marketing were set up, and direct subsidies to primary producers

became available.

As the Canadian Pacific Railway Company acquired amongst its privileges some twenty-five million acres of land fit for settlement, they too wished to encourage settlement, to stimulate traffic; and so, in turn, became a colonizing agent, advertising extensively, setting up offices in Great Britain as well as in other European centres, and even sent out travelling lecturers to remote towns to lecture and demonstrate by means of slides the attractiveness of the Canadian West.

Although settlement of the West had become successful only after 1896, and although wheat had attained significance also that late, or even slightly later, expected profitability of wheat production and the associated investment involved in developing the Canadian prairies, were undoubtedly significant expanding factors in themselves, and acted as stimulants to domestic and foreign investment.

Though the country's comparative cost advantage pointed to the production of primary products, the desire for stability and security encouraged diversification in the form of industry, and protection to native industries became a factor in government policy. A national policy of protection was adopted in 1879 and tariffs have since then become a central topic of controversy on the Canadian scene. Like the railways, the tariff was expected to force traffic in an East-West

direction, enlarge the domestic market for local products and help foster a national economy. Estimated trade between Canadian provinces in 1896 amounted to $116 million, as against the $1 million of 1861,[1] showing an immense increase in interregional trade. Likewise, tariffs were expected to increase the domestic traffic of manufactured goods, and thereby increase railway earnings sufficiently to enable reductions in transportation costs to producers of raw materials by an amount equal to or greater than the rise in the price of manufactured goods due to the tariff protection.

It is quite difficult to assess the consequences for Canadian economic development of this policy of tariff protection. We cannot be sure that similar results would not have been attained in the absence of such a policy. Investment seems to be forthcoming in many projects whether protected by tariffs or not. Ever since Professor Taussig, after having served for a period of some ten years as Chairman of the United States Board of Commerce, refused to commit himself as to the extent to which tariffs have contributed to the growth of a particular industry, the tendency has been amongst many economists, to deny positive contributions of tariffs. And yet, in the Canadian case, proximity to

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[1] Report of H. W. P. Holland, Sessional Papers of Canada, Volume V, p. 461.

the United States has introduced into the Canadian economy techniques of manufacturing closely modelled on the American style, with its large scale mass production of standardized commodities. Undoubtedly, the limited Canadian market due to population size, and the limited supply of labor must have restricted the range of local industries. But size of market was not the only limiting factor. In addition, nature and scale of manufacturing operations, wages and cost of labor, cost of materials, machinery, transport, distribution, climate, capital costs, profits, legislation, taxes, national management, all play an equally important role. In view of this, it is interesting to note the results of an investigation conducted by D. H. Fulberton and H. A. Hanson. These indicated that the growth of secondary industry in Canada has been rapid in periods of falling protection and that although protection had its greatest impact on new industries and products, in general it has not been an "adequate source of demand or a dynamic determinant of growth of domestic manufacturing",[2] implying that protection may have been a necessary condition for the existence of many secondary industries, and yet, not a sufficient condition in itself to assure their growth. In a country such as Canada, with an overwhelming dependence upon primary

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[2]Royal Commission on Canada's Economic Prospects, Ottawa, (Queen's Printer, 1957), p. 36.

production, diversification of foreign investment into secondary industries, which are concentrated in only two of its provinces, would result in an unbalanced growth, with much dislocation, creating discontent. Interference with the free play of natural economic forces is likely to result in high economic costs. National disadvantages or advantages have to be weighed against these costs, and in Canada's case, the deciding factor apparently was the desire for a national independent entity at any price.

As pointed out previously, the country's geography and national policies thus made for dependence upon the international play of forces, a topic to be taken up in the following chapter.

CHAPTER III

CANADA AND THE INTERNATIONAL MARKET

". . . relationships between foreign trade and growth are varied and complex . . . occasionally they are remote."[1] Much controversy has arisen concerning the above relationship. To some, "More or less foreign trade is neither a necessary nor a sufficient condition of growth or non growth",[2] to others, "Statistics of Foreign Trade are popularly regarded as among the most important indexes of a country's progress and well being . . .".[3] And indeed, the historical experience of various countries has shown different relationships between rates of growth of foreign trade and of domestic development. Numerous poor countries, despite considerable growth in their foreign trade have lagged behind in their domestic development, which tended to

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[1] C. P. Kindleberger, "Foreign Trade and Economic Growth: Lessons from Britain and France, 1850-1913", in the Economic History Review, (Vol. XIV, No. 2, December, 1961), p. 305.

[2] Ibid.

[3] K. W. Taylor, Statistics of Foreign Trade, Statistical Contributions to Canadian Economic History II, (The Macmillan Co. of Canada Ltd., Toronto, 1931), p. 1.

proceed at an exceedingly slow rate if at all, while in contrast, a number of to-day's wealthiest economies have managed, in the past, to aptly utilize their opportunities on the international market as a springboard towards a marked and rapid economic growth. This, of course, points to the supposition that a mere increase in a country's volume of trade will in itself be an insufficient criterion of growth, and that it is perhaps rather the character of the particular country's export base and the degree of its domestic market imperfection which will, amongst other things, be of greater significance here.

The latter quotation above appears more relevant to the Canadian case. For Canada, a country geographically not adapted to diversified production and consequently not to economic self-sufficiency, the proportion of her needs which could be obtained more cheaply abroad than by domestic production tended to increase, creating greater dependence upon foreign trade. Similarly, the specialized nature of the country's bountiful resources required, in view of a limited domestic market, large external markets to permit a more economical exploitation, while proximity to the United States and trading arrangements with that country, also contributed to the greater dependence of the Canadian economy upon foreign trade. It is hence not surprising to note the relative importance of a few raw materials

for export purposes, especially that of wheat, to the growth of the Canadian economy, with its regionalism and aspirations for regional interdependence, while possessing so few alternative opportunities. Increased production of wheat following a rise in demand for it on the international market has successfully managed to link Canada to the international scene in a relatively short period of time, and provided a stimulus to a vast influx of capital which helped raise domestic output, employment and real income. The air of profit expectations surrounding wheat was perhaps also responsible for the large influx of immigrants into the country, and the opening of the Western frontier to settlement. Specialization in wheat has also stimulated and induced growth via a multiplier effect working back from an increased final demand in the agricultural sector through the exportation of wheat to a variety of complementary industries, stimulating thereby growth of many tertiary industries, which in turn then proceeded to stimulate growth of the country's secondary sector, with wheat acting here as the carry over of prosperity to the rest of the economy.

Rates of growth of the Canadian economy are hence viewed here as a function of available possibilities for the development of the country's natural resources and the relative ease of converting the latter into cash sales on

the international market; the country's staple export trade thus becoming the key factor contributing to her rapid economic progress, realizing at the same time, that it was not merely the rise in volume of trade as such which helped the country's rapid progress, but rather the character of the export industry, the strength of its linkage effects, the nature of its production functions, the manner of disposition of the income derived from this sector, and a host of other variables, to be discussed more fully later on in this thesis, which together helped determine the timing and pace of the country's take off into sustained growth.

In view of the Canadian comparative cost structure and the essential roles that agriculture and the export sector thereof were led to play in the country's developmental process, it becomes both interesting and necessary to, (a) view, even if only briefly, the effects of external conditions upon the Canadian economy. To that end, a brief analysis of some international and Canadian economic fluctuations over a period ranging from the 1860's to the first World War will be undertaken, with a mere hint at the main causes of such fluctuations. The dependence of the Canadian economy upon European demand for some essential raw materials, particularly cereals, and proximity to the United States and commercial links with that country have linked

their prosperities together, but rather with Canadian prosperity more of a function of European and American prosperity. Participation in an international market has hence caused Canadian trade to be regulated by the sum total of the varying influences in all participating countries rather than by internal considerations alone, rendering the Canadian economy sensitive to external fluctuations of prosperity and depression. In this sense, changes in prices received for raw materials on the international market caused fluctuations in Canadian incomes received from abroad, via its income effect, whereby prosperity was induced by a transfer of purchasing power, or via its investment effect whereby prosperity was induced through the operation of an accelerator, reducing thereby much of the economy's former flexibility and practically nullifying its capacity for automatic adjustment to changing conditions.
(b) Similarly, it becomes important to set out the factual aspects of Canada's position in a world economy, by observing in some detail the trend in the country's foreign trade, its composition, its relationship to the country's total output, the percentage distribution of the country's gross national expenditure in exports and imports of goods and services, and so on, to be undertaken later on in this chapter, so as to be able to relate the above, even if only tentatively to the general emphasis of this thesis as a whole.

A. THE INTERNATIONAL SCENE

The 1860's have generally been given an overall favourable press. Britain, the world's most advanced industrial nation at the time, was experiencing a boom accompanied by fairly high rates of growth of production, an upward trend in real wages, a policy of easy money and a booming foreign trade. The United States, Canada's closest neighbour, was also experiencing relative prosperity and rising demand conditions, accompanying post Civil War reconstruction and a vast railway expansion programme.

These external conditions formed a favourable setting to the emerging new Dominion of Canada. Increasing demand and rising prices have stimulated Canada's external trade, so much so, that towards the end of the 1860's and early 1870's, the country's external trade occupied a much higher proportion of her gross national product than ever before.

A world-wide depression set in towards the end of 1873, unsettled conditions being further accentuated by an international secular price decline. Opinions as to the cause of this price decline tend to vary. W. W. Rostow maintains that falling prices were, to a large extent, caused by " . . . prolonged overshooting in particular sectors of the economy and by reaction from such excessive distortion in the sectoral pattern of growth . . . the overshooting

process . . . arose from areas of War and/or of large scale expansion in the capacity for raw materials and foodstuffs, usually connected with the opening up of new areas",[4] the latter aspect was apparently made possible by declining transportation rates.

Yet, there appears to be no statistical evidence for the acceleration of growth in the production of the most important items in the diet of the countries concerned, namely, that of wheat and meat, from whence it is argued that no major acceleration of growth of primary production occurred to explain the downward trend in prices.[5] Even if the trend rate of growth in primary production does appear, superficially, to be in the upward direction, it does so only because the trend rate of growth of industrial production had failed to maintain its pre-1870 rate. It is assumed that a general decline in prices will normally result from failure of industrial capacity to keep pace with growth of primary production output, thereby causing industrial demand to decline. On the basis of this assumption,

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[4]W. W. Rostow, Process of Economic Growth, (2nd edition, Oxford, 1960), pp. 126, 129, here quoted from D. Coppock, "The Causes of The Great Depression, 1873-1896", (The Manchester School of Economic and Social Studies, Vol.XXIX, No. 3, September, 1961), pp. 205-230.

[5]This is based on an investigation conducted by C.Snyder, "New Measures of Trade and Economic Growth", Review de l'institute International de Statistique, (January, 1934, pp. 5-15), and is taken from D. Coppock, ibid., p. 212.

the secular decline in world prices is attributed to the deceleration, after the early 1870's, of production of coal and pig iron in Britain, Germany and the United States, the world's then major industrial nations, also to a decline in world output of wool, jute, lead and zinc, as well as to a drop in European consumption of cotton and United States production of cotton.[6]

Since raw materials act as production inputs and are closely related, in a technical sense, to industrial production, it is logical to assume that the overall demand for raw materials was also likely to have collapsed fairly early in the 1870's but not so with foodstuffs, since the supply of the latter is assumed to be capable of adjustment to changes in demand even if in an opposite direction, as was the case during the depression of the 1930's.

Whichever was the true cause, statistical evidence points in the direction of a declining trend in prices during the period in question. Import prices in the United Kingdom are said to have fallen forty-six per cent and forty-five per cent respectively in 1870/7 - 1893/4. In the United States, the world's cheapest center of production, farm prices fell twenty-eight per cent and thirty per cent respectively over the same period.[7] The index of import prices for food, drink, and tobacco from the United

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[6]D. Coppock, ibid., p. 215.

[7]Ibid., p. 210.

States fell from one hundred in 1872 to seventy-seven in 1900, whilst that from areas of "recent" settlement fell from one hundred in 1872 to sixty-nine in 1900, whilst the index of import prices for raw materials from the United States fell from one hundred in 1872 to fifty-five in 1900, and that from areas of "new" settlement, fell from one hundred in 1872 to seventy-one in 1900.[8]

Though in the United States economic activity had already slumped considerably by 1873, for Canada, the years 1871 - 1875 were marked by industrial growth and extensive undertakings in capital investment. The building of the intercolonial Canadian Pacific Railway was begun, as well as considerable expansion in large scale lumbering, also in manufacturing. But by 1876, the Canadian economy was also enveloped in depression, which persisted for some twenty years, till 1896.

Once again, no uniform picture emerged for the world as a whole. Whereas for Britain, the 1880's marked the worst part of the depression, both in severity and duration and manifested itself primarily in the building industry, for the United States and for Germany, those were years of secular boom in the building industries, especially so in

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[8]G. M. Meier and R. E. Baldwin, Economic Development, (John Wiley & Sons, Inc., New York, 1959), p. 233; based on A. K. Caincross, Home and Foreign Investment, 1870-1913, (Cambridge University Press, Cambridge, 1953), p. 233.

the United States, where tremendous railway systems helped open up the West. In the 1880's, whilst a large increase in the rate of industrial demand relative to supply of primary products helped raise the price of the latter and managed to extend to some Canadian industries, briefly reviving the country's export trade, with some favourable effects upon employment and income, it is claimed that on the whole, the above was offset by poor local crop yields, and by generally unsettled financial conditions, the worst of which are reported to have occurred in the 1890's. Still, the gloomy overall pessimistic picture presented of Canada of the "great depression" years is not always consistent with available evidence. Throughout the entire period, including both periods of upswings and downswings in world prices, Canadian terms of trade tended to improve and remain in her favour, and this must have helped to alleviate, at least to some extent, the severity of local depression. Similarly, Canadian industry was protected to some extent from competitive imports at that time by a high tariff wall accompanied by relatively high transportation costs, and with resulting increasing domestic production costs, local prices tended to move more slowly than did world prices, perhaps also taking the severe sting out of the depression.

In the late 1890's all leading nations entered periods of expansion and prosperity, interrupted by occasional

periods of crisis and depression. Briefly, for the United States, revival which set in in 1895, continued till 1903/4, while in Europe this revival was interrupted by 1900. The years 1905/6 were prosperous years for both Europe and the United States, while in 1907, a crisis set in, involving the world money market, accentuated by an attitude of panic in the United States, where it led to a brief, but severe depression in 1908/9. Revival followed in England and Germany in 1909/11, and slightly later on in the United States, with a general set back in 1913, which was overcome and averted by the advent of the First World War.

The international scene in brief, then,was one of War - the Boer, the Spanish-American, the Russo-Japanese and the Balkan Wars, with their peculiar effects upon demand and prices. More gold appeared on the scene, due to more efficient mining techniques, further stimulating the upward trend in prices. European population was rapidly increasing, crowding into industrial centers, increasing demand for foodstuffs, especially cereals. Prices of raw materials and foodstuffs rose more rapidly than did prices of manufactured articles, especially those of iron and steel, and indeed, the ratio of trade in primary products to manufactured articles fell from an index of 112 to 100 over this period.[9] This favoured a country such as Canada,

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[9] Ibid., p. 265; calculated from League of Nations Industrialization and Foreign Trade, (Geneva, 1945), p. 157.

through a favourable swing in her terms of trade, but affected Britain's gross and net barter terms of trade adversely, causing unemployment in her building industry, as well as falling real wages, though by that time, the availability in Britain of social services as well as of a more equitable tax structure, helped ease generally adverse conditions.

For Canada, recovery from the antecedent period of depression commenced in 1896, but proceeded only slowly and gradually until 1901, after which, excepting a temporary set back in 1907, which was spurred on by disturbances on the world money market, the country's industrial expansion became spectacular, embracing extensive railroad building, public works and a variety of other investment enterprises. The Canadian prairies emerged as the country's most important export sector, fundamentally altering the country's economy. The existence of many millions of cheap and fairly fertile land, capable of relatively inexpensive exploitation during a period of expanding external markets, rising prices spurred on by an increase in the world's gold output, free land grants, increasing land values, cheap and ready credit facilities, adequate transportation facilities and the complete settlement of the best American lands, all helped make the lure of the Canadian prairies irresistible.

International trade thus helped link various markets

together, interweaving economic fates with one another to their advantage or even disadvantage, helping transmit from one economy to another both booms and depressions. The lag in timing of reaction, or the lack of unison in reaction to world conditions, is perhaps due to the existence of specific factors, such as domestic harvest conditions, domestic politics, changes in local monetary and banking systems, war, peace, the discovery of new industrial methods and a host of such similar factors, which help determine a country's prospects of profit, and are therefore also responsible for its state of prosperity.

B. CANADA'S FOREIGN TRADE

CANADIAN EXPORTS

Specialization in production and in the exportation of staple products has always been an important characteristic of the Canadian economy, especially so in the years preceding the first World War. For example, during the years from 1880 - 1910, some eighty per cent of Canadian exports consisted of five staples, namely, grain, dairy and meat products, lumber, fish and non-ferrous metals. As such specialization makes dependence upon international markets inevitable, it is not surprising to note, that Canada's trade per capita has always ranked high amongst the world's trading nations.

The following Table 1 helps analyse Canadian exports over the period under consideration here.

TABLE 1

PERCENTAGE RELATIONSHIPS OF GROUPS OF EXPORTS TO TOTAL EXPORTS, TEN YEAR AVERAGES, 1869-1915

Classification	1869-76	1876-85	1886-95	1896-05	1906-15
Agricultural products	12.3	23.0	21.0	21.5	32.4
Animals & Their products	24.1	24.5	39.2	38.5	23.9
Fibres and Textiles	0.9	0.7	0.9	1.2	1.7
Wood, wood products & paper	38.7	30.5	27.4	19.1	15.6
Iron & Steel products	1.2	1.4	0.7	2.3	4.8
Non-ferrous Metals	1.8	1.5	1.4	10.1	13.8
Non Metallic Minerals	2.9	2.0	3.4	3.3	3.2
Chemicals	- -	- -	0.3	0.6	1.3
Miscellaneous	18.1	6.4	5.7	3.4	3.3
Total	100.0	100.0	100.0	100.0	100.0

Source: K. W. Taylor, "Statistics of Foreign Trade", Statistical Contribution to Canadian Economic History, II, (Toronto, 1931), p.5.

Changes in the composition of Canadian exports after Confederation have occurred partly as a reaction to increased competition from new American grain growing frontiers, and partly as a result of increasing United States tariffs, after the passing of Reciprocity. By the second half of the nineteenth century, the structure of Canada's exports changed, becoming more diversified, showing a decline in the relative importance of forest products, while agriculture continued to expand, but away from grains and toward livestock and dairy products to serve United Kingdom markets, where population was rising and transportation costs were declining. In greater detail, at the time of Confederation forest products were the country's main exports and, though fluctuating up and down, showed almost no growth throughout the earlier period, holding a relatively minor position at the end of the period, after having ranked second in importance, in terms of value, during 1879 and 1896, third in 1901, first once more in 1905, third in 1910 and, finally, fourth in 1913. Since then, the rapid development of the Canadian pulp and paper industry has restored forest products to prime importance and equal to that of agricultural products.

Agricultural produce, grains, vegetables and fruits, came next to forest products in importance in terms of value, at the time of Confederation, manifesting a rising trend in

value until 1886, surpassing forest products in terms of value, in 1879 and 1882, then following a declining trend, assumed to be due to the failure of foreign sales of wheat and flour to keep pace with the expansion of the general export trade, until 1896, when their value commenced to rise once again, trebling in 1905 - 1910, increasing one and a half times again by 1913, rising from $37 million in 1900 to $138 million in 1914, primarily the result of an increase in the exports of wheat from $33 million in 1900 to $133 million in 1914, constituting practically the entire export of grain.

The above decline in agricultural produce was largely compensated for by a significant increase in the export of animals and their products. By 1900, animal products ranked first in importance, having surpassed grains and vegetables in importance in the years 1886, 1891, 1896, 1900 and 1905, but by 1910, ranked second to grains and vegetables and by 1913, only third.

This decline in the importance of animals and their oroducts is significant, indicating the change in the domestic supply of Canadian food, which occurred over the last ten years of the period, through the stagnation of mixed farming and the excessive specialization in the production of wheat on the Canadian prairies.

By 1900, non-ferrous metals, gold and quartz, ranked

second in importance after animal products, with wood and its products third and agriculture (other than animals and their products) fourth, the latter rising to first position by the end of the nineteenth century. Mineral produce, though showing an upward trend since Confederation, assumed significance only by 1901, when attaining second place in importance, third place in 1905, fourth in 1910 and second once again in 1913. The last fifteen years saw a remarkable development in the production and exportation of both precious and base metals.

Manufacturing has, on the whole, shown an upward trend, but has attained some significance only after 1900, sharing fourth place of importance with forest products by 1913. The appreciable increase in textiles and in iron and steel exports after 1900 points to the attempts made by Canadian manufactures to appear on world markets.

The following Table 2 shows trends in exports of manufactured items, as well as their percentage relationship to total exports. These manufactured items include flour, canned fish and meats, condensed milk, sole and upper leather, paper, textiles, iron and steel products, aluminium, coke and chemicals.[10] With the exception of the years 1886 - 1890, when a slight set back occurred, the general trend was one of a steady increase.

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[10]K. W. Taylor, op. cit., p. 5.

TABLE 2

EXPORTS OF MANUFACTURED GOODS, FIVE YEAR AVERAGES, 1869-1915
(VALUED IN 1900 PRICES, IN MILLIONS OF DOLLARS)

Fiscal Years	Manufactures	Total	Per Cent
1869 to 1870	3.2	68.5	4.7
1871 to 1875	4.1	80.2	5.1
1876 to 1880	7.1	79.4	8.9
1881 to 1885	7.4	91.4	8.1
1886 to 1890	6.3	89.4	7.1
1891 to 1895	9.2	108.8	8.5
1896 to 1900	13.9	156.6	8.9
1901 to 1905	26.2	197.2	13.3
1906 to 1910	33.1	217.2	15.2
1911 to 1915	68.1	312.8	21.8

Source: Ibid., p. 6.

Until 1876, flour was the most important item amongst Canada's "manufactured" exports; but was replaced by canned fish from 1877-1901, when the latter often accounted for more than half the manufactured exports. Iron and steel manufactures were of some importance from 1871-1883, but their importance fell off considerably after 1895, attaining prime importance after 1910. The exportation of textiles in appreciable quantities commenced about 1892 and increased

steadily to the end of the period. Other items, such as condensed milk, paper, aluminium and chemicals assumed importance only during the last ten years of the period under study.[11]

Canada's total export capacity increased greatly from $63 million (in "1900 Dollars") at the time of Confederation, to $125 million (in "1900 Dollars") by 1896, rising further to $183 million (in "1900 Dollars") at the turn of the century, with this last figure more than doubling to $390 million (in 1900 prices) by 1914, when grain and grain products comprised one third of the country's total exports. Whereas the only manufactured items exported prior to 1900 were simple types, consisting almost entirely of processed foodstuffs, by 1900, the considerably broader base of Canadian exports was already noticeable, and was reflected in the exports of iron and steel products, non-ferrous metals, non-metallic minerals and chemicals, some fully manufactured products, such as machinery, agricultural implements, drugs, clothing and furniture.

The following figures point to the tremendous percentage increase in the exportation of grains over the years 1901 - 1913 at the same time marking the percentage increase of all other Canadian exports, with the exception of animals

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[11] Ibid., p. 6.

and their products, which experienced a decline, as pointed out earlier.

TABLE 3

TRENDS IN EXPORTS, 1901 - 1913

Classification	Percentage Increase	Percentage Decrease
Grains and Vegetables	505.3	
Animal Produce		19.3
Fisheries	52.4	
Forest Products	44.1	
Manufacturing	172.8	
Minerals	42.3	
Miscellaneous	118.7	

Source: Canada, Department of Labour, Statistical Branch, The Rise of Prices and the Cost of Living, 1900-1914, (II, Ottawa, 1915), p. 913.

In view of the tremendous surge of field crops to prime importance amongst Canadian exports, and the intensive specialization in production involved thereby, it becomes both interesting, and necessary to pursue this topic in somewhat greater detail.

Wheat was exported from this land even in pre-Confederation days, and had been a major farm surplus of Upper Canada, but

not a dominant export. As for Western Canada, it has been a regular wheat exporter since 1876, but it was only since 1896 that concentration upon this single crop has taken on such significant proportions as to force Eastern grain growers to switch their efforts to dairy products to supply United Kingdom markets. Yet, it was only with the turn of the century, from 1901 - 1914 that wheat became Canada's dominant export, representing the entire increase in grain exports, constituting sixty-three per cent of the increase in exports of agricultural and vegetable produce and forty-one per cent of the increase in total merchandise exports.[12] The really outstanding rise in wheat exports occurred from 1910 - 1913. "From fiscal 1911 to fiscal 1914, wheat flour exports increased $79 million, the increase of total exports being $183 million, while in a period five times as long, namely from fiscal 1896 to fiscal 1911, wheat and wheat flour exports increased only $50 million, whilst total exports increased $176 million",[13] and by the end of World War I, wheat had become Canada's largest single export in terms of dollar value, wheat and flour exports bringing in $10.9 million in 1901, $377.5 million in 1921 and $495 million in 1929. As for domestic conditions of wheat consumption

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[12]J. A. Stovel, Canada in the World Economy, (Harvard University Press, Cambridge, 1959), p. 108.

[13]Ibid., pp. 108-109.

since Canada has always had a large surplus of wheat, these high export figures actually represent no change in domestic conditions.

To bring out the significant changes in the world situation which helped make Canada one of the world's major suppliers of wheat, the bread of many nations, it is useful to subdivide the world arbitrarily into wheat surplus and wheat deficient areas.

South East Europe was normally a large export area, the countries of Bulgaria, Hungary, Rumania, Yugoslavia, Poland and the U.S.S.R. comprising six major European wheat exporting areas. Amongst the major non-European wheat exporting areas, the Indian Peninsula, Algeria, French Morocco, Tunis, Chile and Uruguay were of greater significance.

Western Europe, on the whole, constituted an important wheat deficient area. Eighteen or nineteen such European countries supplied a good market for wheat. As for non-European wheat markets, Africa, Egypt, Japan, Korea and New Zealand were the more important ones.

The following Table 4 illustrates the quantities of wheat imported by wheat importing countries, in five year averages, 1909 - 1937.

TABLE 4

WORLD NET IMPORTS OF WHEAT AND WHEAT FLOUR
(MILLIONS OF BUSHELS)

Period	United Kingdom and Irish Free State	Continental Europe	Ex-European Countries	Total
1909 - 1914	217.7	326.7	98.0	643.2
1922 - 1927	224.4	373.1	128.5	740.2
1927 - 1932	236.3	373.9	159.4	780.7
1932 - 1937	225.8	170.8	126.8	543.6

Source: Report of The Royal Grain Inquiry Commission, (Ottawa, 1938), p. 121.

From 1909 to 1914, the Danubian countries and the U.S.S.R. provided some forty per cent of the world's wheat exports. Prior to the first World War, Russia was the world's largest wheat exporter, with an annual average of 164 million bushels, constituting more than one quarter of the world's total production of the years 1909/10 and 1913/14. After 1914, with the exception of two or three years, Russia was no longer a significant wheat exporter and Canada, the United States, Australia and Argentina became the world's major wheat exporters.

The following Table 5 indicates the shift in the exporting position amongst the four major newly emerged exporting countries, at the same time pointing to the decline in

importance of the world's former major wheat suppliers.

TABLE 5

PERCENTAGE SHARE OF WORLD TOTAL NET EXPORTS OF WHEAT OBTAINED BY EACH EXPORTING COUNTRY 1909-1914 and 1922-1923

Country	1909-1914 per cent	1922-1923 per cent
Argentina	12.3	19.4
Australia	8.0	7.0
Canada	13.9	39.0
United States	16.0	28.2
Total	50.2	93.6

Source: W. J. Waines, "Prairie Population Possibilities", A Study Prepared For The Royal Commission On Dominion-Provincial Relations, (Ottawa, 1937), p.57.

For the seven European exporting countries, the percentage share of total net export trade fell from 40.5% to 1.4% over the period indicated and the nineteen importing countries obtained most of their wheat from outside of Europe, Canada providing a large share of this, as third largest wheat exporter in 1912, second largest in 1918 and first largest after 1922 to 1930, when it accounted for almost forty per cent of the world's total wheat exports, a situation implying

a high degree of specialization in Western Canada and a great dependence upon external wheat markets and fluctuating world prices.

Most of Canada's trade was carried on with the United Kingdom and the United States. Until 1891, the value of these two to Canada in actual exports was about equal. By 1870, for instance, Great Britain received forty-three per cent of Canada's exports and the United States forty-five per cent. From 1891 a change occurred, with exports to Great Britain just about doubling and then trebling upon figures of Canadian exports to the United States. It is interesting to note that despite vast market potentials of the United States and the availability of facilities for intercommunication, Canadian exports to the United States over a period of thirty years from 1868 - 1898 only rose by some $12 million; a total of $1,260 million worth of Canadian products going to the United Kingdom, whilst only $955 million worth to the United States over these same thirty years.[14]

The following Table 6 points to the share of Canadian exports in percentages, going to the United States, the United Kingdom and to other countries, for the years 1901, 1905 and 1913 respectively.

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[14] Cost of Living Report, (Vol.II), p. 486.

TABLE 6

EXPORTS OF CANADA, FOR THE YEARS
1901, 1905 and 1913
(PERCENTAGES)

Year	Foods				Materials			
	U.K.	U.S.	Other	Total	U.K.	U.S.	Other	Total
1901	76.5	13.7	9.8		26.9	64.2	8.9	
1905	74.2	14.9	10.9		22.7	63.5	13.8	
1913	66.6	21.7	11.6		20.3	65.0	14.7	
Increase % of 1913 over 1905	81.7	195.0	115.8	102.3	49.6	71.0	78.4	67.2

Source: Cost of Living Report, (Vol.II), p. 992.

As indicated in the above table, the United Kingdom received the largest proportion of Canadian exports of foodstuffs, whilst the United States received the largest proportion of Canadian exports of materials. At the same time, Canada's sales to countries other than these two increased steadily from $1 million in 1851 to $19 million in 1900, and went higher in 1913.

As expanding exports of primary commodities are usually amongst other things, a means toward the acquisition of manufactured goods for the expansion of domestic production and consumption, it is necessary now to proceed to the analysis of Canadian imports.

CANADIAN IMPORTS

TABLE 7

PERCENTAGE RELATIONSHIP OF GROUPS OF IMPORTS
TO TOTAL IMPORTS INTO CANADA
TEN YEAR AVERAGES 1869-1915

Principal Classes	1869-75	1876-85	1886-95	1896-05	1906-15
Agricultural Products	27.0	23.7	22.2	20.6	16.6
Animals	7.5	9.1	8.4	8.2	7.8
Textiles and Fibres	26.5	28.7	26.0	21.7	17.4
Wood and Paper	- -	4.9	4.7	5.1	5.8
Iron and Steel	12.8	12.4	12.6	16.9	21.4
Non-Ferrous Metals	1.1	1.9	3.4	4.7	6.0
Non-Metallic Minerals	5.0	7.4	11.3	10.8	13.2
Chemicals	2.3	2.4	3.3	3.1	2.8
Miscellaneous	17.8	9.5	8.1	8.9	9.0
Total	100.0	100.0	100.0	100.0	100.0

Source: K. W. Taylor, op. cit., p. 4.

Table 7 above points to a steady increase in Canadian imports from the time of Confederation to 1874, after which a downward trend, coinciding with a depressed economy, proceeded until 1880. Much of this decline can perhaps be

attributed to generally falling prices, as well as to a real contraction in volume of imports. Declared values of imports during this six-year period, declined by some forty-five per cent, but when valued in "1900 prices" the decline amounted only to twenty-nine per cent. After 1880 to about 1883, a marked recovery is in evidence. Despite a slight overall downward tendency, the next fifteen years show a slight, but steady increase in values, whilst in volume, imports were twenty per cent higher in 1897 than in 1883, pointing to a distinct upward tendency. From the turn of the century to the First World War, the overall increase in imports was very rapid, reflecting the general optimism throughout Canada during those earlier years of the twentieth century.

Table 7 further aids the analysis of Canadian imports classified into their specific groups in the period under study here.

By 1870, agriculture and vegetable products constituted over twenty-five per cent of total imports into Canada, this figure though declining in later years, the decline was offset by the importation of fresh fruits, nuts and spices, sugar and tobacco, all a variety of products suggesting rising local standards of living. A similar situation is in evidence for fibres and textiles, items looming fairly high in importance amongst Canadian imports until the turn of the

century, more than doubling in value in "1900 Dollars", from $14 million at the time of Confederation to $36 million in 1900, after which their rise in importance was not so marked. But this was only relative, since the per capita imports, in "1900 Dollars" actually increased substantially both for agricultural products and for fibres and textiles, especially after 1900, pointing towards a rise in Canadian standards of living in terms of quality, quantity and variety, as is pointed out in the following Table 8.

TABLE 8

IMPORTS PER CAPITA (VALUED AT 1900 PRICES)
BY FIVE-YEAR AVERAGES, 1871-1915
(DOLLARS)

	1871–1875	1876–1880	1881–1885	1886–1890	1891–1895	1896–1900	1900–1905	1906–1910	1911–1915
Agricultural products	5.55	4.93	4.31	4.80	5.44	6.32	7.16	8.06	10.39
Textiles	5.49	5.27	5.97	5.96	5.98	6.46	7.74	8.79	10.46

Source: Ibid., p. 4, footnote 5.

The most significant change involved the large increase in the importance of iron, steel and other metal products, which rose in value from $5 million in 1869 to $133 million in 1914 (both in "1900 Dollars"), or from 12.8% in 1869 - 1875

to 21.4% in 1906 - 1915. This increase is perhaps a reflection of the increasing importance Canada was attaching to the importation of capital equipment so essential for the building of her vast railway nets, as well as for the industrialization of Eastern Canada and the mechanization of Canadian agriculture. Similarly, the notable increase in the importation of non-metallic minerals and of chemicals can be assumed to reflect the increasing industrial activity within the country.

In general, raw materials imported into Canada consisted of crude rubber, unprocessed tobacco, raw fibres and textiles, textile yarns, pig iron, brass, copper, aluminium, lead, tin, zinc, bituminous coal and sulphur.[15] The following Table 9 points out the general trends in raw material imports, as well as their percentage relationship to total imports over the period under consideration.

TABLE 9

IMPORTS OF CERTAIN RAW MATERIALS (IN 1900 PRICES)
(FOR FIVE-YEAR AVERAGES IN MILLIONS OF DOLLARS)

Fiscal Year	Raw Materials	Total	Per cent
1869-1870	2.6	52.2	5.0
1871-1875	4.6	80.4	5.7
1876-1880	5.9	73.4	8.0
1881-1885	10.2	92.8	11.0
1886-1890	13.6	104.6	13.0
1891-1895	15.9	115.8	13.7
1896-1900	18.4	145.8	12.6
1901-1905	25.8	216.6	11.9
1906-1910	37.3	294.2	12.7
1911-1915	54.2	499.4	10.9

Source: Ibid., p. 6.

[15] K. W. Taylor, op. cit., p. 5.

Of the raw materials imported, tobacco and raw textiles were of prime importance up to about 1890. Bituminous coal, pig iron and steel billets increased steadily in importance after 1880, with crude rubber assuming importance after 1890, and non-ferrous metals after 1896. In the last six years, from 1911 to 1915, the commodities ranked in the following importance, namely, bituminous coal, raw textiles, pig iron, copper and rubber.[16]

Both the United Kingdom and the United States accounted for the great bulk of Canadian external trade, predominancy shifting from one to the other. It is perhaps possible to generalise that Britain supplied Canada with most of her manufactured goods, while the United States supplied most of the needed raw materials and agricultural products. For instance, from 1868 to 1898, Great Britain exported to Canada a total of $1,331 million worth of goods, almost all manufactures, with the United States supplying $1,464 million worth of exports, consisting mainly of raw materials and agricultural products. By 1870, Great Britain was still Canada's main trading partner, providing fifty-seven per sent of total Canadian imports and accepting forty-three per cent of her exports, while the United States although receiving forty-five per cent of Canadian exports, was supplying her with

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[16]Ibid., pp. 5-6.

only thirty-two per cent of her imports. After 1870, Britain's share of Canadian imports fell to forty-eight per cent in 1880, then to thirty-eight per cent in 1890 and to twenty-four per cent in 1900, with the United States' share of Canadian imports increasing steadily to forty per cent in 1880, forty-six per cent in 1890 and sixty per cent in 1900, this increase being perhaps in part, due to the establishment of American branch plants in Canada, requiring the United States to become the main source of supply for the latter's capital goods, also involving factors such as convenience due to proximity, as well as induced similarity in tastes. Still, despite this greater dependence upon the United States market, it is held that ties to the British market for Canadian exports were sufficiently strong to hold in check any excessive influence exerted by the United States upon the Canadian economy. By 1896, imports from Britain to Canada declined by $4 million from their value of $32 million at the time of Confederation, whilst those from the United States increased threefold to $78 million.

By 1913, Canada shifted her attention to imports from other countries, a trend indicated in the following Table 10. This shift involved the use of less efficient services, due to greater distances, thereby increasing distribution costs.

TABLE 10

IMPORTS OF CANADA, FOR THE YEARS 1905 AND 1913
(PERCENTAGES)

Year	Food				Materials			
	U.K.	U.S.	Other	Total	U.K.	U.S.	Other	Total
1905	15.1	66.2	18.7		24.3	61.4	14.2	
1913	9.0	63.8	27.2		20.3	59.5	20.2	
Increased % 1913 over 1905:	42.9	131.4	249.5	140.1	139.4	178.2	307.8	187.2

Source: Cost of Living Report, (Vol.II), p. 992.

In 1905 Canada imported agricultural and animal products worth $30 million from the United Kingdom and the United States, and in 1913, $64 million worth, indicating a gain of 103%. From other countries Canada imported such products worth $6 million in 1905 and $23 million in 1913, indicating a gain of 283%.[17] Of a total gain in food imports worth $53 million, one third came from other countries, while in raw materials, less than one quarter of the gain has been from other countries.[18]

From information provided in the above two last sections concerning Canadian exports and imports, it would

[17] Cost of Living Report, (Vol.II), p. 989.

[18] Ibid.

appear that the kinds of commodities which Canada imported in the second half of the nineteenth century did not change as significantly as did the kind of commodities she exported. The most significant change in composition of Canadian exports concerned the forging of wheat to prime position amongst the country's exports after 1896, as a response to shifts in foreign demand, which also reacted favourably upon other Canadian foodstuffs and raw materials, as pointed out earlier in this chapter. As for imports, throughout the period under consideration Canada was heavily dependent upon the importation of manufactured consumption and capital goods which she could not produce herself economically at the time, though perhaps to a lesser extent at the close of the century, when her own industries became more diversified.

The following Table 11 points to the significance of international trade to the Canadian economy as indicated by the percentage relationship between commodity exports, imports and total commodity trade and the country's gross national product.

Canada's export trade seems to have been of lesser importance in 1890 than in any of the other periods since Confederation, with the proportion of the country's exports of commodities in its gross national output declining from 15.5% in 1870 to 12.1% in 1890. With the turn of the century, when wheat began to assume a major share in the country's

export trade, Canadian exports commenced to play an important and decisive role in the country's rapid growth, with exports of commodities comprising over eighteen per cent of the country's gross national product in 1900, whereas by 1910, exports of goods and services were more than three times that of the 1890 total.

TABLE 11

COMMODITY EXPORTS AND IMPORTS AS A PERCENTAGE OF GROSS NATIONAL PRODUCT, SELECTED YEARS 1851-1900

	1851	1860	1870	1880	1890	1900
Total Exports	10.7	14.1	15.5	16.7	12.1	18.5
Total Imports for Consumption	17.2	15.0	19.4	15.5	13.9	16.8
Total Commodity Trade	27.9	29.0	34.9	32.2	26.0	35.3

Source: O. J. Firestone, "Canada's External Trade and Net Foreign Balance, 1851-1900", in Trends in the American Economy in the Nineteenth Century; (A Report of the N.B. of E.R., New York, Princeton University Press, 1960), p. 759.

As for Canadian imports, these were also of lesser importance in the 1890's than in the 1870's, declining from their level of twenty-five per cent during the 1870's to twenty per cent in the 1890's. During the earlier period following Confederation to the turn of the century, imports

of goods and services into the country have expanded less over the entire period than did exports, with ratio of the former to the country's gross national product showing only slight variations since 1890. But with the turn of the century to 1910 the rate of imports into Canada commenced to increase at a faster rate than did the country's exports, surpassing the latter by almost fivefold.[19]

With levels of external trade and the balance of payments assuming particular significance in the development of the Canadian economy, it becomes necessary to pursue a more detailed study of the subject as will be attempted throughout the remainder of this chapter.

CANADA'S BALANCE OF PAYMENTS

Diagram I compares the growth in volume, of Canadian exports and imports. From 1869 until 1900, there appears to have been a one year lag between movements in exports and imports, with the former leading the direction which the latter then followed. After 1902, imports increased sharply, mainly as a result of rapidly increasing foreign investment, whilst exports advanced only slightly, giving rise to a marked and persistently increasing debit against Canada. Only by 1911 did exports increase, suggesting that this new capital investment had at last begun to be profitable.

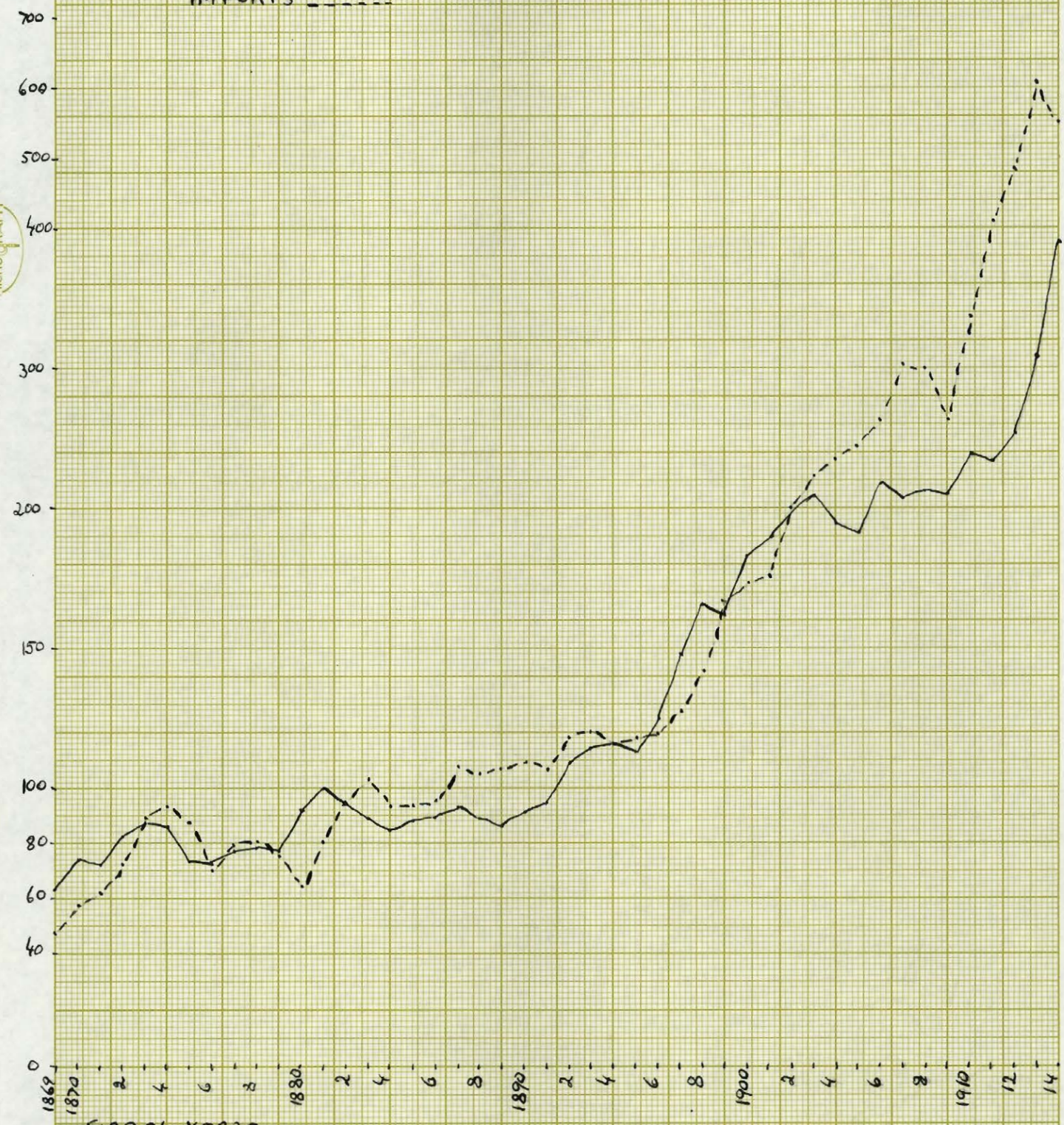
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[19] O. J. Firestone, Canada's Economic Development 1867-1953, Income and Wealth Series VII, (Bowes and Bowes, London, 1958), p. 147.

DIAGRAM I

TOTAL EXPORTS AND IMPORTS (in 1900 PRICES)
CANADA, 1869–1914 (MILLIONS OF DOLLARS)

EXPORTS ——
IMPORTS - - - - -



CCS MICROGRAPH
10 X 10 TO THE CM
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SOURCE: K.W. TAYLOR, "STATISTICS OF FOREIGN TRADE" STATISTICAL CONTRIBUTION TO CANADIAN ECONOMIC HISTORY, (vol. II, TORONTO, 1931), pp.10-13

It is tempting to associate years of rapid expansion and business activity with growingly unfavourable balances, and years of depression or slow growth with increasingly favourable balances, but the facts do not always support this generalization. The years from Confederation to 1875 were years of considerable prosperity, also of heavily unfavourable balances, with the greatest excess of imports over exports, totalling $172 million in declared values, occurring during the years 1871 - 1875, years of industrial growth and extensive undertakings in capital investment in Canada. The depression which enveloped the world in 1873, reached Canada by 1875, but her unfavourable balance, which when averaged for five year periods seems fairly constant in amount, continued to 1894, with the exception of the one year in 1880 when business is said to have been at its worst. As the Canadian economy by 1894 has not as yet attained its "take off", it is logical to assume this constant import surplus[20] to be an indication of inflow of foreign capital into the country, and indeed, the years 1868 - 1894 were years of steady capital inflow. An export surplus was shown, for the first time since Confederation (with the exception of 1880) in the years 1895 - 1898 inclusive, and again from 1900 - 1901, suggesting that this inflow of foreign capital

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[20]Net deficit on commodity trading account amounted to $3 million in 1860, $18 million in 1870, $11 million in 1880 and $15 million in 1890, as shown in Table 12 of this chapter.

has been checked, or that it has been overbalanced by Canadian liquidation of old debts to other countries and by payments of interest on old investments.

The years 1896 - 1901 mark a slow but gradual recovery from the depression years, with Canada's export trade expanding more rapidly than did her domestic economy and her imports, thus enabling payment for necessary imports. This trend was reversed during the first few years of the twentieth century, probably due to the greater industrialization of the country. After 1901, with the exception of a temporary set back in 1907, the Canadian economy was advancing in a most spectacular manner, expanding industrially, increasing public works and railway building. These booming construction activities necessitated borrowing, leading to heavy importation of capital goods, raw materials and various necessities to supply the men engaged in capital construction works, and thus, once again, Canadian imports were exceeding her exports. In addition, high wages and profits were most conducive to the importation of foreign luxuries.

In pre-Confederation days, the total value of trade between colonies amounted to some six per cent of their external trade. This low figure was probably due to the high cost of internal transportation. After 1868, the rise in inter-provincial trade was aided by the abandonment of internal tariffs and the reduction in transportation costs brought

about by the building of railways, creating a common domestic market for manufactured goods. But Canada's external trade also rose sharply. The following Table 12 points to the role of external trade in the Canadian economy during the second half of the nineteenth century, also to its relationship to the country's gross national product.

TABLE 12

COMMODITY EXPORTS AND IMPORTS, THE BALANCE OF COMMODITY TRADE AND GROSS NATIONAL PRODUCT, SELECTED YEARS, 1851-1900
(IN MILLIONS OF DOLLARS)

	1851	1860	1870	1880	1890	1900
Exports[a]						
Domestic Produce	c	c	61	84	89	177
Total Exports[b]	18	45	71	97	97	195
Imports for Consumption[a]	29	48	89	90	112	178
Total Commodity Trade	47	93	160	187	209	373
Net Balance Commodity Trade	11	- 3	- 18	+ 7	- 15	+ 17
Gross National Product	169	319	459	581	803	1,057
As Percentage of G.N.P.			per cent			
Total Exports	10.7	14.1	15.5	16.7	12.1	18.5
Imports for Consumption	17.2	15.0	19.4	15.5	13.9	16.8
Total Commodity Trade	27.9	29.0	34.9	32.2	26.0	35.3

[a]Not adjusted to National Accounts Concept.

[b]Includes both domestic and foreign produce.

[c]No breakdown available for domestic and foreign produce taken separately.

Source: O. J. Firestone, ibid., p. 759.

Canada's total commodity trade, namely, the value of her exports and imports, of $373 million in 1900 was almost eight times its 1851 value. In greater detail, this total had increased from $47 million in 1851 to $160 million in 1870, a 240% increase, increasing in 1890 one third over the total of 1870, and that despite depressed conditions and falling prices. An increase of four-fifths had occurred by 1900 over that of 1890, reflecting improved economic conditions.

For the year 1871 as compared to 1851, exports quadrupled and imports tripled. For 1890 as compared to 1870, exports rose only thirty-seven per cent and imports only twenty-five per cent, reflecting a more moderate increase. For the year 1900 compared to 1890, exports doubled, while imports increased by three fifths. For the period as a whole, exports in 1900 were almost eleven times those of 1851, while the gross national product of 1900 was only six and a half times that of 1851, showing that exports of goods as a proportion of gross national product rose from eleven per cent in 1851 to nineteen per cent in 1900 (in round figures). Imports in 1900 were barely six times those of 1851, and were equivalent to some seventeen per cent of gross national product in both years. As for total commodity trade as a percentage of gross national product, it was twenty-eight per cent in 1851 and thirty-five per cent in

1900, pointing to the increasing importance assumed by foreign trade in the Canadian economy.

Data concerning services is rather limited. Up to 1900, the bulk of Canadian trade consisted of commodities, namely, eighty-eight per cent in 1870, seventy-seven per cent in 1890 and eighty-three per cent in 1900. The importance of services commenced to increase after the turn of the century, as the Canadian economy was becoming more diversified with greater industrialization.

Table 13 gives a breakdown of exports and imports of Canadian services for selected years 1870, 1890 and 1900, while Table 14 deals with Canadian net balance over the same years, taking into account imports and exports of both commodities and services.

Canada's deficits in the exchange of services alone was relatively small, ranging from $8 million in 1870 to $27 million in 1900, but when joined with commodities to give the net foreign trade balance, the 1870 figure was much higher, at $35 million, increasing greatly to $56 million in 1890 then declining once more to $31 million in 1900.

From 1870 - 1900 the growth of exports and imports of services was more rapid than that of commodities. Imports of services consisted mainly of interest and dividend payments made by Canada abroad, this last rising from $5 million

TABLE 13

EXPORTS AND IMPORTS OF SERVICES FOR THE YEARS 1870, 1890 AND 1900 (MILLIONS OF DOLLARS)

Item	1870	1890	1900
Exports			
Freight & Shipping	5	5	17
Tourists & Travel	2	5	7
Interest & Dividends	1	2	4
Other Current Receipts	a	2	3
Total	8	14	31
Imports			
Freight & Shipping	8	8	11
Tourists & Travel	2	4	6
Interest & Dividends	5	32	36
Other Current Receipts	1	6	5
Total	16	50	58
Net Balance Services	- 8	- 36	- 27

[a]Less than $500,000.

Source: Ibid., p. 769.

in 1870 to $36 million in 1900, whereas the gain in export of services is attributed to larger shipping, tourist and travel expenses, as well as to a rise in freight and shipping. For the 1900 period, Canada's total unfavourable balance was equivalent to seven per cent of her total trade and to three per cent of her gross national product, indicating an improvement over the 1870 deficit of 18% and 8% respectively.[21]

[21]Ibid.

TABLE 14

EXPORTS AND IMPORTS OF GOODS AND SERVICES ADJUSTED TO NATIONAL ACCOUNTS CONCEPT AND THE NET FOREIGN BALANCE, FOR THE YEARS 1870, 1890 AND 1900 (MILLIONS OF DOLLARS)

Item	1870	1890	1900
Exports			
Commodities	71	96	185
Services	8	14	31
Total	79	110	216
Imports			
Commodities	98	116	189
Services	16	50	58
Total	114	166	247
Net Foreign Balance	- 35	- 56	- 31

Source: Ibid.

The following Table 15 compares Canada's external trade with that of the United States from 1870 to 1899.

TABLE 15

IMPORTS AND EXPORTS OF THE UNITED STATES AND CANADA INDEX NUMBERS (100 = AVERAGE PER DECADE OF FOUR DECADES, 1870-1900)

Period	United States		Canada	
	Exports	Imports	Exports	Imports
1870-1879	56	67	61	66
1880-1889	79	90	71	71
1890-1899	101	100	95	82

Source: Cost of Living Report, (Vol.II), p. 1020.

Over the twenty years, from 1871 - 1891, Canada's aggregate external trade increased from $170 million to $218 million in declared values, representing an increase of twenty-two per cent, whilst the United States experienced a ninety-eight per cent increase over the same period. But from 1891 - 1911, Canada's aggregate external trade rose 252%, whilst that of the United States increased only 117%. For the entire period, 1871 - 1911, Canada's aggregate external trade increased by 350% and that of the United States by 330%.[22]

The following Table 16 compares Canadian expansion of trade with that of world trade in general.

TABLE 16

INDEX NUMBERS OF COMMERCIAL EXPANSION FOR CANADA AND THE WORLD, SELECTED YEARS 1906, 1910-1912.

	1900	1906	1910	1911	1912
Canada	100.0	144.4	180.7	201.7	299.2
World	100.0	136.4	167.4	178.4	196.8

Source: Ibid., p. 935.

The above figures lead to the conclusion that Canada's aggregate foreign trade has grown at a more rapid rate than

[22] Cost of Living Report, (Vol.II), p. 1020.

that of any other country.

On a per capita basis, the following Table 17 compares the situation in Canada with that of Great Britain, France and the United States.

TABLE 17

PER CAPITA TRADE OF THE FOUR COUNTRIES FOR THE YEAR 1911

Country	Aggregate Trade '000 Dollars	Population '000	Per Capita Trade Dollars
Canada	874,638	7,207	121.36
Great Britain	6,024,365	45,369	132.78
France	3,471,745	39,602	87.67
United States	3,267,031	91,972	35.52

Source: J. Viner, Canada's Balance of International Indebtedness, 1900-1913, (Cambridge, 1924), p. 13.

On a trade per capita basis, Canada was thus second to Britain, and at a level over three times that of the United States, and slightly over one and a half times that of France.

For Canada, from the early 1870's until the end of the century, growth in imports and exports hardly kept pace with the increase in population, small as it was. But from 1896 onwards, imports per capita increased very rapidly, but

exports per capita, after a substantial rise to about 1903, declined slightly between 1904 and 1912. Real exports per capita followed an almost even trend from 1875 - 1896 and then began to rise greatly, indicating that available economic opportunities were so tremendous that the already spectacular population growth, which they induced, did not manage to keep up pace.[23]

Having, so far, considered value and volume of Canadian imports and exports, it is interesting to study their respective price indexes and analyse the trends in Canadian terms of trade over the period under consideration.

CANADA'S TERMS OF TRADE

Amongst a variety of terms of trade, those most commonly used are known as net barter terms of trade, or commodity terms of trade, which form an index obtained by comparing the ratio of export prices to import prices for a given period with the same ratio of an earlier period, and the gross barter terms of trade, which relate the quantities of exports and imports exchanged for one another in a given period to those of a base period.

A great many theories have arisen concerning these terms of trade, but often without sufficient evidence for their

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[23]Based on K. W. Taylor, op. cit., p. 3.

substantiation. For instance, in this manner it is claimed that the terms of trade regulate the direction of capital lending, that domestic business cycles are initiated by changes in terms of trade, that the terms of trade affect the nature and extent of a country's development, and are, in turn affected by the country's course of development, that favourable terms of trade stimulate foreign investment, and so on and so forth. All that can be conceded here is that, all other things being equal, rising prices for exports compared with import prices should benefit a country. Still, it is most difficult, or perhaps even impossible, to isolate the effects of this one factor when so many other factors bear influence upon a country's state of prosperity or depression. By merely observing trends in the terms of trade, one cannot say whether there has been a gain from trade, nor tell the direction of this gain, if any, for even if the price of exports exceeds that of imports, if at the same time the cost of exports exceeds this price increase, the above index will not indicate so, and therefore though it may point to a favourable gain per unit of trade, total trade as such may have declined. On the whole, price movements are a better indication of conditions than movement of terms of trade and the latter can be of use only when bearing in mind the various limitations involved.

Table 18 below, presents the general indexes of value,

volume and price of both exports and imports, also export prices as a percentage of import prices, to indicate changes in purchasing power of Canadian exports in terms of her imports, and import prices as a percentage of export prices, to show changes in the cost of imports in terms of Canadian contemporary exports, namely, the net barter terms of trade.

TABLE 18

INDEX NUMBERS OF IMPORTS AND EXPORTS: VALUE, VOLUME (1900 PRICES) AND PRICE, ALSO COST OF IMPORTS AND PURCHASING POWER OF EXPORTS
1869-1915 (1900 = 100)

Fiscal Years	Imports - Grand Total				Exports - Grand Total			
	Value	Volume	Price	Total Export Price as % of Import Price (net barter T.T.)	Value	Volume	Price	Import Price as % of Export Price
	I	II	III	IV	V	VI	VII	VIII
1869	36.6	27.5	133.0	67.2	30.7	34.3	89.4	148.8
1870	38.7	32.9	117.6	75.2	35.8	40.5	88.4	131.6
1871	48.8	35.5	137.2	68.1	36.8	39.4	93.4	146.8
2	60.8	41.7	145.7	65.6	42.9	44.9	95.5	152.4
3	72.2	51.5	140.1	71.7	46.9	47.3	99.1	139.4
4	71.4	53.7	132.9	76.1	47.7	46.9	101.0	131.3
5	68.0	50.2	135.4	78.2	41.9	39.4	105.8	127.8
6	53.6	40.3	132.9	82.1	43.5	39.9	109.1	121.7
7	54.5	45.7	119.2	82.3	41.0	41.8	98.1	121.5
8	52.3	46.1	113.5	88.9	43.2	42.8	100.9	112.5
9	45.6	43.9	104.4	87.8	38.6	42.2	91.6	113.8
1880	40.5	37.0	109.4	85.7	47.0	50.1	93.8	116.7
1881	52.4	46.3	113.3	86.1	53.1	54.5	97.5	116.1
2	64.4	54.8	117.4	91.3	55.5	51.8	107.2	109.5
3	70.6	59.9	117.8	93.1	53.2	48.5	109.6	107.4
4	61.4	53.7	114.3	91.7	48.7	46.5	104.8	109.0
5	57.8	53.8	107.3	92.5	47.6	48.0	99.2	108.1

TABLE 18 (Continued)

Fiscal Years	Imports - Value	Imports - Volume	Grand Price	Total Export Price as % of Import Price (net barter T.T)	Exports - Value	Exports - Volume	Grand Price	Total Import Price as % of Export Price
	I	II	III	IV	V	VI	VII	VIII
1886	55.6	54.8	101.5	94.7	46.5	48.4	96.1	105.6
7	60.9	62.3	97.7	98.6	48.8	50.7	96.3	101.4
8	58.3	61.1	95.9	106.0	49.2	48.4	101.6	94.4
9	63.2	61.9	102.1	99.2	47.6	47.0	101.3	100.8
1890	64.7	63.2	102.4	101.1	51.5	49.7	103.5	98.9
1891	64.6	62.0	104.2	99.8	53.2	51.1	104.0	100.2
2	66.7	68.3	97.8	105.3	61.2	59.4	103.0	95.0
3	66.8	69.3	96.3	104.6	62.4	62.0	100.7	95.6
4	63.2	67.2	93.7	107.8	63.1	62.5	101.0	92.8
5	58.3	68.4	85.3	113.1	59.6	61.9	96.5	88.5
6	61.0	69.4	87.9	105.9	63.5	68.2	93.1	94.4
7	61.8	73.8	83.8	108.5	73.4	80.8	90.9	92.2
8	73.8	82.4	88.8	109.2	87.1	89.8	97.0	91.6
9	86.5	96.6	89.6	106.5	84.5	88.6	95.4	93.9
1900	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1901	103.0	102.1	101.0	101.5	106.1	103.6	102.5	98.6
2	113.9	116.3	98.0	106.4	114.5	109.8	104.3	94.0
3	130.4	129.6	100.7	106.8	122.9	114.3	107.6	93.6
4	141.2	137.0	103.1	105.3	115.2	106.0	108.7	95.0
5	145.8	142.0	102.7	102.5	110.0	104.4	105.3	97.6
6	164.3	152.6	107.7	105.3	134.6	118.7	113.4	95.0
7	200.1	176.0	113.8	104.1	133.7	112.8	118.5	96.1
8	204.2	174.5	117.0	106.2	143.7	115.8	124.2	94.1
9	167.1	152.5	108.6	113.7	141.8	114.8	123.5	87.9
1910	214.5	196.2	109.3	114.2	163.0	130.6	124.8	87.5
1911	262.1	237.3	110.5	111.9	158.2	128.0	123.7	89.4
2	302.7	282.2	107.2	112.6	167.9	139.0	120.7	88.8
3	388.7	253.4	110.0	111.4	205.8	167.0	122.5	89.7
4	358.6	317.5	112.9	103.5	248.6	212.6	116.9	96.6
5	264.0	256.1	103.1	118.8	251.8	205.5	122.5	84.1

Note: The price in each case is the average price of all grades

of the particular commodity involved, e.g. price of wheat is the average price of all wheat exported and is thus affected by both market quotations of price as well as by average quality of wheat sold. The weights used here change from year to year, formula used is based on declared values divided by same quantity valued at 1900 prices, giving good index of purchasing power of exports, or cost of imports from year to year.

Source: K. W. Taylor, op. cit., columns III, IV, VII and VIII - p.6, columns I, II, V and VI based on Table III, pp. 16-17, Table IV, pp. 18-19.

Table 18 and Diagram II show the significant differences between import and export price indexes. Import prices showed a markedly downward trend over the period 1872-1897, an upward trend from 1897-1908, after which until 1915, their trend was fairly steady. Exports do not appear to have been affected as much by changing prices. From 1869-1900 their trend was practically even, tending in the upward direction from 1900-1908, after which, until 1915, their level was even once more. In greater detail, the import price index (1900 = 100) that stood at 140.1 in 1873,declined steadily to a low point of 85.3 in 1895, rising a little to 87.9 in 1896,while the export price index (1900 = 100) increased from 99.1 in 1873,when economic activity began to decline,to 101.6 in 1888,then after further declines,it recovered to 104.0 in 1891. Of the entire period commonly known as the "Great Depression",export price indexes were below their peak leval of 1873 only for six years,attaining a level higher than their 1873 peak for the remaining seventeen years. These movements illustrate the improvements which have occurred in Canada's terms of trade.

10 X 10 TO THE CM
G 8-14
CC&S MICRO GRAPH

DIAGRAM II

EXPORT PRICES ——
IMPORT PRICES - - - -

INDEXES OF EXPORT AND IMPORT PRICES

150 140 130 120 110 100 90 80 70 60 50

1869 1870 2 4 6 8 1880 2 4 6 8 1890 2 4 6 8 1900 2 4 6 8 1910 12 14 15

INDEXES OF EXPORT AND IMPORT PRICES

DATA OF TABLE 18, PAGE 106 Above

DIAGRAM III

EXPORT PRICES AS % OF IMPORT PRICES ——
IMPORT PRICES AS % OF EXPORT PRICES - - - -

EXPORT AND IMPORT PRICES AS PERCENTAGES OF EACH OTHER

150 140 130 120 110 100 90 80 70 60 50

1869 1870 2 4 6 8 1880 2 4 6 8 1890 2 4 6 8 1900 2 4 6 8 1910 12 14 15

PURCHASING POWER OF EXPORTS AND COST OF IMPORTS

DATA OF TABLE 18 PAGE 106 Above

Diagram III in conjunction with Table 18 show that the purchasing power of Canadian exports in terms of imports was steadily rising throughout the period, especially from 1869 - 1897, the reason being that prices of Canada's prime exports at the time, namely, animal products such as meat and dairy produce, also wood and its products maintained a slightly upward trend throughout the period, whilst prices all over the world were declining, helping reduce costs of Canadian imports, especially those of manufactured goods and iron and steel products.

The next Table 19 illustrates in greater detail, trends in prices and costs for the Canadian economy as a whole.

As indicated in Table 19, the years 1896 - 1913 saw a decline in transportation costs, a rise in prices of cereals and raw materials and the relative cheapening of costs of factors of production as well as manufactured goods generally imported by Canada.

The average price of all Canadian exports rose by 32%, grain and flour by 62%, wheat at Liverpool prices by 33%, while the price of imports increased only 24% and that of manufactured goods 20%. Ocean rates fell one half their 1870 - 1875 rates, capital goods were cheaper than previously and the rates of interest are said to have been lowest on record in British history. All these combined to foster real opportunity within the Canadian economy.

TABLE 19

CHANGES IN PRICES AND COST TRENDS
1870-1913

	Percentage Decrease 1870-1875 Average to 1896	Percentage Increase 1896 to 1909-13 Average
General Level of Canadian Wholesale Prices[a]	- 35	+ 48
Canadian Selling Prices Exports[b]	- 4	+ 32
Grains and Flour[a]	- 40	+ 62
Wheat Liverpool	- 46	+ 33
Canadian Costs Imports[b]	- 35	+ 24
Imports of Iron and Steel Products[b]	- 34	+ 6
Prices of Manufactures[c]		+ 20
Ocean Freights[d]	- 47	+ 7
Interest Rates[e]	- 23	+ 28

[a]Mitchell, H., "Statistics of Prices", Statistical Contributions To Canadian Economic History, (II, Toronto, 1931).

[b]K. W. Taylor, Statistics of Foreign Trade, Ibid.

[c]Dominion Bureau of Statistics.

[d]Isserlis, L. "Tramp Shipping; Cargoes and Freights", Journal of Royal Statistical Society, (I, 1938), p. 122.

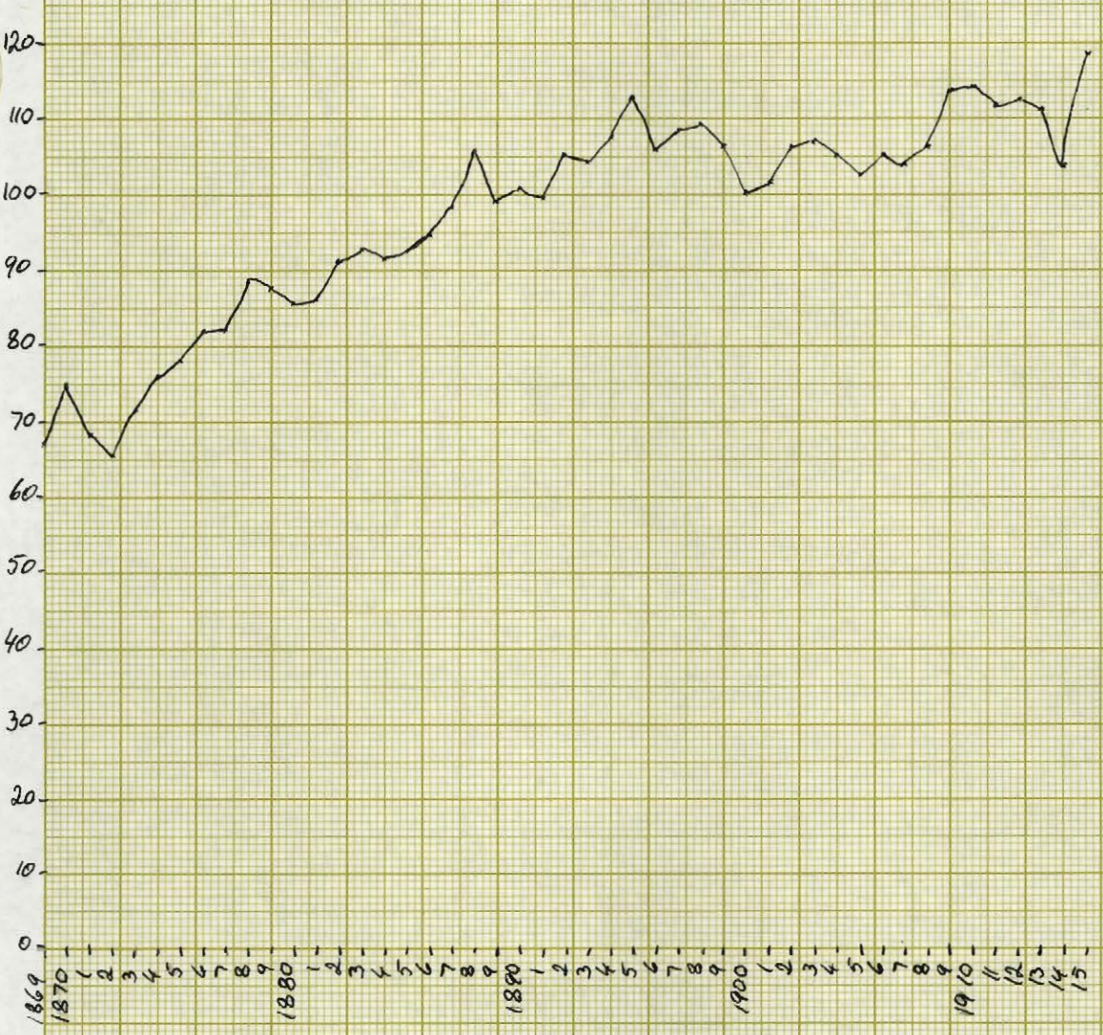
[e]Yield on U. K. Consols.

Source: Report of The Royal Commission on Dominion-Provincial Relations, Book I, Canada 1867-1939, (Ottawa, 1940), p.67.

DIAGRAM IV

CANADA'S NET BARTER TERMS OF TRADE

1869 – 1915



CCS MICROGRAPH
10 X 10 TO THE CM
G8-14

SOURCE : K.W. TAYLOR, "STATISTICS OF FOREIGN TRADE", STATISTICAL CONTRIBUTION TO CANADIAN ECONOMIC HISTORY, (VOL. II, TORONTO, 1931), P. 6
(TABLE 18, P. 106 of this THESIS.)

The terms of trade moved sharply in Canada's favour over the period, especially after 1878, when the price of manufactured imports into Canada fell materially, while the price of exports of foodstuffs rose moderately. From 1870 - 1900 the price index of Canada's imports fell by twenty-six per cent and that of her exports rose eleven per cent, improving the terms of trade from sixty-one per cent in 1870 to ninety-two per cent in 1900, when a dollar's worth of exports paid for half again as many imports as in earlier years.[24]

As for world trade, from 1870 - 1913, the average rate of increase in the volume of trade of both manufactured articles and primary products was well above two per cent per annum. However, the ratio of trade in primary products to that in manufactured articles increased by more than twenty-five per cent from 1876/1880 - 1896/1900.[25] This relative importance of trade in primary products was associated with deterioration of terms of trade for primary products, when sharp increases in tariffs on manufactured goods occurred after 1890. But from 1900 - 1913, the ratio of primary products to manufactured articles declined from an index of

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[24]O. J. Firestone, "Canada's External Trade and Net Foreign Balance 1851-1900", op. cit., pp. 757-771.

[25]G. M. Meier and R. E. Baldwin, op. cit., p. 265. Calculated from League of Nations, Industrialization and Foreign Trade, (Geneva, 1945), p.147.

112 to one of 100,[26] during which the terms of trade were improving for primary producing countries. In Canada, the vigorous tariff protection policy of 1879 is accused of having nullified, to a large extent, the favourable terms of trade brought about by the greater drop in price of Canadian imports than in her exports. On the whole, though, it seems that in the long run, the terms of trade tended to move in favour of those countries which were developing most rapidly and against stagnant economies, irrespective of their attained particular level of development.

CANADA'S CAPITAL IMPORTS

Historically, Canada was for a great many years, especially during her formative years, a consistent net importer of capital. It is estimated that the total volume of foreign capital in Canada at the time of Confederation was approximately $200 million, while total direct estimates of foreign capital invested in Canada during the period extending from Confederation to the turn of the century stood at $1,105 million,[27] and imports of capital for the subsequent period 1900 - 1915, a period half as long as the former mentioned period, were estimated at over twice as much at $2,600

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[26] Ibid.

[27] O. J. Firestone, "Canada's External Trade and Net Foreign Balance, 1851-1900", op. cit.

million, with capital imports into Canada being particularly large after 1907 to the first World War. This latter figure was estimated to be more than half as large, namely, 57.4% as the country's domestic savings, comprising twenty-six per cent of gross domestic investment in 1900-05 and thirty-eight per cent in 1906-10.[28]

Though the particular nature of the country's climate, topography and specialized natural resources required an expensive transportation system as a pre-requisite to development, in addition to a variety of public services and other highly capital consuming utilities and activities, all of which would tend in their very nature to make the ratio of domestic capital to resources rather low, there appears to be no agreement as to the actual need for Canada to rely upon foreign trade for her developmental process during the period in question. To some there seems to be no doubt that without capital imports Canada could not have undertaken her launching into sustained economic growth, and to others, "There is an element of truth in the idea that given a determination to develop our country and given a willingness on the part of the banking system to impart initial impulse by rather free lending policies, it is possible that with our domestic gold production, there was no particular reason in 1900 - 1913 why

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[28]K. Buckley, Capital Formation in Canada, 1868-1939, (Toronto University Press, Toronto, 1951), p. 63.

we ourselves could not have financed our development without recourse to British investors. Under pressure of necessity, we developed a domestic bond market and financed heavy war expenditure in a way somewhat analagous to what I have in mind."[29] The above contention is rather difficult to prove or disprove, especially since Canada did chose to rely upon foreign funds rather than develop her own "domestic bond market". Even if this latter situation were possible, it is doubtful whether it would have been sufficient by itself. No matter how patriotic and idealistic the population, or how generous the local banking policies, the process of domestic capital accumulation, by its very nature, was bound to be much too slow to cope with domestic requirements, what with the need to pay high interest on previously accumulated debts, especially at the turn of the century, when development proceeded at so spectacular a pace, making great and pressing financial demands. The analogy between the War years and the 1900 - 1913 period is not a very good one. When the War commenced the Canadian economy was already well launched upon its process of economic development, with a larger and much better developed domestic market than at the

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[29]J. C. Elliott, "The Importation of Capital into Canada; Its Effects And The Possibilities of Its Control", The Canadian Economy And Its Problems, (Part III, Chapter III), eds. H. A. Innis and A. F. W. Plumptre, (Toronto, 1934), p. 224.

turn of the century. For an economy to be able to replace imports of goods and services without lowering real domestic consumption and investment, it must have an unnecessarily low domestic productivity or else a large number of unemployed domestic resources, but this was certainly not the case in Canada. It is logical to assume that the readily available foreign funds enabled Canadian investment to occur domestically, and in so doing played a causal role in Canadian growth. Yet, there is no denying that excessive borrowing, namely, excessive investment over and above a country's earning capacity, could be a bottleneck to hamper or even reduce growth. But when not in excess, investment of capital can help improve the borrower's bargaining position on the international market, as was the case with Canada, where the years 1872 - 1878, 1882 - 1888 and 1900 - 1912 were years of most marked improvements in her barter terms of trade as well as periods of heavy investment of foreign capital.

Some economists maintain that it is usual for young agricultural nations to pass through four typical stages during their process of development, namely, the immature debtor stage, when imports exceed exports, the mature debtor stage, when the balance of trade becomes more favourable; but since there is no evidence of any such nation having passed through this last stage, it is perhaps merely hypothetical.

The third stage is that of the young creditor nation and the fourth stage, that of the mature creditor nation.[30]

Indeed, countries such as the United States, Canada, Argentina, New Zealand and others have all gone through the above mentioned first stage. From 1880 - 1890, borrowing in the United States on account of railway securities is indicated by some unfavourable trade balances. For Argentina, her trade balances were even more unfavourable and her position during 1885 - 1890 is considered a close approximation of the Canadian situation of 1905 - 1913, the Canadian case being even more pronounced, leading all borrowing countries both in immigration and in volume of imports, spurred on by heavy borrowings abroad.[31]

From 1870 - 1900 Canada was a consistent net importer of capital, which helped bridge the gap of imports over her exports. The net inflow of foreign capital into Canada, as measured by a debit balance of payments on current account, amounted to a total of some $1,000 million in 1868 - 1899.[32] Estimates for Canadian foreign investment before 1868 are based on scanty information. Professor J. Viner arrives at a figure of $15 million, primarily in bank assets and

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[30] P. Samuelson, Economics, (3rd Edition, New York, 1955), p. 620.

[31] Cost of Living Report, (Vol.II), p. 935.

[32] J. Viner, op. cit., p. 94.

railroad mileage.[33] From 1900 - 1913, the net capital inflow amounted to $2,277 million and the gross average inflow to $2,414 million.[34] If we add the year 1914 to the above period, the figure will rise to $2,713.3 millions, as shown in the following Table 20.

TABLE 20

CANADA'S TRADE BALANCE
1900 - 1914

1. EXPORTS		$4,031,400,000	
Deductions from Exports			
Interest	1,488,000,000		
Remittances to Friends	150,000,000		
Tourist Expenditure	150,000,000		
Emigrant Expenditure	245,000,000		
Insurance Payments	117,000,000		
Freight	60,000,000		
Call Money Outside Canada	35,000,000	2,245,000,000	
Excess Exports over Deductions			$1,786,400,000
2. IMPORTS		5,359,700,000	
Deductions from Imports			
Receipts from Immigrants	650,000,000		
Tourists in Canada	140,000,000		
Remittances to Friends	50,000,000		
Insurance Payments to Canada	20,000,000	860,000,000	
Excess Imports over Deductions			4,499,700,000
Balance Representing Borrowing			$2,713,300,000

Source: Cost of Living Report, (Vol.II), p. 906.

[33] Ibid., p. 88.

[34] P. Hartland, "Canada's Balance of Payments Since 1868", in Trends of The American Economy Since The Nineteenth Century, A Report of the N.B. of E.R., (Princeton University Press, 1960), pp. 717-753.

The average net per capita capital increased from some $6 in the early 1870's to over $40 in the pre-World War I year.[35] Canada's payments for interest and dividends on capital were approximately five per cent of her total debits in the early years, but at the turn of the century, as Canada became the field of one quarter of United Kingdom foreign investment, her payments of interest and dividends on capital rose to some twenty per cent of her total debits, and by 1914 her payments were almost three quarters of the annual net interest payments of the United States, and that with a Canadian population of only one third of United States population.

The London money market acted as Canada's primary source of borrowing and prior to 1900 investment was mainly in railways, municipal and industrial development. There was very little direct investment and what there was of it represented primarily United States investment in Canadian railroads, lumber, mining and investment in British and United States insurance companies operating in Canada.

In the late 1890's, gold discoveries, land boom and a general upsurge in prosperity attracted much foreign capital, including an estimated $100 million of United States capital, chiefly for mining, lumber and industrial ventures.

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[35] Ibid.

Further detail concerning Canada's major suppliers of capital and its distribution will be dealt with in greater detail in another Chapter to follow later on in this study.

The following four Chapters will deal respectively with problems concerning land, transportation, population and capital, all factors which made possible Canada's specialization in the production and exportation of her prime staple, wheat.

CHAPTER IV

LAND

Inasmuch as production is a major feature of any country's economic activity, the process of economic development can be regarded fundamentally as a series of changes in the manner and proportion in which factors of production, human or other, are combined in an effort to increase and improve output of goods and services. Availability and nature of production factors, of which land, labor and capital are usually of prime significance, and existing possibilities for their improvement hence become of utmost importance to any developing economy, especially in view of the fact that often, one or the other of these factors tends to be in scarce supply relative to the demand placed upon it.

The term "land" in its economic sense, implies total available natural resources of an economy be they mineral, forest or water, farm or other land, all of fixed supply relative to the demand for them. With "land" as the prime source of food and raw materials, both its current characteristics as well as its inherent economic potentialities become of major importance to any developing economy, especially so

to a country such as Canada, where natural comparative cost advantages tended to concentrate in the country's primary producing sector. For Canada, a rapid increase in agricultural output of a land intensive or extensive type appeared most favourable to the economy's well-being, especially when coinciding with a high and rising external demand for a staple product of that sector.

Though availability of land as such may permit productive operations to a certain extent, different tracts of land, by virtue of possession of different qualities of varying suitability for production, will tend to limit productivity of the land worked. For Canada, in addition to lack of uniformity in soil fertility, which is often the normal case for most countries, climatic and geographic limitations added their contribution to fluctuation of yields of products per acre worked, often limiting soil productivity. For such a country to be able to develop an extensive commercial agricultural sector, the development of new methods of production, new techniques and new institutions became an essential prerequisite. Similarly, a shortage of labor, as will be discussed more fully in a later chapter, also gave impetus to increased mechanization to permit operations of large-scale production and specialization and enable the commercialization of the agricultural sector.

And indeed, Canada has experienced a remarkable increase in her agricultural production, especially during the first decade of the twentieth century, when such production rose some thirty-seven per cent, as will be discussed more fully in Chapter VIII. This rise in production occurred primarily in the country's new grain producing areas in the West, in response to a rising external demand which seemed to determine the returns to be obtained at a given level of technological productivity, and helped link the country to the outside world market economy. Acreage under wheat in Western Canada more than doubled in a single decade, rising from 4.2 million acres in 1900 to 8.9 million acres in 1911, providing thereby a real basis for the economic expansion of Western Canada, as will be discussed more fully in subsequent chapters, especially in Chapter VIII of this thesis. In addition to expanded acreage, increasing yields of wheat per acre have also been remarkable, advancing Canadian wheat production, on the average in terms of yields per acre from an insignificant level to one ahead of all other wheat producing countries, particularly during the years 1901-2, 1905-6, 1911-13 and 1915.[1] With yields dependent, apart from intensity of cultivation, upon climate, temperature, rainfall and various other natural features which

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[1]See Table 80 Chapter VIII of this thesis.

are not easily tempered with by man, the restrictive nature of these in the Canadian West required the introduction of certain technological innovations before any large scale production of wheat could be undertaken there. And indeed, Canadian wheat production was greatly aided by the introduction of improved wheat varieties better able to resist drought and frost, the introduction of dry farming techniques and a system of fallowing to conserve moisture. These innovations together with others involving transportation, labor and capital, as well as Government policies of land distribution, all to be discussed more fully in later chapters, helped change the potential of land in Western Canada, permitting there specialization in the production of wheat to such an extent as to force wheat producers in other Canadian provinces to divert their activities to other, more suitable production avenues, as will be enlarged upon later on in this thesis.

Thus, Canada's diversity of topography, soil, climate and resources gave rise to a variety of development and settlement, rendering only a relatively small portion of her 3.9 million square miles open to easy cultivation. The Dominion Government's settlement and immigration policies were, by necessity, linked together, since the availability of cheap and relatively abundant agricultural lands acted as attraction to men and capital - the prime requirements for the country's

development.

From the Hudson's Bay Company the Dominion Government acquired, in 1870, the vast central northern area included in the three prairie provinces, creating the province of Manitoba in the same year and those of Saskatchewan and Alberta in 1905. Manitoba, Canada's most central province, was blessed with a variety of assets, including many forests, a section of the Canadian Shield with its good mining prospects, large lakes and rivers, as well as some four hundred miles of sea coast, and a very fertile belt of treeless prairie; a wide range of temperature modified by low humidity and an abundant seasonal rainfall. Similar conditions existed for the province of Alberta, whilst the province of Saskatchewan, occupying the center of the Great Plains, also contained fertile plains, as well as coal deposits, oil and gas.

Though the American experience pointed to the possibilities of a Canadian wheat economy, the agricultural prospects of the Canadian West were still uncertain at the time of Confederation and remained so for almost another generation. The American Homestead Act of 1862 pointed to the necessity of an equally generous Canadian measure to attract settlers. And indeed, Canadian Homestead regulations were promulgated in Dominion Orders in Council in 1871 and incorporated in the Dominion Land Act in 1872, entitling settlers

to secure entry to a quarter section, or 160 acres of land, on payment of a $10 fee, and after residence of at least six months of each of three years, having erected a habitable dwelling in addition to breaking at least thirty acres of the holding, twenty of which had to be cropped. Greater flexibility as to size of the farm unit was provided in 1874, with the addition, in legislation, of pre-emption rights, whereby a homesteader was given rights to buy, as soon as a patent had been issued on the original homestead, and at a low price set by the Government, an additional 160 acres of Dominion land adjoining his homestead. This last privilege was repealed in 1890 but was briefly restored for one decade from 1908 to 1918.[2]

As no settlement could proceed without the availability of adequate transportation facilities, railways had to precede and at times, complement settlement of the Western frontier. As land was relatively plentiful while cash was relatively scarce, the Dominion Government undertook to finance railway companies out of land revenues, granting the C.P.R. syndicate alone some twenty five million acres of public domain fit for settlement and located partly in alternate sectors along the future railway line and partly in large blocks away from it. From 1881 - 1908, approximately

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[2]Chester Martin, Dominion Lands Policy, (Toronto, 1938), Chapters 10 and 11.

thirty-two million acres of public lands had been alienated in Western Canada as grants for railway construction, while the Hudson's Bay Company, under its contract with the Dominion Government, whereby the latter acquired the North-west territory, retained one twentieth of the lands of the fertile belt.

The following Table 21 summarizes the land grants made to the railways by the Dominion and by Provincial Governments up to December 31st, 1928.

TABLE 21

LAND GRANTS MADE TO CANADIAN RAILWAYS[a]
(THOUSANDS OF ACRES)

	Total	Govt. owned and controlled Roads	Canadian Pacific	All other Roads
By Dominion	31,782	5,727	24,953	1,102
By Provinces	15,509	1,806	10,612	3,091
Total	47,291	7,533	35,565	4,192

[a]Based on the Duff Report, 87-89.

Source: K. Buckley, Capital Formation in Canada, 1896-1930, (University of Toronto Press, 1955), p. 71.

This railway land grant system was finally discarded in 1894, but until that date it persistently dominated the Canadian scene, rendering the country's Homestead Act ineffective.

Though the land grants did imbue the Railway Companies with interests in opening up the West for settlement purposes, these were often intermixed with speculative activities, causing large tracts of land to remain idle, thereby retarding settlement. In addition to the Railway grant system, the years prior to 1896 also suffered, especially so from 1880 - 1890, from the intense competition of the American frontier, where climatic conditions were more favourable and economic opportunities more abundant. Australia and Argentina also managed to attract a great many prospective European settlers.

Any Western settlement which did occur in the years prior to 1900 was usually in the form of British and European colonies rather than that of individual settlers. In 1872, the Dominion Government Order-in-Council reserved some hundred-thousand acres of land for a Swiss colony, a similar block of land for a German Menonite colony and another for a Scottish colony. In 1874, reservations were made for French-Canadian Separatists repatriated from New England. By 1876 there were some 6,150 German Menonites in Manitoba and a total of 4,800 French-Canadians in the West, in addition to various colonies of settlers from England, Scotland, the Scandinavian countries, Eastern Europe and others. Though most of these arrived unsolicited, their attempt to settle the West was not successful.

It was only after 1896 that homestead entries began to attain significance, doubling their numbers in that year.[3] The level of homestead entries almost quadrupled from 1896 - 1901, rising from a total of 2,384 in 1897 to 8,167 in 1901, quadrupling once again from 1901 - 1903. The average level of homestead entries from 1903 - 1911 was about ten times its level of the 1880's, entries attaining their peak in 1911. Of a total of some 675,000 homestead entries in the Canadian prairies over a period of some sixty years, from the early 1870's - 1930, over 440,000 entries were concentrated in the brief period of fourteen years, from 1900 - 1914, averaging some 40,000 entries per year, thereby reflecting the rapidity of prairie settlement during that period. Though the number of cancellations was also rising, the net trend in homestead entries was in the upward direction, at least until 1910, as indicated in the following Table 22.

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[3]The only other year prior to 1896 to experience a similar phenomenon was that of 1882, this being attributed to a combination of factors, primarily the completion of the railway line linking East and West, thereby stimulating a real-estate boom in Winnipeg; also the attainment of a record price for wheat, resulting in optimistic expectations.
K. Buckley, Capital Formation in Canada, 1896-1930, (Toronto, 1955), p. 13.

TABLE 22

NUMBER OF HOMESTEAD ENTRIES AND CANCELLATIONS
1874 - 1914

Year	Homesteads No. of entries	No. of Cancellations
1874	1,376	889
5	499	303
6	347	153
7	845	457
8	1,788	1,377
9	4,068	2,045
1880	2,074	679
1	2,753	937
2	7,483	3,485
3	6,063	1,818
4	3,753	1,330
5	1,858	597
6	2,657	812
7	2,036	459
8	2,655	668
9	4,416	639
1890	2,955	794
1	3,523	934
2	4,840	1,322
3	4,067	899
4	3,209	648
5	2,394	683
6	1,857	301
7	2,384	1,090
8	4,848	1,546
9	6,689	1,746
1900	7,426	1,096
1	8,167	1,682
2	14,633	3,296
3	31,383	5,208
4	26,073	8,702
5	30,819	11,296
6	41,869	11,637
7	21,647	14,110
8	30,424	15,668
9	39,081	14,677
1910	41,568	16,832
11	44,479	22,122
12	39,151	18,486
13	33,698	17,101
14	31,829	15,854

Note: From 1874-94 the Departmental Years ended Oct.31st; 1895-99, Dec.31st; 1900-06 June 30th; 1907 March 31st.

Source: Canada Year Book, 1930, p. 961.

As seen in Table 22, the number of homestead entries rose more than five-fold, from 7,426 in 1900 to 41,869 in 1906, dropping to 21,647 in 1907 and rising once again to over double its number in 1911. The largest number of "net" entries occurred in 1906 and not in 1911, the year of peak new entries. In 1906 the number of new entries exceeded cancellations by over 30,000, while in 1911, the record number of 44,479 entries was offset by 22,122 cancellations, leaving only 22,357 "net" entries.

The spurt in Canadian homesteads occurring after 1896 could perhaps be attributed to the conjuncture of a variety of factors occurring simultaneously at that time and not earlier. When summed up briefly, these factors would include the emergence of an attractive new price situation for wheat in response to increased European demand, the emergence of favourable freight rates both overseas and domestically as a result of improved transportation facilities, giving rise to a satisfactory price-cost relationship; reductions in cost of production of wheat on the Canadian prairies implicit in improved production techniques as well as the invention of new techniques to render possible expansion in wheat acreage on the prairies as well as increased yields per acre, permitting thereby the specialization and commercialization of wheat production on a large scale; complete settlement of the best American lands reduced their

competitiveness for new potential settlers and diverted attention to the potentialities of the Canadian West, which was regarded by many as the natural continuation of the American frontier. All in all, economic and technological factors, the emergence of a so-called Canadian "wheat economy" and the culmination of half a century of Canadian propaganda abroad, all provided tremendous stimulus to potential immigrants, which in turn, became both cause and effect of the opening up of the Canadian West to agricultural settlement. The above-mentioned factors will all be dealt with more fully in Chapter VIII, after discussing first in somewhat greater detail, the other factors of production involved in Canada's process of economic growth.

For the prairie provinces, for the years 1870-1927, the gross total acres of original homestead entries has been estimated at ninety-nine million, while the total patented and brought under homestead by 1930 amounted to 58.2 million acres.[4] As eleven million acres were alienated directly by Federal pre-emption, purchased homesteads and direct sales policies, in addition to approximately fifty million acres which were sold by railways and other companies, it appears that more land was bought than acquired by homesteading.[5]

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[4] Ibid., based on C. Martin, Dominion Lands Policy, (Toronto, 1938), p. 431.

[5] Ibid., based on C. Martin, ibid., p. 499.

The following Table 23 presents total land sales by railway companies and by the Hudson's Bay Co., from 1893 - 1929, as well as fluctuations in average price per acre, reflecting both the relative intensity as well as the unevenness of prairie settlement.

TABLE 23

LAND SALES BY RAILWAY COMPANIES WITH GOVERNMENT LAND GRANTS AND BY HUDSON'S BAY COMPANY, FISCAL YEARS 1893 - 1929

Year	Total Sales		Average Price per Acre
	Acres	Dollars	
1893	120,211	352,847	2.93
4	68,668	207,856	3.02
5	114,713	222,489	1.94
6	108,016	361,338	3.34
7	222,225	719,016	3.23
8	448,623	1,431,774	3.18
9	462,494	1,520,792	3.28
1900	648,379	2,125,146	3.27
1	621,027	2,088,269	3.36
2	2,201,795	7,746,958	3.56
3	4,229,011	14,651,757	3.46
4	1,267,187	5,564,240	4.39
5	990,005	5,046,572	5.09
6	1,642,684	9,871,241	6.01
7	1,237,759	7,697,930	6.02
8	346,693	3,052,461	8.80
9	109,373	2,211,885	11.08
1910	1,184,790	15,835,228	13.36
11	1,406,651	19,122,937	13.59
12	1,329,390	18,224,419	13.70
13	707,149	9,867,155	13.95
14	501,575	7,398,191	14.75
15	192,801	3,279,031	17.01

TABLE 23 (Continued)

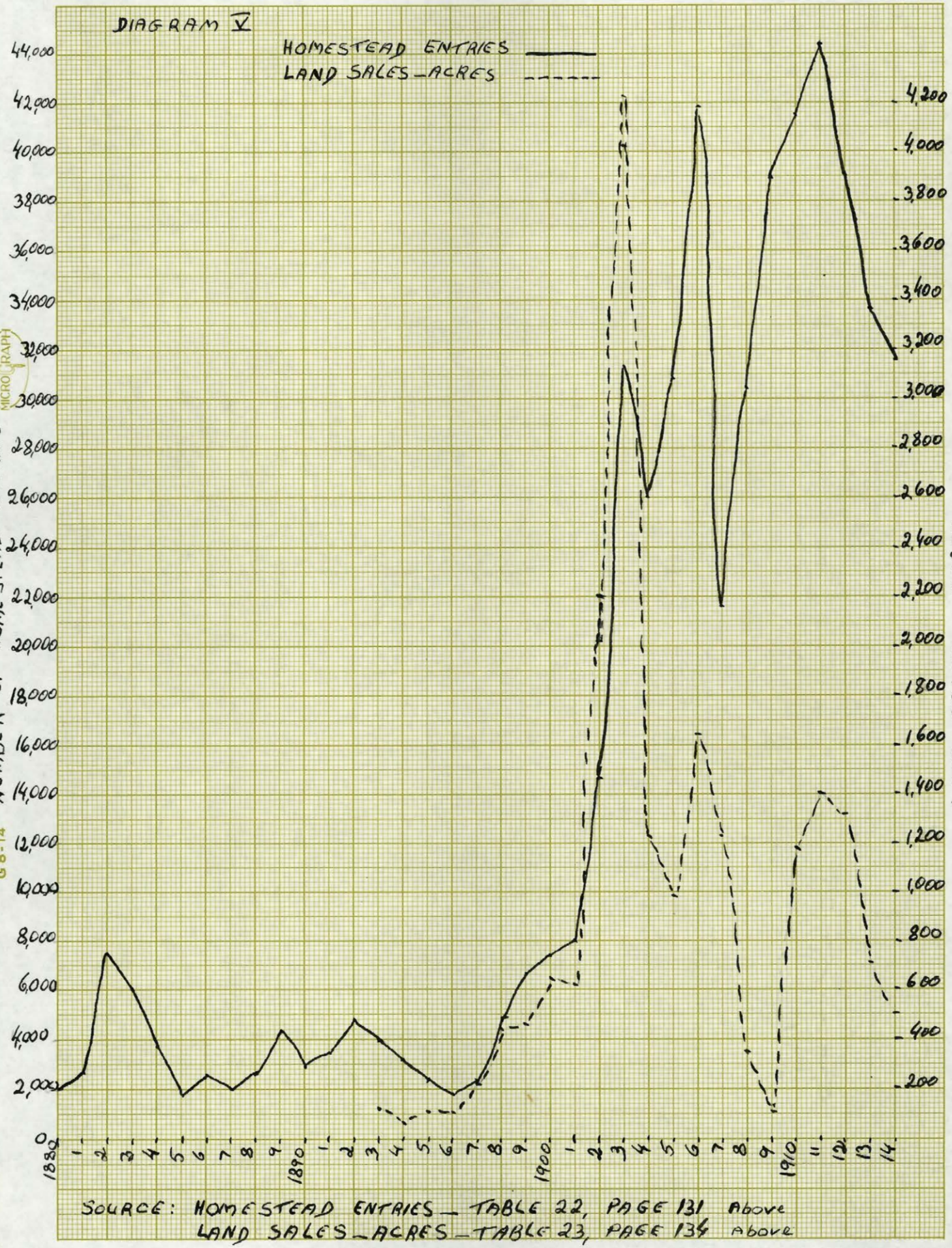
Year	Total Sales Acres	Total Sales Dollars	Average Price per Acre
1916	354,886	5,435,949	15.32
17	755,154	12,357,377	16.35
18	1,116,237	20,887,600	18.71
19	1,038,657	18,148,736	17.47
1920	1,026,157	19,136,225	18.69
1	553,630	10,860,756	19.61
2	155,239	2,633,572	16.96
3	123,303	1,864,364	15.12
4	159,795	2,460,057	15.39
5	247,405	3,700,938	14.95
6	457,822	5,594,216	13.01
7	666,479	8,295,685	12.45
8	783,604	9,259,759	11.82
9	859,769	9,858,688	11.46

Source: Canada Year Book, 1930, p. 964.

Maximum acreage appears to have been sold in 1903, while the maximum amount of money for land sold was obtained in 1918. The lowest point of sales occurred in 1923, thereafter sales were showing an upward trend till 1929, when their level was almost seven-fold that of 1923. Total sales for the period 1893 - 1929 of some 28.5 million acres brought in a total of $268.5 million, averaging $9.42 per acre.

For the year 1902-3, over 4.25 million acres were sold. The C.P.R. alone sold more than 2.2 million acres of its main land grant, its sales approximating one million acres per year for 1906, 1907 and 1910 respectively.

DIAGRAM V



SOURCE: HOMESTEAD ENTRIES — TABLE 22, PAGE 131 Above
LAND SALES—ACRES — TABLE 23, PAGE 134 Above

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Comparing land sales with homestead entries, as is done in Chart V, the slope of the curves suggests that for the years 1896 - 1903, the rate of increase in land sales was even more rapid than that of homestead entries. The years 1904 and 1907 showed recessive trends in both homestead entries and land sales, only more so in the latter. After 1915, both curves were following different patterns. As for land prices, these tended to move in an upward direction, even when land could be had free and indeed, much of the land was acquired at high prices, often with borrowed money. Most of the American settlers entering the Canadian West did so mostly on their own resources and often bought land at inflated prices. For the period 1901 - 1911, lands which had previously been purchased for $2 per acre, sold readily at prices ranging from $8 - $12. Also, C.P.R. lands, which until 1900 sold for some $3 per acre, were selling at $17 an acre in 1913, but this last figure is probably a reflection of high irrigation expenses as well as higher selling costs.

Of approximately 400,000 homestead entries made from 1901 - 1914, 110,000 entries were made by Americans, 107,000 by Canadians, 69,000 by British immigrants and the rest by Europeans. It is claimed that the first three mentioned groups, being primarily motivated by profit aspirations, exhibited a great deal of speculative activities, whilst

European homesteaders, having acquired their land with the aim of perpetuating a certain way of life, tended to operate their holdings themselves rather than sell them for a profit.[6]

Apart from the normal tendency to settle the most fertile and most easily accessible areas first, prairie land settlement having often been motivated by private profit and self interest, tended to proceed haphazardly, with hardly any planning, soil surveying or classification of resources, consequently, mistakes in land selection and utilization were quite common. For instance, the occupation of the submarginal dry belt area, which though expanding the area of occupied land by some seventy million acres, greatly increased settlement problems.

Despite the intensive and extensive colonization activities which proceeded since the turn of the century to the first World War, by 1921 the area under cultivation was still only a fraction of the total area of some 358 million acres surveyed and available for agricultural settlement. Statistics of farm land obtained at the census of 1921, place the area then occupied at 140.9 million acres, leaving a total of some 217.3 million acres of agricultural lands still uncultivated.

For the three prairie provinces total surveyed

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[6]R. W. Murchie, Agricultural Progress on the Prairie Frontier, (Toronto, 1936), p. 119.

agricultural land consisted of 215.3 million acres, of which 127.3 million acres were still unoccupied by 1921. This total was reduced to 19.2 million acres by January 1, 1930, the total area then surveyed, according to the Department of the Interior, was 201.2 million acres, leaving an unsurveyed area of an estimated 475,555 square miles.[7]

The following Table 24 presents the relative expansion of agricultural land in the prairies, percentages reflecting the extent and rapidity of frontier development, whereas Table 25 compares the extent of improved land in the nine provinces during the years 1901 and 1911.

TABLE 24

RELATIVE EXPANSION OF LAND IN PRAIRIE AGRICULTURE[a]
SELECTED YEARS, 1881-1931

Year	Occupied Acreage		Improved Acreage	
	All Canada ('000 acres)	Prairie % of Total	All Canada ('000 acres)	Prairie % of Total
1881	45,358	5.9	21,866	1.3
1891[b]	- -	- -	- -	- -
1901	63,969	24.3	30,166	18.5
1911	108,969	52.9	48,734	47.1
1921	140,888	62.4	70,770	63.4
1931	163,114	67.3	85,732	69.8

[a]Source: Decennial Census.

[b]Data for this year not available.

Source: K. Buckley, op. cit., p. 16.

[7]Canada Year Book, (Ottawa, 1930), p. 961.

TABLE 25

IMPROVED LAND, YEARS 1901 AND 1911

Province	1901 (acres)	1911 (acres)	Percentage Increase 1911 over 1901
Prince Edward Island	726,285	709,135	+ 5.9
Nova Scotia	1,257,468	1,248,719	- 0.7
New Brunswick	1,409,720	1,414,310	+ 0.3
Quebec	7,439,941	8,147,633	+ 9.5
Ontario	13,266,335	13,460,353	+ 1.5
Manitoba	3,995,305	6,762,582	+ 69.3
Saskatchewan	1,122,602	11,871,907	+ 957.5
Alberta	474,694	4,351,445	+ 816.7
British Columbia	473,638	477,576	+ 0.8
Canada	30,166,033	48,503,660	+ 60.8

Source: Cost of Living Report, (Vol.II), p. 917.

For Canada, a sixty-one per cent increase in improved land occurred, signifying the country's possession of new agricultural lands at the turn of the century. The most spectacular increase in improved acreage occurred in Saskatchewan, followed by an equally impressive increase for Alberta. The province of Manitoba, though considerably lagging behind the other two prairie provinces, in its improved acreage, still showed an impressive increase when

compared with the rest of the country. As for occupied acreage, in the decade 1901 - 1911, this increased from 15 million acres to 58 million acres, with gains of 24 million acres in Saskatchewan, 15 million acres in Alberta, and 3 million acres in Manitoba, confirming this decade as one of most rapid growth.[8] As for improved farm land per farm worker in the prairie provinces, this too showed an upward trend, with areas in 1921 being almost double those of 1901, as pointed out in the following Table 26.

TABLE 26

LAND PER FARM WORKER IN PRAIRIE PROVINCES
SELECTED YEARS, 1901-1931

Year	Improved Land Per Worker (acres)
1901	67
1911	81
1914	101
1921	119
1926	119
1931	145

Source: K. Buckley, op. cit., p. 24.

[8]K. Buckley, op. cit., p. 24.

Farm units spread over new geographical regions, with the most extensive phase of occupation and settlement occurring after 1896, attaining a peak during the years 1905 - 1911, after which the intensity of this extensive settlement commenced to subside. The given increase in settlement and in cultivation of land after 1896, could perhaps be explained in terms of a favourable interaction between supply and demand factors. On the supply side, Canada developed at that time commercial advantages in her ability to supply large quantities of wheat for the international market. Availability of large tracts of suitable land in Western Canada, under liberal conditions of favourable government policy, as well as easy credit facilities, the invention and innovation of suitable technology to enable cultivation of these lands and the construction of good transportation facilities, all combined to facilitate specialization in wheat on a large scale and for commercial purposes. On the demand side, a rising European demand for wheat in response to a growing industrialized population kept pace with Canada's capacity to produce wheat, gave rise to remunerative prices for wheat and helped establish favourable movements in Canada's terms of trade, all factors of great importance to the country's rate of economic development. In this sense then, wheat and the expectations of its ultimate profitability provided the major stimulus to the tremendous

influx of immigrants into the country and enabled the pushing back of its frontier by extending settlement and cultivation.

As the very nature of the process of migration and settlement within the confines of Canadian geographic, economic and political conditions entailed dependence upon transportation, the following chapter will be devoted to the study of problems involved in the evolution of Canada's transportation facilities.

CHAPTER V

TRANSPORTATION

It is perhaps no exaggeration to regard transportation as not merely a convenience, but a necessity of practically every human activity. Man has always been aware of the advantages provided him by coastal waters, lakes and rivers and has utilized these with the aid of rafts even in prehistoric time, gradually progressing to boats, eventually to land transportation facilities, continuously endeavouring to improve methods and facilities. Transportation is both cause and effect of a society's social environment and geographic setting, directly bearing upon the society's state of productivity, hence also upon its progressiveness and is itself directly affected by them.

For Canada, a land of vast distances, great physical diversities, a sparse population and a great dependence upon trade, slow and costly routes are a hinderance to internal as well as external trade, hence to development. The need to bridge great distances, overcome geographic barriers, integrate diverse communities to enhance national unity and facilitate a suitable economic climate and industrial expansion,

all pointed to transportation facilities as the prime preconditions of settlement and economic growth.

For a land well endowed with natural lakes and rivers, movement within Canada had at first followed these natural waterways. Yet, though these managed to provide a splendid inland navigation system often leading to sea ports, their services were greatly restricted by geographic and climatic conditions, which limited activities to a seasonal basis, as winter frost tended to paralyze movement. In addition, barriers and rapids in rivers, especially in the chief water route of the Saint Lawrence system, tended to interrupt movement, often necessitating portages, which tended to waste time as well as involve much hard labour.

So long as the canoe, the bateau or the Durham boat, the country's major means of transportation, were adequate for the then limited activity, there was no great pressure to improve facilities. But when Canadian shipping in the Upper Lakes became fairly profitable, engaging after 1845, in the cartage of settlers from Buffalo to the American West and returning with grain for which there was great local demand, Canadians began to nurture their dream of exclusively capturing the trade with the American West by building an extensive system of canals, to divert traffic to the Saint Lawrence. And indeed, following the Union of Upper and Lower Canada, the 1840's saw the commencement of the Canadian

era of canals, which continued well into the 1850's. This was further justified by the prospects envisaged for the Canadian prairies as the country's future producers of surplus wheat. Unfortunately, the advantages provided by the American seaboard helped frustrate Canadian hopes, while the completion of the Erie Canal rendered Canada's canal system its final blow by diverting the trade of the American West to New York rather than to Montreal.

Yet, no doubt, the canal system was most useful to the country's commercial life, especially when still only a maritime economy, with fish, timber and furs as major staples. Water carriers provided low cost facilities for the movement of bulky commodities and were adequate for non-perishable goods, where fast service was not essential. By 1914, Canada had six canal systems, totalling some 117.2 miles in length and under the control of the Dominion Government. Some fifty per cent of lake tonnage was engaged in carrying grain, and the balance was divided between coal, iron ore, pulpwood, crude petroleum, limestone and general cargo.[1]

As railways have the capacity to supply relatively cheap, all weather transportation facilities in large volume and over vast distances, the need for their construction was soon realized as the prime requisite to enable the opening

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[1] Canada Year Books, (1914, 1921, 1930), chapters dealing with transportation.

up of the country and its transformation into a continental economy based on agricultural products. In addition, the railway's multiple impact on growth in general, namely, its ability to induce development of modern coal, iron, steel and engineering industries was well known in Canada from experience of the United States and certain European countries in the nineteenth century.

Historically, the first Canadian railway was built in 1836, to shorten the distance between Montreal and New York. It was sixteen miles in length and was operated by horses, which were replaced by the locomotive one year later. Ten years later, in 1847, a second railway was built to join Montreal to Lachine and a third, in 1848, from Montreal to Hyacinthe. By 1850, there were some sixty-six miles of short portage railways in all of Canada, of which the Grand Trunk and the Great Western were of greatest importance; the latter was eventually taken over by the former. These provided lines in an East-West direction across southern Ontario and Quebec.

Canada's railway era is said to have started in 1851, with the passage of an Act to construct a main railway line to join Upper and Lower Canada. And indeed, the Grand Trunk railway emerged to join Montreal and Toronto in 1856, extending westward in 1859 to join Sarnia, and eastward, in 1860, to the Rivière du Loup. By 1860, over two thousand miles of

railroad had been built and a total of some $100 million spent on their construction. In the following seven years, until Confederation, only 212 miles were added.[2]

At the time of Confederation, some sixteen companies had already spent some $146 million for over two thousand miles of railway in Canada,[3] while the Federal Government had undertaken the completion of an inter-colonial railway system, after the province of Canada had already acquired a total debt of $174.4 million, of which $18.7 million were municipal obligations associated with their support of railway construction.[4]

At the time of Confederation, much of Canada's produce reached its United Kingdom markets by way of the United States, over American transportation facilities and was often handled by American middlemen. This was quite understandable in view of the continent's major topographic trends, which were in a north-south, or longitudinal direction. With Confederation emerged the country's national transport policy, stipulating the building of a transcontinental railway in an east-west, or latitudinal direction, through almost one

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[2] Ibid.

[3] G. P. Glazebrook, History of Transportation in Canada, (Toronto, 1938), p. 172.

[4] Report of the Royal Commission on Dominion-Provincial Relations, Canada, 1867-1939, (Vol.I, Ottawa, 1940), p. 172.

thousand miles of barren, non-revenue bearing country and with no immediate prospects of traffic, rather than pass through the high traffic potential American territory, namely, through Lake Superior, to join East and West by way of Chicago, so as to facilitate shipment of goods through an all Canadian transport system.

Confederation thus produced the Intercolonial and the Canadian Pacific Railways, thereby redeeming promises made to the Maritime provinces and British Columbia upon their entering Confederation. The Intercolonial was begun by the Federal Government in 1868 and was completed in 1876, remaining under Government ownership. It stretched from the Grand Trunk's eastern terminal in Rivière du Loup to Truno in Nova Scotia. The Federal Government took over, along with provincial debts, all the provincial roads which linked the line to Halifax and to St. John in the Maritimes. The Pacific Railway was also to fulfil a promise made to British Columbia for its entering Confederation in 1871, as well as open up the Canadian West. Having failed as a private venture, it started as a public enterprise in 1873. It made very slow progress up to 1880, after which, with the establishment of the present C.P.R. company, which turned it into a private venture backed by public aid in the form of $25 million in cash, tax concessions, rate privileges, as well as twenty-five million acres of land fit for settlement,

its progress was greatly increased and the road was finally completed with its reaching the Pacific. It stretched from the north of Toronto across the southern prairies to the Pacific coast, completing the first all-Canadian transcontinental route, joining central Canada to an Atlantic terminus.[5]

The extension of railway service to the Canadian West opened up new trade routes. The St. Paul Boniface route extending west-south was opened up in 1879, whilst in 1880, the Grand Trunk Railway, which stretched from the Atlantic to Sarnia, via Montreal and Toronto, was extended west to Chicago. In 1883, intercolonial links were established between Winnipeg, the West's main railway center, and Port Arthur, commencing a regular wheat movement from Western Canada by rail and lake. These railway activities, which continued into the 1890's, had contributed to occasional, at times pronounced booms, especially during the years 1867 - 1873 and 1880 - 1885, but these booms were short-lived and on the whole did not bring lasting prosperity to the country. By 1895, the country's three major roads consisted of the Canadian Pacific, the Grand Trunk and the Intercolonial, totalling some 15,977 miles in operation.

With the turn of century, the initial activity in the wheat economy of pre-1905 years, induced extensive railway

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[5]Canada Year Books, (1914, 1921, 1930), chapters dealing with transportation.

construction. This renewed burst of activity was rationalized in terms of an expected increase in railway traffic potential with rising wheat prices and increased settlement. This lasted to 1915, after which railway activity commenced to decline, but was partially offset by the innovation of the automobile. Branch lines have been constructed practically in every direction, within and without the country, spreading a network of rails throughout the three prairie provinces, while mileage owned by Canadian companies in the United States increased from 227 miles in 1860 to 2,435 miles in 1900,[6] rising to 7,197 miles in 1912.[7]

From 1896 - 1915/20, two additional transcontinental railways were constructed, as well as several smaller roads. The first of these transcontinental roads, the Canadian Northern, was begun in Manitoba in 1896 by private contractors but with Federal and provincial aid, to establish competition with the C.P.R. so as to provide the provinces with more favourable transportation rates, as well as improved facilities. This road opened up in Ontario as well as in the West, large tracts of cultivable land. Branch lines went out in every direction, opening up the northwestern territory to settlement, facilitating commercial and financial

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[6]G. P. Glazebrook, op. cit.

[7]J. Viner, op. cit., p. 90.

activities, thereby helping the transformation of areas such as Calgary, Vancouver, Fort William and Port Arthur into towns.

The second railroad, the Grand Trunk Pacific, emerged through the agreement between the Grand Trunk, which was eager to participate in the West's wheat boom, and the Federal Government. It was to run from the Pacific coast to Moncton in New Brunswick; the eastern section, from Moncton to Winnipeg, was to be constructed by the Government and leased to the Grand Trunk Company for a period of fifty years, while the western section of the road, from Winnipeg to Prince Rupert, was to be built by the Grand Trunk Company. This road was completed in 1915, but as the Grand Trunk Company, beset by financial difficulties, was unable to stand by its agreement, the road reverted to dependence upon Government funds. Mileage of Government owned railways increased to 4,393 miles.

With these two new transcontinental lines, in addition to numerous smaller branches, Canadian railway mileage doubled in fifteen years, increasing from 17,657 miles in 1900 to 35,582 miles in 1915, this latter figure representing a sixteen-fold increase over the 2,200 miles of 1868. Though competition between parallel services reduced rates for shipping wheat, other expectations associated with the building of these lines, namely, the great influx of settlers and

capital in areas tributary to the new roads, were frustrated by the advent of the Great War. Consequently, operational costs increased with scarcity of men and materials, while fixed payments of interest on loans had to be met and that out of a diminished income, forcing the Government, in 1915, to intervene and subsidise the railways.

A great deal of the foregoing information is borne out by the following statistical tables, the latter being based primarily upon information provided by the Dominion Bureau of Statistics, Transportation Branch, and reflect quite adequately, the development of Canada's railway and canal systems.

Table 27 summarizes statistics concerning steam railway operations, namely, total train miles, number of passengers, tons of freight, gross earnings and working expenditure, as well as the ratio of expenditure to returns, all for the selected years 1875 - 1914; while Table 28 presents the percentage increase of the year 1913 over 1900 for the various aspects concerning steam railways and canal traffic. Total miles in operation have increased fourfold by the turn of the century over their number in 1875, probably in response to expectations placed upon the emergence of a "wheat economy" in view of increased external demand for wheat; and again in 1914 their increase was one and a half times their number in 1900, rising to a total of 35,582, undoubtedly induced by the initial activity in the country's "wheat economy" of pre-1905

years, while in the thirty-two years, 1835 - 1867, they numbered only 2,278 miles, which on the whole, in view of the Canadian environment at that time, could perhaps be taken to be an autonomous activity. This latter figure was doubled in 1875; it doubled again in 1882 and once more in 1896. Total train miles, with the exception of the year 1895, experienced an upward trend over the entire period to 1914, after which a decline set in, probably in response to the outbreak of the Great War which frustrated hopes for a large influx of capital and settlers into areas tributary to new lines. By 1914, the number of railway passengers was nine times that of its number in 1875, due to the tremendous increase in the country's population over that period, whilst tons of freight increased twenty-fold over the same period, with gross earnings trebling and working expenditure multiplying by twelve. Yet, the ratio of expenditure to receipts declined from eighty-one per cent in 1875 to its lowest point of 67.5% in 1900, rising to seventy-five per cent in 1905, declining only very slightly by some one and a half per cent by 1914. With increased competition between parallel services, rates for shipping wheat tended to decline, and with increased demand in Western Canada for manufactures of the East, railway traffic was greatly increased and with it receipts while costs were reduced.

TABLE 27

STEAM RAILWAY STATISTICS, SELECTED YEARS, 1875-1915

Year	Miles in Operation	Total Train Miles (Number)	Passengers (Number)	Freight (Tons)	Gross Earnings $	Working Expenses $	Ratio of Expenditure to Receipts %
1875	4,804	17,680,178	5,190,416	5,670,836	19,470,539	15,775,532	81.02
1880	7,194	22,427,449	6,462,948	9,938,858	23,511,447	16,840,705	71.47
1885	10,773	30,236,689	9,672,590	14,659,271	32,227,469	24,015,531	74.51
1890	13,151	41,849,329	12,821,262	20,787,469	46,843,826	32,913,350	70.26
1895	15,977	40,418,324	12,520,585	21,524,421	46,655,883	32,678,035	70.04
1896	16,270	43,940,155	13,059,023	24,248,294	50,374,295	34,893,337	69.27
1900	17,657	52,647,684	17,122,193	35,764,970	70,231,979	47,405,596	67.50
1905	20,487	65,934,114	25,288,723	50,893,957	106,467,198	79,977,573	75.12
1910	24,731	85,409,241	35,894,575	74,482,866	173,956,217	120,405,440	69.22
1914	30,795	107,895,272	46,702,280	101,393,989	243,083,539	178,975,259	73.63
1915	35,582	93,218,479	46,321,035	87,207,838	199,843,072	147,731,099	73.92

Source: Canada Year Book, 1914, p. 477.

TABLE 28

PERCENTAGE INCREASES OF 1913 OVER 1900

A.- STEAM RAILWAYS			
Train Mileage	Number of Passengers	Tons of Freight	Gross Earnings
158.0	115.0	197.6	262.9
B.- CANAL TRAFFIC			
Total Vessels (Tonnage)	Total Tons of Freight Canadian & U.S.Vessels	Total Number of Passengers: Canadian & U.S.Vessels	
455.5	938.2	54.7	

Source: Cost of Living Report, (Vol.II), pp. 974-5.

TABLE 29

MEASURES OF STEAM RAILWAY EXPANSION
FIVE-YEAR AVERAGES, 1896-1915

Period	Net Addition to Railway Miles	Equipment Expenditure (Millions of Dollars)			Net Addition to Rolling Stock		
		Net	Replacement	Gross	Locomotives	Freight Cars	Passenger Cars
1896-1900	1,680	12	4	16	250	12,557	- 514
1901-1905	2,830	34	7	41	633	21,577	496
1906-1910	4,244	82	10	92	1,173	28,616	1,190
1911-1915	10,151	132	13	145	1,407	82,077	2,006

Source: K. Buckley, op. cit., p. 30.

Table 28 compares the percentage increase in the number of passengers going by steam railway with those travelling by canal traffic in 1913 over that in 1900, the increase in the former being twice that in the latter, probably in response to the great time saving element introduced by a more efficient railway system. But when considering tons of freight, the increase for canal traffic was almost five-fold that of the increase in steam railway traffic in the same period and the increase in total canal tonnage was also much greater than the increase in train mileage for the same years, the former rising to the extraordinary level of over ten-fold and that with only a relatively small increase in capital expenditure. This undoubtedly involved cartage of grain, iron ore, coal, pulpwood, crude petroleum and the like, all bulky non-perishable commodities requiring no fast service and hence preferring the cheaper rates demanded by the low-cost water carriers. It is interesting to note that coasting river and lake trade increased 129%, while sea-going tonnage, in and out of the country, rose eighty-four per cent.[8]

The volume of traffic has increased even more rapidly than did the supply of vessels, locomotives and cars since transportation facilities were constructed even before there was actual need for their services in proportion to level of

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[8]Cost of Living Report, (Vol.II), pp. 974-6.

population and local activity. Locomotives and cars had attained their peak in 1911-1915 (Table 29). The Increase in the number of passengers, which has more than doubled in proportion to population, could perhaps be assumed to reflect the greater extent of the country's industrialization, as industrial and commercial activities would be expected to require more travelling than would farming, or other primary occupations.[9] This conclusion is reinforced by the analysis and comparison of railway tonnage for the years 1907 and 1913, or 1912, whichever be the case, as is done in the following Table 30, reflecting the extraordinary activity within the country, pointing to a significant increase in requirements of assembly materials to suggest rapid industrialization.

As seen in Table 30, the tonnage of grain has almost doubled in 1912, reflecting the opening up of the West to cereal production. Flour is reported to have followed a similar trend, while livestock is reported to have stood still.[10]

It is interesting to compare the growth of Canadian railway mileage with that of the United States and other countries, as is done in the following Tables 31 and 32.

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[9] Ibid.

[10] Ibid., p. 973.

TABLE 30

RAILWAY TONNAGES FOR THE YEARS 1907, 1912 OR 1913

Item	Year			Percentage Increase
	1907	1912	1913	
Grain	5,776,231	10,386,282		79.8
Pig Iron	304,136		1,394,725	312.1
Rails	190,380		1,304,551	581.6
Cement, Brick, Lime	1,393,792		3,958,419	112.2
Castings and Machines	231,159		1,499,084	544.1
Bar Sheet and Metal	87,958		1,305,682	1384.4
Stone and Sand	2,083,336	6,350,395		204.8
Oil	270,810		807,062	196.6
Bituminous Coal	11,000,000	17,000,000		54.5
Merchandise	2,309,084		4,365,852	89.7
Manufacture	7,974,641	19,694,240		146.9

Note: Table arranged by the writer.

Source: Cost of Living Report, (Vol.II), p. 973.

TABLE 31

GROWTH OF MILEAGE IN THE UNITED STATES AND IN CANADA
100 = AVERAGE MILEAGE CONSTRUCTED PER DECADE
FOR FOUR DECADES, 1870-1910

Period	United States		Canada	
	Mileage constructed or under construction	Index Number	Mileage constructed or under construction	Index Number
1870-80	40,345	82	4,577	83
1880-90	73,924	150	5,957	108
1890-1900	31,773	64	4,506	82
1900-10	50,028	104	7,074	128
1900-15	67,036	136	18,343	332

Source: Ibid., p. 1,020.

Table 31 reflects the remarkable development of Canadian railways, especially since the turn of the century, though the years 1880 - 1890 also experienced marked activity. As for the United States, activity in railway construction was greater during the earlier period, which corresponds to that country's earlier "take-off" into sustained growth.

Table 32 further illustrates Canada's remarkable activity in railway construction. Only Argentina exceeded Canada's mileage increase of that period, but then Argentina also had the lowest railway mileage of the entire group, in 1900.

Actually, by 1873, Europe and the United States have already completed the main outlines of their railway systems, and any subsequent development was perhaps only of secondary nature. To illustrate, from 1850 - 1870 the world's railroad mileage increased at an average annual rate of 8.8%, while that for the years 1870 - 1897 was only 4.4%.[11]

TABLE 32

MILES OF RAILWAYS IN VARIOUS COUNTRIES FOR THE YEARS, 1900 AND 1915

Country	1900 (miles)	1915 (miles)	Increased Mileage 1915 over 1900	Percentage Increase
United States	194,334	266,000	71,666	36.8
Canada	17,657	36,000	18,343	103.9
India	24,633	36,000	11,664	47.4
Argentina	10,412	24,000	13,588	130.5
Australasia	15,531	23,000	7,469	48.0
Russia	35,623	53,000	17,377	48.8
Total	298,190	438,000	139,810	46.9

Source: Ibid., p. 945.

[11]D. Coppock, op. cit., p. 222.

The years 1896 - 1913 saw a decline in transportation costs and a rise in the price of cereals and raw materials, establishing for Canada a favourable relationship between the price of her prime export, wheat and its cost of transportation, so essential for her successful trading. The decline in transportation costs was the direct result of increased domestic transportation facilities, due both to the multiplicity of competing lines as well as to great improvements in previously existing lines. The opening up of Western Canada to settlement facilitated the extension of rail and water routes, increasing competition between them. In 1908, the two groups tacitly agreed to maintain rates by all water transportation, or by rail and water, at a fixed differential between all water rates, to enable all transport agencies to obtain a "fair" share of traffic. This differential rate structure operated fairly successfully to 1915.

Canadian transport rates were governed by,

(1) Water competition governing Eastern Canada as well as the country's coast to coast rates;

(2) Contractual agreements including both the Dominion Government and the various provinces, covering Western Canada.

The above two systems together prevented the possibility of

a general increase in rates for the greater part of the country. Western rates were originally fixed by the amount of prevailing traffic. In this way, only diminishing traffic could raise charges, whereas competition and regulations diminished rates. It was early realized that low rates tended to attract settlers, which in turn would increase traffic and thereby revenue, to justify this initial reduction in costs. Hence, Canadian railways tended to differentiate between charges made for basic commodities and those made for manufactures and general merchandise, charging low rates on raw materials and on basic commodities which tended to move in volume and hence could not stand high rates and make up their losses by charging relatively heavier rates on manufactured articles and general merchandise, items which could better bear such charges.

As for commodities carried by sea, the purchasing country had to pay freight upon goods bought in Canada, whereas Canada had to pay freight on all her imports which were carried by foreign vessels. Most of Canada's exports were shipped by foreign vessels. But Canada still received payment for her share in transporting the commodity from its point of origin in Canada to its point of embarkation to cross the country's boundary, as well as for any purchase or hiring in Canada of vessels and crew. From 1900 - 1914, Canadian vessels carried, on an average, some ten per cent

of the country's imports by sea and twelve per cent of her exports, leaving Canada to pay freight charges on ninety per cent of her imports carried by British and foreign ships, minus the twelve per cent of her earnings from her export freight. It is rather difficult to arrive at a satisfactory estimate for Canada's freight charges. One such estimate places Canada's excess freight payments over her receipts at $60 million for 1900 - 1914.[12]

Professor J. Viner[13] regards this as an underestimate, in view of the bulky commodities, namely, cotton, coal and coke, steel, corn, fruit, and so on, which Canada imports from the United States, all being commodities of relatively small value per unit of bulk or weight, travelling overland and over the Great Lakes, covering long distances and expensive freight hauls. These charges all have to be settled abroad alike with the less bulky commodities, such as manufactures, textiles and their products, which are imported from Britain and transported by sea. Railway rates tended to be higher on the same commodities than did ocean rates, as is seen from the following Table 33.

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[12] Cost of Living Report, (Vol.II), p. 901.

[13] J. Viner, op. cit., Chapter 4.

TABLE 33

IMPORT VALUES FREIGHT RATES FOR THE YEAR 1907[e]

Commodity by Group	Unit	Average Import Value[a] $	Average Freight Rate[b] $	Percentage of Freight Charges to Import Value	Weights[c]	Final Results
OCEAN						
Great Britain						
Manufactures of Iron and Steel	Long Ton	53.83	2.60	5.6	40	224
Cotton Textiles	1000 yds.	94.63	2.18[d]	2.3	60	138
Total					100	362
Percentage						3.6
RAIL						
United States						
Iron & Steel	Short Ton	53.30	3.06	5.8	90	522
Cotton Textiles	100 lbs.	33.11[d]	0.36½	1.1	10	110
Total					100	63.2
Percentage						6.3

[a]Computed from Canada Trade and Commerce Report for fiscal year ending March 31, 1908.

[b]Computed from data in Report of British Trade in Canada in 1907, (Great Britain Parliamentary Papers, ed.3861).

[c]Weights are according to relative importance in imports of 1907.

[d]Based on conversion rate from measurement to weight basis 1-lb. tare = 3.5 yards.

[e]For years prior to 1907 no Canadian quotations were obtainable.

Source: Cost of Living Report, (Vol.II), p. 70.

Railway freight rates fell some five or six per cent during the 1900 - 1914 period, as seen in Table 34 below. Ocean rates were also reduced, so that by 1896, these were only about half of what they had been during 1870-75, continuing to fall until 1908. In Canada, sectional pressure caused some vital changes in the country's freight structure, namely, for Western Canada, the Crow's Nest Pass Agreement, in 1897, whereby the Government gave the C.P.R. an additional cash subsidy in exchange for reductions in rates, averaging three cents per hundred pounds of grain and flour moving East and ten cents on agricultural goods coming West. For the East, the Eastern Export Rates Case in 1905 and the International Rates Case in 1907 resulted in a decrease of some ten per cent in export rates from Ontario and in merchandise class rates in Eastern Canada, while rates between the Maritimes and Central Canada were kept low by Government control. All these combined to encourage inter-regional trade and open up new areas to settlement.[14]

TABLE 34

RAILWAY AND FREIGHT RATES 1900/4 AND 1914 (1900/4 = 100)

	1900/4	1914
Commodity Rates	100.0	95.2
Class Rates	100.0	93.6

Source: Ibid., p. 426.

[14] Report of the Royal Commission on Dominion-Provincial Relations, Book I, Canada 1867-1939, (Ottawa, 1940), pp. 71-72.

To summarize briefly, for Canada, the entire period 1867 - 1895, of which especially the years 1880 - 1890, and then even more so, the opening decade of the twentieth century, continuing to the outbreak of the Great War were all years of extensive development of the country's railway system, involving high rates of investment outlays, mostly that of foreign origin. During the nineteenth century this burst of activity was motivated not by the immediate inducement of resources and markets but rather by an anticipation of future needs and benefits envisaged by the Canadian Government and incorporated into its national policy, designed to stimulate a rapid settlement of the country, as well as attain political objectives in the form of a Canadian national unity and an economic independence from the United States. Railway construction was further stimulated by a sort of "pressure" exerted by capital exports from the United Kingdom in the sense that these foreign investors were primarily interested in investing in railway construction rather than in other types of ventures, as will be brought out more clearly in the following chapter. Hence, within the then prevailing Canadian environment transportation could perhaps be appraised as a combination of endogenous and exogenous factors, with the greater emphasis placed upon the former, since after all, the decision as to whether to borrow abroad or not still rested with the Canadian Government. During that

earlier period, railway activities contributed only to occasional, even if at times pronounced booms, especially during the years 1867 - 1873 and 1880-85, but those were only short-lived booms which did not bring any lasting prosperity to the country as a whole. Consequently, overexpansion and unnecessary wastage were often the case then. Some writers extend the above complaint to the later period, extending from the turn of the century to the Great War as well, to quote Professor J. Viner, "borrowings during the period under study if not too great in volume, were in large part invested in economically unsound ventures"[15] and with the preponderance of foreign investment, especially that of British origin still going into railways,[16] the above criticism seems to have applied to investment in railways. Still, the motivating force behind the investment in railway facilities during this second period seems to have differed from that during the earlier period in the sense of its being induced during this second phase by the country's wheat economy of the pre-1905 years, when investors were led to expect increases in railway traffic as a consequence of rising wheat prices and increased settlement. Here then, railway construction responded to a change in market conditions for wheat which led to an increased demand for railway

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[15] J. Viner, op. cit., p. 305.

[16] See Chapter VI, Table 45.

services and was in this sense more of an exogenous phenomenon within the then prevailing Canadian environment. And indeed, until the Great War, the spurt in railway construction did provoke a round of economic development, which in turn resulted in an increased demand for railway services, as pointed out earlier in this chapter. It helped create a favourable price-cost relationship for wheat through the emergence of competitive lines and improved facilities, opened up new trade routes as well as new areas for settlement and helped transform small towns or even villages into larger population centers.[17]

In an attempt to appraise Canadian policy of railway construction during the period in question, it is necessary to consider not only the financial "soundness" of such ventures, or their consequent tangible benefits but also all those intangible benefits which are only too often emotionally charged and which cannot be measured or evaluated precisely, such as the attainment of national unity, reduction in the country's dependence upon the United States and the like. These make it rather difficult to establish whether the heavy economic costs involved in the process of railway construction were eventually outweighed or at least balanced by resulting benefits. And yet, one must realize that waste

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[17]See page 152 above.

can occur not only in relation to economic ends but also to non-economic ends. The question still remains as to whether settlement, unity and other political objectives could not have been achieved at less cost, by say, constructing less mileage and employing more rationality. There is no denying that the building of a railway line through the densely populated American sector would have been much more economically ideal, since large centers of trade and travel usually give the best compromise between costs of railway operation and their revenues. Topographically too, this would have been a more natural phenomenon for Canada than her attempt to cross a thousand miles of barren, rocky and desolate land. In the sense of this latter occurrence which seemed to interfere with the free play of natural forces, it did involve wastage, loss and consequently suffering. But on the other hand, this so-called "unnatural" construction did manage eventually to open up Canadian lands for settlement as well as to establish a favourable price-cost relation for wheat. It is perhaps then the question of timing which would tend to become significant here. Undoubtedly, because of the country's vast distances, great physical diversities, sparse population and dependence upon trade, the construction of the railway, in view of its ability to supply relatively cheap, all year round transportation in large volume and over great distances, was a necessary and important

pre-requisite to the economy's ultimate "take-off" into sustained growth. Likewise the linkage effects emerging from railway construction in terms of their inducing development in the country's modern coal, iron and steel as well as engineering industries must not be underestimated. Yet, in terms of the country's population numbers as well as its economic activities and limitations at that time, one cannot help feel that this vast and expensive construction project was perhaps not fully justified and that the country's intangible objectives could have perhaps been attained at a smaller economic cost, by postponing much of the construction activities to the second period at the turn of the century, when Government policy was still in effect, when demand for wheat and the price it then fetched would have justified such expansion and when the heavy influx of immigrants increased population density and together with regional population distribution within the country contributed greatly to increased travel as well as to land settlement. Usually, rapid extensive transportation and communications are needed both for areas producing raw materials and for consuming centers, when changes in location of centers of production, as have occurred in Canada with the emerging profitability of her prairies during the second phase of her development resulting in changes in regional population distribution, these in themselves would have required, as indeed they did,

very rapid rates of expansion in transportation and communications. But even during this second phase of development, over construction was not avoided and again it seems because of considerations of future expectations in the form of a tremendous influx of population and capital, hopes which the oncoming of the Great War helped frustrate, resulting rather in heavy losses to the railways, instead of using more rationality by confining activities to the then current conditions and needs.

As British capital played so important a role in the construction of Canadian railways, many of which were under Government control, the following chapter will deal with sources of supply of Canada's foreign capital and its distribution, to help throw some more light on the costs involved in the construction of the country's railway system as well as create better understanding of the workings of this important production factor termed capital.

CHAPTER VI

CANADIAN CAPITAL AND ITS DISTRIBUTION

Certain aspects of the inflow of foreign capital into Canada have already been dealt with in Chapter Three of this thesis. To avoid unnecessary repetition, the present chapter will concentrate upon sources of supply of this foreign capital, the problem of interest payments on foreign debt, also a superficial treatment of domestic capital formation and, finally, the distribution of investment over the period under consideration.

The terms "capital" and "investment" are usually interrelated, the former pertaining to all those man-made instruments of production, which enable him to raise his productivity and thereby improve his present living conditions as well as provide for future needs: whereas the latter is the causal factor, involving a complex of activities as well as decisions which create new capital or augment already existing capital. In this sense, the creation of "capital" will involve the entire community, its producers, consumers and government, embracing domestic activities as well as international financial ones, all involving a process of savings,

or rather a balance between present consumption and production for the future.

There are various means by which a country may create, accumulate, or obtain its capital. These include individual and community savings, mortgage and various other companies, merchants, banks, funds brought into the country by immigrants and the borrowing of foreign capital. Community savings and other domestic means of providing capital often have to be supplemented. If, as is often the case, government surplus is not sufficiently large, or is not available, that is, if government revenue does not exceed its expenditure, the country has to resort to overseas funds if needs exceed domestic supplies. And indeed, historically, it was usual for "new" countries to obtain a large portion of their working capital from abroad by means of borrowing, primarily because of the relationship between their potentialities and current production.

For Canada, because of the particular nature of climate, topography and natural resources involved, namely, forest, mining, hydro-electric power, gas and oil, as well as the need to open up the country's interior by means of an expensive transportation system, an enormous outlay on construction or purchase of capital instruments of which the country was in short supply was necessary, obliging the country to resort to capital imports to supplement local savings. This Canada

found relatively easy to do. With her abundant and useful resources, opportunities for profitable undertakings were plentiful. Each new investment undertaking created new profitable opportunities, thereby stimulating rapid economic development, which in itself helped capital imports gain prominence. This attraction of foreign capital created by the profitable domestic climate, was reinforced by the responsibility assumed by the Dominion Government guaranteeing the safety of foreign invdstment within a climate of social and political order and stability. Although all capital producing countries invested a great deal of capital within their own boundaries, to stimulate their own industrial development, the "new world" was still regarded as a profitable outlet for their "surplus" capital. With a shortage of concrete capital as well as a corresponding scarcity of money capital at a time of rapid expansion, spurred on by the high prices obtained for agricultural exports, a country like Canada could offer high rates of interest relative to those other countries, thereby becoming more attractive to foreign investors; and for a country such as Britain, where local profits tended to decline in the nineteenth century, investments in the "New World" were seized upon as a means to arrest this declining tendency and thereby provide a profitable outlet for domestic capital.

Local thrift was probably responsible for a great deal

of Canada's wealth and the country's domestic savings have undoubtedly amounted to many millions of dollars. And yet, it is most difficult to obtain an accurate assessment of these domestic savings during the period under study. Records of savings deposits with chartered banks, which would have made a fairly good index of domestic savings, are not available for that period. To complicate matters, it is most likely that the predominantly small, unincorporated businesses of that time, as well as the people engaged in farming, fishing, trapping and construction industries, or in wholesale and retail trades, and even those few large-scale family owned businesses, all tended to re-invest their savings directly, rather than first allowing them to pass through any form of market intermediaries. This, too, tended to obliterate any reliable trace of the exact magnitude of these re-investments. That they did occur, is evidenced from the various investigations concerning the matter which have been conducted from time to time. One such investigation into the nature and magnitude of savings out of farm income discovered that, "seldom less than twenty per cent and frequently as much as fifty-five per cent of net income is devoted to re-investment in the home farm, or the payment of principal and interest of debts formerly

contracted."[1]

Various attempts were made to obtain information concerning the problem of domestic savings, during the period in question. Information as to deposits with government institutions as well as deposits with building societies and trust companies was easily obtainable, and though these figures do not represent the absolute magnitude of the country's savings, they are quite useful as indicators of trend. The following Table 35 presents information concerning savings deposits with Government savings banks as well as with the post-office savings banks, the latter catering to small scale deposits, all for selected years 1868 - 1913.

Both post-office and Government savings bank deposits have increased quite considerably, the former especially during 1907/8, the year of financial difficulties. Yet, on a per capita basis, savings in Government institutions showed a decline in 1895, recovering again in 1900, then maintaining a downward trend during 1904 - 1913, Canada's period of great expansion, when investment outlays were especially large.

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[1]K. Buckley, Capital Formation in Canada, 1896-1930, (Toronto University Press, 1955), pp. 67-68, taken from R. W. Murchie, Agricultural Progress on the Prairie Frontier, (Toronto, 1936), pp. 72-73.

TABLE 35

SAVINGS DEPOSITS WITH POST-OFFICE SAVINGS BANKS AND GOVERNMENT SAVINGS BANKS, SELECTED YEARS, 1868-1913

Year	Post Office Savings Banks: Amount at Credit December 31 (dollars)	Government Savings Banks: Amount at Credit, Dec. 31 (dollars)	Total per capita (dollars)
1868	204,589[a]	1,483,219[b]	0.5
1870	856,814	1,822,570	0.8
1875	2,926,090	4,245,091	1.8
1880	3,945,669	7,107,287	2.6
1885	15,090,540	17,888,536	7.2
1890	21,990,654	19,021,812	9.1
1895	26,805,542	17,644,956	8.8
1900	37,507,456	15,642,266	10.0
1901	39,950,813	16,098,144	10.4
2	42,320,210	16,117,777	10.6
3	44,255,327	16,515,802	10.7
4	45,419,706	16,738,744	10.3
5	45,368,321	16,649,136	10.0
6	45,736,488	16,174,134	9.0
7*	47,453,228	15,088,584	9.9
8	47,564,284	15,016,871	9.6
9	45,190,484	14,748,871	9.0
1910	43,568,357	14,677,872	8.4
11	43,330,579	14,763,752	8.1
12	43,563,764	14,655,564	7.7
13	42,728,942	14,411,542	7.4

[a] 3 months only.

[b] Includes credit deposited in 1867.

* 7 months only.

Note: Calculations of the last column were made by the writer.

Source: Canada Year Book, 1914, pp. 584-5

Deposits with loan companies and building societies are said to have risen almost seventy per cent since the turn of

the century, notwithstanding the financial set back of 1907.[2] With the exception of the year 1910, deposits with these companies have shown an upward trend, during the years 1909-1913, as is shown in the following Table 36.

TABLE 36

DEPOSITS WITH LOAN COMPANIES AND BUILDING SOCIETIES (1909 - 1913)

Year	Millions of Dollars
1909	27.8
1910	25.4
1911	33.7
1912	33.2
1913	32.7

Source: Canada Year Book, 1914, p. 592.

Until the outbreak of World War I, individual mortgage lenders as well as private mortgage companies, trust and loan companies were most important in financing the country's capital formation, since Canadian banks were forbidden by law to lend money on real estate or chattel mortgages. Loans made by such companies on real estate increased from $3 million in 1867 to $117 million by the end of the century, undoubtedly in response to the rise of some twenty per cent in returns

[2] Cost of Living Report, 1900-1914, (Vol.II), p. 911.

on first mortgages on city house property.[3] With the increase in the domestic supply of money, by 1900, these companies were forced to give way before individual investors and various insurance companies.[4]

K. Buckley[5] has attempted to measure domestic savings by deducting direct Government investment from the country's total investment, then adding Government deficit or subtracting its revenue, as the case warranted. His conclusion was that high rates of private capital formation as well as recurring Government deficits exceeded the country's community savings for most of the period 1900-1915, utilizing foreign funds to augment the latter. He arrived at his figures for gross private domestic savings as shown in the following Table 37, where he also determined gross savings as a percentage of the country's gross national product.

Gross private domestic savings tended in the upward direction over the entire period and their relationship to gross national product was fairly stable, oscillating about seventeen per cent, with a peak in the 1906-1910 period, and this despite the severe recession of 1907-8. On the whole, these were fairly prosperous years, the major break in

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[3]A. K. Cairncross, Home and Foreign Investment, 1870-1913, (Cambridge University Press, Great Britain, 1953), p. 40.

[4]K. Buckley, op. cit., p. 68.

[5]Ibid., Chapter 6.

pre-War I expansion occurring after the peak period of 1912-13, this recessive tendency continuing to about 1915.[6]

TABLE 37

GROSS SAVINGS OFFSETS IN CANADA 1901-1915,

(IN 5-YEAR AVERAGES)
(MILLIONS OF DOLLARS)

Period	(1) Gross private Domestic Investment[a]	(2) Government Deficits	(3) Capital Inflows	(4) Gross private Domestic Savings (1 + 2 - 3)	(5) Gross Savings as Percentage of Gross National Product
1901-05	1,189	40	301	928	16.4
1906-10	2,039	225	784	1,510	17.8
1911-15	2,839	770	1,515	2,094	17.2

[a]Private Investment excludes direct Government investment but includes investment of Government-owned enterprises.

Source: K. Buckley, op. cit., p. 63.

As for net private investment, only rough estimates were obtained, as seen in the following Table 38.

The sum of net private domestic investment plus government deficits (columns 1 + 2), equals total capital formation financed by capital imports and net domestic savings and is equal to the sum of capital inflows and net private domestic

[6]Ibid.

savings (columns 3 + 4), with only inventories being financed largely by domestic savings.

TABLE 38

ROUGH ESTIMATES OF NET PRIVATE INVESTMENT AND SAVINGS, 1901-1915
(MILLIONS OF DOLLARS)

Period	(1) Net Private Domestic Investment		(2) Government Deficits	(3) Capital Inflow	(4) Net Private Domestic Savings	(5) Capital Inflow as % of G.N.P.	(6) Net Savings as % of G.N.P.
	Structures & Equipment	Inventories					
1901-05	402	222	40	301	363	5.3	6.4
1906-10	929	262	255	784	662	9.2	7.8
1911-15	1,261	360	770	1,515	876	12.4	7.2

Source: Ibid., p. 64.

Net savings as a percentage of gross national product exceeded capital inflow as a percentage of the same, only during the years 1901-5.

The domestic capital market was, on the whole, rather weak during the early part of the nineteenth century and the country's private means of finance were incapable of coping with all its investment requirements. Prior to the first World War, most of Federal and provincial securities as well

as a large part of municipal securities were sold abroad, though, in 1908-1914, some $250 million of bonds were subscribed in Canada.[7] Scarcity of money capital raised rates of interest, increasing the return on Dominion and Provincial government bonds by twenty per cent and on bonds of cities, counties and townships by more than forty per cent. The terms upon which Canada could borrow abroad became more difficult.[8]

Though Canadian banks commenced to provide the Government with loans in 1873, their direct loans to the Dominion Government were rather small and even uncommon after 1892. This was probably so because of the Government's preference to sell the banks short-term treasury bills rather than borrow directly from them.[9] Yet, domestically, Canada's commercial banks were fairly important institutions, helping to finance inventories and receivables and making short-term advances to implement companies, so as to enable farmers to purchase their required implements on credit, and their overall credit policy helped make the transfer of capital a smoother process. Bank reserves were approximately fifty per cent of

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[7] Cost of Living Report, 1900-1914, (Vol.II), p. 1047.

[8] A. K. Cairncross, op. cit., p. 40.

[9] C. A. Curtis, "Statistics of Banking", Statistical Contributions to Canada's Economic History, (Vol.I, Toronto, 1931), Introductory Chapter.

their deposits and were composed of cash fifteen per cent of deposits, Government bonds, call loans and deposits with banks in foreign lands.[10] Their investments were mostly of the portfolio type, keeping a large portion of their resources in the United States and in Great Britain for purposes of foreign exchange as well as the building up of a second line of reserves for investments in the call loan market. Before 1900, most of their securities were foreign, the bulk of which were call loans in New York averaging an interest rate of 3.6% throughout the period.[11] They commenced to hold railroad bonds only after 1891. After 1900, Canadian banks are reported to have held railway and other bonds, debentures and stocks, mainly in the form of railroad and industrial securities. The only Canadian industry to undertake direct foreign investment of any magnitude in the pre-1900 years, was the railroads and that usually in the form of mileage owned in the United States.

IMMIGRANT FUNDS

Capital brought into the country by immigrants, as the function of the rate of immigration, was of greater importance in the post-World War I years than in the pre-War years, with

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[10] B. H. Beckhart, The Banking System of Canada, (Hold, 1929), p. 430.

[11] J. Viner, op. cit., p. 91.

which this study is concerned. For the period 1900-1913, for the first seven years, 1900-1907, immigrant funds plus remittances to Canada sent from abroad outweighed that of total capital taken out of the country by Canadian emigrants, plus remittances abroad made by Canadians, giving rise to a credit item, while during the next six years, 1907-1913, the reverse was the case, resulting in a debit item, as shown in the following Table 39.

TABLE 39

THE BALANCE OF NON-COMMERCIAL TRANSACTIONS, 1900-1913
(IN THOUSANDS OF SOLLARS)

Year	Balances	
	Debit	Credit
1900	. .	3,049
1901	. .	3,431
1902	. .	9,077
1903	. .	9,624
1904	. .	5,046
1905	. .	8,137
1906	. .	6,668
1907	. .	568
1908	7,632	. .
1909	4	. .
1910	375	. .
1911	8,033	. .
1912	23,391	. .
1913	34,431	. .
Total	73,866	45,600

Source: J. Viner, op. cit., p. 61.

During the years 1912 and 1913, the debit balance was greatest, while during the years 1902 and 1903 the credit balance was highest, but on the whole, the debit balance outweighed the credit balance by approximately one and a half times.

It has been estimated that for the period 1900-1914, American immigrants brought in, on the average, $500 per person, while British immigrants averaged $100 each and Continental Europeans $25 each. To obtain the total amount of capital brought into Canada by immigrants, including returned Canadians, the per capita sums are multiplied by the total number of the respective immigrants and added up, as is done in the following Table 40, to give a total of some $651.5 million for the fourteen years 1900-1914.

TABLE 40

TOTAL CAPITAL BROUGHT INTO CANADA BY IMMIGRANTS, 1900-1914

Group	Number of Immigrants	$ per Person	$ Total
British	1,116,352	100	111,635,200
Continental European	791,011	25	19,775,275
American	998,659	500	499,329,500
Returned Canadians	275,000	125	51,150,000
Chinese Head Tax	. .	. .	15,605,919
Grand Total			651,495,894

Source: Cost of Living Report, 1900-1914, (Vol.II), pp.902-3.

The above estimates are very rough, still, it is possible to assume that some immigrants were able to make some financial contributions toward their requirements for settlement in Canada. Other later sample studies indicate that a significant portion of credit requirement for frontier settlement was supplied by the personal funds of the immigrants upon their arrival on the frontier. It was estimated that the average initial investment of new settlers was $1,249 for the five years 1901-5, $1,812 for 1906-10, $1,993 for 1911-16, $4,943 for 1916-1920, and approximately $5,000 for the post-War period, reflecting the importance of personal funds in agricultural settlement, especially so in post-1914 years.[12]

SOURCES OF SUPPLY OF FOREIGN CAPITAL

The importance of foreign funds to Canadian economic development has already been discussed and attested to earlier in this thesis. It is now interesting to analyse its sources of supply as well as the problems it gave rise to and finally, discuss the distribution of foreign funds and domestically created capital within the country.

Though Canada's economic history attests to the steady

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[12] K. Buckley, op. cit., p. 68, based on R. W. Murchie, Agricultural Progress on the Prairie Frontier, (Toronto, 1936), pp. 72-73.

inflow of foreign capital even before the advent of Confederation, there are still no reliable estimates for the years prior to 1900 and rough estimates have to be consulted. It is thus estimated that the total volume of foreign capital in Canada at the time of Confederation was approximately $200 million, consisting of some $70 millions of British investments in provincial bonds, $90 millions of British investments in railroads and $25 millions of British investments in other forms, while the United States is assumed to have invested only $15 million and that mainly in lumber and mining operations. It is also assumed that pre-Confederation years also saw primarily the above mentioned type of foreign investment, namely, Government and railway bonds.[13]

The following Table 41 presents the direct estimate of foreign capital invested in Canada, in total as well as subdivided into its various components, for the period 1868-1900.

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[13] O. J. Firestone, "Canada's External Trade and Net Foreign Balance, 1851-1900", in Trend in the American Economy in the Nineteenth Century, A Report of the N.B. of E.R., New York, (Princeton University Press, 1960), pp. 757-771.

TABLE 41

DIRECT ESTIMATE OF FOREIGN CAPITAL INVESTED IN CANADA, 1868-1900

Classification	Millions of Dollars
Public Issues	789
United States direct and private investment	191
British direct and private investment	90
Investments of all "other countries"	35
Total	1,105[a]

[a]It is interesting to note that a similar figure to the above total was obtained with only a very slight discrepancy, namely, $1,066 million, when the net inflow of foreign capital was measured by the debit balance of payments account, i.e., by deduction of total current payments from total current receipts, adding Canada's capital invested abroad.

Source: O. J. Firestone, "Canada's External Trade and Net Foreign Balance 1851-1900", op. cit.

The London market was Canada's prime source of foreign capital and practically all of Canada's securities or public issues were floated there. Some of these undoubtedly, eventually found their way into Europe or America, but of the total issues during the pre-1900 years, only two Canadian public offerings were floated in the United States and all the rest in Great Britain. As for direct and private

investment, the total for the United States was more than double that of Britain's, the latter's direct investment, private purchases of Canadian securities and miscellaneous capital movements, such as financing Canada's foreign trade and shipping and investing in British insurance companies operating in Canada, is estimated at approximately $3 million, out of a total of some $90 million, which is only a small proportion of the volume of the estimated $755 million of Canada's securities issued in Britain over that period.[14]

It is rather difficult to break up the term "investment of all other countries" into its various components, since no such information is available. It is known that countries such as France, Germany and the Netherlands have been lenders of some importance, but estimates, and rough ones at that, were made only for France, whose investment in Canada, apart from securities, was estimated at $15 million for the period in question, leaving a total of $20 million as investments made in Canada by "all other countries", excluding Britain and the United States.[15]

From 1900-1915, Canada's international indebtedness grew rapidly, her net capital imports for these fifteen years

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[14] O. J. Firestone, "Canada's External Trade and Net Foreign Balance 1851-1900", op. cit.

[15] Ibid., based on estimates made by Prof. J. Viner.

totalling some $2,600 million, over twice the size of her capital imports during the twice as long period, 1868-1900. It was estimated that Canada's capital imports for 1900-1915, were more than half as large at 57.4% as the country's domestic savings,[16] comprising twenty-six per cent of her gross domestic investment in 1900-5 and thirty-eight per cent in 1906-10.[17]

Canada's gross liabilities increased by some $2,500 million in fourteen years, rising from $1,200 million in 1900, to $3,840 million in 1914.[18] As for Canada's net per capita imports of capital, the increase was from some $6 in the early 1870's, declining from mid-1890's to the end of the century, then greatly increasing to over $40 in pre-World War I years, as shown in the following Table 42.

TABLE 42

CANADA'S PER CAPITA IMPORTS OF CAPITAL, 1868-1913
(DOLLARS)

	1869-71	1895-99	1909-13
Net Capital Imports per capita	6.05	4.41	42.17

Source: P. Hartland, "Canada's Balance of Payments Since 1868", Trends in the American Economy in the Nineteenth Century, A Report of the N.B. of E.R., (Princeton University Press, New York, 1960), p. 720.

[16] K. Buckley, op. cit., p. 63.

[17] P. Hartland, "Canada's Balance of Payments Since 1868", op. cit., p. 719, based on estimates by O.J. Firestone and K.Buckley.

[18] K. Buckley, op. cit., p. 65.

As a percentage of gross national product, this capital inflow was at an average annual increase of nine per cent for the five years 1906-10, rising to twelve per cent over the next five years 1911-15.[19]

This importance of capital imports into Canada declined, both relatively and absolutely in 1915, when the country shifted its position from a net capital importer to a net capital exporter, and it was only eleven years later, in 1926, that capital imports into Canada assumed significance once again.

The following Table 43 presents total foreign investment in Canada for 1900-1913, also the subdivision of this total into its various sources of origin.

It was only after 1907 that capital imports into Canada assumed so large a scale. Whereas in 1900 British investment in Canada comprised only about one-third of the latter's total foreign investment, American investment almost one-half of the total and that by "other countries" about an eighth, from 1904 to the end of this period British investment in Canada assumed prime position, increasing by some 37-fold in 1913 over the 1900 figure, while American investment in Canada rose only eight-fold and that of "other countries", ten-fold.

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[19] P. Hartland, "Factors in Economic Growth in Canada", Journal of Economic History, (Vol. XV, No. 1, 1955), pp. 13-22.

TABLE 43

INVESTMENTS OF FOREIGN COUNTRIES IN CANADA, 1900-1913
(THOUSANDS OF SOLLARS)

Year	British	American	Other Countries	Total
1900	10,068	17,907	3,745	31,720
1	15,085	18,339	3,745	37,169
2	11,916	23,358	7,060	42,334
3	28,833	22,093	3,745	54,671
4	29,500	25,780	6,618	61,898
5	76,398	32,408	3,745	112,551
6	68,453	29,510	7,293	105,256
7	65,251	25,992	3,845	95,088
8	181,404	32,744	7,982	222,130
9	212,725	36,153	4,522	253,400
10	218,457	72,664	22,065	313,186
11	244,427	76,143	27,840	348,410
12	214,830	81,735	24,550	321,115
13	375,771	134,968	35,960	546,699
Total	1,753,118	629,794	162,715	2,545,627

Source: J. Viner, op. cit., p. 139.

By 1913, British investment in Canada was almost three times that of American investment, with the latter practically

four times that of the investments made in Canada by "other countries" during the same year. It was only later that American investment in Canada increased sharply, attaining a level of some $2,300 million, while total British investment was slightly reduced by the end of the first World War.

Throughout the years 1900-1914, Canadian public, as well as private borrowers, had easy access to British funds and at relatively low cost too, that is, since conditions within Canada were then prosperous due to an expanding economy spurred on by a successful export industry. Since the turn of the century, British capital went out in large sums to various "new" countries, her average annual lendings at the time were reported to have reached $800 million, her imports greatly exceeding her exports, this excess representing primarily receipts of interest and dividends on her foreign loans and investments. Whereas in the 1870's, approximately one-third of Britain's total capital was invested within her own Empire, by 1885, this rose to approximately one-half and remained so until the outbreak of the Great War, with Canada as the prime borrower within the Empire, followed by India, South Africa, Australia and New Zealand. A definite relationship was obvious between Britain's foreign investment and her terms of trade, as the two tended to move in the opposite direction, the volume of the former rising only with

the worsening of the country's terms of trade, as it was only then that investment opportunities in raw material producing countries, seemed so much more favourable, attracting large amounts of British capital.[20] In this sense, Britain's boom in foreign investment after the mid-1880's was brought to an end by the sharp break in the price of foodstuffs and raw materials in the early 1890's, resulting in low foreign investment, while after 1903, when the terms of trade have ceased to move in Britain's favour, her foreign investment increased, as is plainly indicated in Table 43 above, and after 1905-7, increased British investment seems to have coincided with rising import prices and almost stationary terms of trade.[21]

INTEREST PAYMENTS

Interest payments on foreign capital invested in Canada, occupied an important place in the country's balance of international indebtedness and yet, opinions as to the actual rate of interest paid, tend to vary even amongst the experts,[22]

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[20] A. K. Cairncross, op. cit., pp. 189-92, 205.

[21] G. M. Meier and R.E. Baldwin, op. cit., p. 218.

[22] R. H. Coats, Cost of Living Report, (Vol.II), p. 891, estimated the average interest rate on British capital in Canada at 5%. Other estimates were 4% on British capital and slightly over 4% on American capital, as suggested by Sir G. Paish; or 4½% as the average rate of interest on all foreign investment in Canada, as suggested by the eminent Canadian banker, Sir E. Walker. J. Viner, op. cit., p. 96.

perhaps so because no direct estimates were made on foreign investment in Canada at that time.

Professor Viner maintains that interest rates paid by Canada were relatively high before 1890, but reached an unusually low level in the following ten years, so much so that the Canadian Government succeeded placing, in 1898, a large loan on the London market at a low 2.88%.[23] It is logical to assume that normally, the rates of interest to be paid on investments made before 1900, would be those current at the time when such investments were made. Prof. Viner estimated the average yield on the investment of foreign Capital in Canada in the pre-1900 years at three per cent, claiming this to be the effective rate until 1907, after which it rose to four per cent, to allow for later conversions of old loans.[24] He goes on to estimate total payments on foreign capital as follows:

i) a total of $576 million was paid on investment made before 1900;

ii) a total of $384.2 million was paid on investments made during the years 1900-1912;

iii) the grand total of $960.2 million was paid by Canada on capital invested in the country during both the pre-1900 years and post-1900 years to 1912.[25]

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[23]Rates were 5% in 1879-1884: 3.25% in 1883-1893.

[24]J. Viner, op. cit., p. 99.

[25]Ibid., p. 101.

R. H. Coats estimated Canada's total payments of interest at five per cent for the period 1900-1924, at $1,488 million, obtained as follows:

Payments by Canada to	Millions of Dollars
United Kingdom	1,263
United States	175
Other Countries	50
Total	1,488

Source: Cost of Living Report, 1900-1914, (Vol.II), pp.891-2.

He further claims that Canada's annual interest payments showed a steady increase, so that by 1914, this payment was almost three quarters of the net interest payments made by the United States, a country with a population three times as large as that of Canada.

Canada's net interest and dividend payments abroad relative to her gross national product, reached a peak during the years 1910-15, averaging 3.27 for 1901-5, 3.85 for 1906-10 and 5.38 for 1911.15.[26]

Rapid expansion of population through its addition to an increased labor force, would tend to keep down cost of investment, and interest rates relatively low in view of the economy's prosperous conditions and tremendous growth at that

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[26]K. Buckley, op. cit., p. 65.

time, would be expected to have helped lower the country's per capita burden of public debt, yet this was not so, as per capita interest rates paid increased from $1.72 in 1869-1873, to $14.39 in 1909-13, while Canadian per capita interest and dividends received, increased from $0.26 to $1.36 over the same period, as shown in the following Table 44.

TABLE 44

PER CAPITA ESTIMATES, 1897-1913
(DOLLARS)

	1869 to 1873	1895 to 1899	1909 to 1913	AS PERCENTAGE OF Total Debit 1869-73	1895-99	1909-13	Total Credit 1869-73	1895-99	1909-13
Capital Imports	6.05	4.41	42.17						
Debit:Interest & Dividends	1.72	7.76	14.39	5.2	20.7	13.8			
Credit:Interest & Dividends	0.26	0.77	1.36				0.1	2.3	2.1

Source: Based on P. Hartland, "Canada's Balance of Payments Since 1868", op. cit., p.720.

Interest and dividends as a percentage of total debit thus increased greatly during 1895-1899 when, until 1904, these payments exceeded the country's net capital inflow, a rare occurrence in Canadian history of that time. It then fell during the following period, 1909-1913, but it still was over

twice as high as that for the 1869-73 period. Interest and dividends received, as a percentage of total credit, showed a similar trend, only on a much lower scale. The increase in rates of interest could perhaps be explained against the background of the country's tremendous economic expansion spurred on by increased foreign demand for Canadian exports, creating in turn a scarcity of capital equipment as well as of money capital and of labor, which in turn contributed to rising rates of interest. But this latter aspect made capital investment in Canada more profitable and attractive.

CAPITAL DISTRIBUTION

The prospects of profit making and the expectations of relatively high rates of return are in themselves attractive inducements to foreign investors anywhere, this being all the more so when guaranteed by a responsible Government. And indeed, for Canada, expectations of high profit returns induced by the development of the country's Western frontier, were reinforced by positive government activity, whether in the form of direct government borrowing and investment, or as guarantors of borrowings made by other local public or private enterprisers, to make Canada most attractive to foreign capital and thereby accelerate the country's process of growth. The following Table 45, though confined to a period of only

fourteen years, 1900-1914, helps present an overall, general picture of foreign capital distribution within the country, at the same time reflecting the situation within the country during the earlier years, 1868-1900, as will be seen below.

TABLE 45

DISTRIBUTION OF TOTAL FLOW OF CAPITAL INTO CANADA, 1900-1914
(MILLIONS OF DOLLARS)

Classification	Great Britain	United States	Other Countries	All Countries
Dominion Government	175	4	- -	179
Municipal Government	200	60	- -	260
Railroads	670	50	47	767
Industrial Investment	420	180	30	630
Land and Timber	80	145	80	305
Mining	65	60	- -	125
Insurance Companies	32	50	- -	82
Miscellaneous	111	81	6	198
Total	1,753	630	163	2,546

Source: J. Viner, op. cit., p. 303.

Canada's railroads had to go abroad for practically all their capital requirements and it is not surprising to note that

it was the railroads which have attracted the preponderance of foreign investment during this period, especially that of British origin, since most railway bonds issued were under government guarantee and were, therefore, considered "safe" investment.[27] British investment in Canada had been typically portfolio investment throughout the period, and as it dominated the Canadian scene throughout the nineteenth century, hence the formation of debt in the form of bonds and mortgages of fixed monetary claims rather than the more variable equity type of investment.

It has been estimated that the capital liabilities of the railways had increased some ninety-five per cent by the year 1914, representing a gain of $750 million over that in the nineteenth century. This estimate, though, cannot serve as an accurate index of the actual money spent in railways, as it does not reflect the 1914 price of bonds and total new expenditure was probably a great deal higher.[28] And indeed, railways have shown the greatest scale of expenditure, primarily so for an increase of over 11,000 miles by 1914, with an additional 7,500 miles still in the process of construction. At the same time, the number of locomotives increased 121%, freight cars 171.5%, passenger and luggage cars

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[27]Also returns on Foreign Rails were better than on British Home Railway preference stock, namely, 4.93% in dividends and 1.79% in principal of former and 4.7% in dividends and 1.8% in principal of latter, cf. A.K. Cairncross, op. cit., pp.230-1.

[28]Cost of Living Report, 1900-1914, (Vol.II), p. 920.

eighty per cent, all requiring vast sums of capital, rendering this industry susceptible to dominance by government investment, which indeed was the case, until the outbreak of the first World War.[29] The following Table 46, compares total joint provincial and Dominion Government expenditure on current account, during the years 1874, 1896 and 1913, reflecting the importance of the Government in direct public investment, primarily that of transportation and public domain.

TABLE 46

TOTAL GOVERNMENT (PROVINCIAL AND FEDERAL) EXPENDITURE ON CURRENT ACCOUNT[a] FOR THE YEARS 1874, 1896 AND 1913 (THOUSANDS OF DOLLARS)

Classification	1874	1896	1913
Net Debt Charges	5,373	11,009	34,794
Justice, Legislation and General Government	7,215	12,298	76,836
Defence	1,331	1,627	13,781
Public Welfare	870	2,418	15,121
Education	1,421	2,003	37,515
Agriculture & Public Domain	1,656	1,941	18,403
Transportation	4,612	2,851	56,663
Other	1,898	1,143	94
Total	24,376	35,290	253,207
Total per Capita	5.91[b]	6.96	32.6[c]

[a]Compiled from public accounts of Dominion and Provinces.

[b]Excludes Ontario surplus contributed to Municipalities.

[c]Calculated by the writer.

Source: Report of The Royal Commission on Dominion-Provincial Relations, Book I, Canada, 1867-1939, (Ottawa, 1940), For years 1874 and 1896, p.63; for 1913, p.106.

[29]Ibid., p. 1049.

The tremendous increase in total Dominion and provincial outlays, as well as the five to six-fold increase in their per capita expenditure are clearly observed in the above Table. Municipal government ranked fourth in importance as receptor of total foreign funds and third for British funds, with the Dominion Government looming sixth in importance of total foreign funds and fourth for British funds, with British funds predominating. Municipal borrowing was primarily for the purpose of town building, to provide for an increasing population, while the Federal Government accounted for almost sixty per cent of the country's total public investment during 1900-1915, its railway program absorbing almost 87.6% of their direct investment in the years 1905-1913. Other transportation facilities, including canals, harbours and river works have also attracted a great deal of Government investment to the extent of exceeding Government outlays for railways during the years 1901-10, while highways comprised some fifty per cent of provincial investment in 1911-1915. Total Government outlays tripled in 1914 over that at the turn of the century, while railway costs rose six-fold. The following Table 47 compares Government direct investment in railways, other transportation facilities and in public buildings for the fifteen years 1901-1915, while Table 48 presents in greater detail, the amounts of aid given by the Dominion Government

to Canada's steam railways for selected years 1875-1914.

TABLE 47

DIRECT INVESTMENT BY GOVERNMENT, 1901-1915
(MILLIONS OF DOLLARS)

Period	Railways	Other Transportation	Building
1901-05	15	32	10
1906-10	19	48	15
1911-15	98	94	33

Source: K. Buckley, op. cit., p. 54.

An upward trend is in evidence for all three groups involved, investments in railways predominating in 1911-15, rising five-fold over that of the previous period to a level of $98 million. These were closely followed by Government investment in other transportation facilities, totalling $94 million in 1911-15, almost double that of the preceding period.

Government investment in building construction increased 164% during the 1906-10 period and only seventy-seven per cent during the following years, 1911-15, comprising 21.9% of the country's total investment in construction.[30] But by 1914,

[30] K. Buckley, op. cit., p. 54.

the value of construction contracts fell by thirty-seven per cent, causing unemployment. This intense Government activity is not surprising, especially so when observed to have occurred primarily during the initial extensive phase of prairie settlement, when needs for absorbing and integrating a tremendous influx of immigrants into the country were most pressing.

TABLE 48

TOTAL AMOUNT OF DOMINION GOVERNMENT AID PAID TO STEAM RAILWAYS UP TO JUNE 30TH OF EACH YEAR, SELECTED YEARS 1875-1914 (MILLIONS OF DOLLARS)

Year	Capital of Gov't Railways	Aid to Other Railways	Paid by Dominion Gov't to Quebec Gov't	Total Aid paid up to Railways other than Gov't	Grand Total
up to 1875	24.3	16.2	-	16.2	41.0
1876	33.4	18.6	-	18.6	51.9
1880	41.9	32.8	-	32.8	74.6
1885	47.4	92.7	0.1	92.8	140.1
1890	56.7	93.2	0.7	93.9	150.6
1895	58.8	102.2	1.3	103.5	162.2
1900	63.8	105.9	1.9	107.8	171.6
1905	84.2	114.7	2.4	117.1	201.3
1910	100.7	146.9	-	146.9	247.7
1914	112.0	178.8	-	178.8	290.8

Source: Canada Year Book, 1914, p. 479.

At the end of June 30th, 1914, out of a total of $290.8 million some $112.0 million were the capital of the two Government-owned lines, while $178.8 million was given by the Dominion Government in aid to other railways, including the $5 million paid to the Grand Trunk Pacific Company in 1912. In each year, since 1886, the aid granted to other railways included the sum of $10.2 million paid by the Government to the C.P.R. for land taken over by the Government from the Company's land subsidy. Payments made by the Dominion Government to the Government of Quebec, were interest at the rate of five per cent for the transfer to the Federal Government, in 1885, of the Quebec, Montreal, Ottawa and Occidental Railways. From 1910 onwards, the loan of $10 million made under the Federal legislation of 1909, to the Grand Trunk Pacific Railway Company, was also included.[31]

To sum up, of the National Railway system, only the Grand Trunk was built without Government aid, while the C.P.R. obtained the bulk of Government aid, both these events being attributed to the timing of construction of the two lines, the former commencing so early in the period, when Government aid system was not yet a significant factor, while the latter seemed to appear on the scene at the most opportune moment.

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[31] Canada Year Book, 1914, p. 479.

The availability of foreign funds for such highly capital consuming activities as railways and other public services, helped release domestic capital for a variety of local activities and facilitate a great many rural and urban developments, amongst which the construction of residential dwellings ranked high. Continued investment stimulated internal activities, increased employment and raised wages, thereby improving the domestic market, raising the volume of imports to boost up excise duties and increase Government revenue. Intense capitalization was employed to speed up the country's industrialization. This intensity of investment activity is brought out more clearly when reducing expenditure to a per capita basis, as is done in the following Table 49.

TABLE 49

GROSS DOMESTIC CAPITAL FORMATION AND GROSS CONSTRUCTION, 1901-1915, EXPRESSED AS ANNUAL AVERAGES PER CAPITA

PERIOD	(1) Gross Domestic Capital (Current Dollars)	(2) Gross (Current Dollars)	(3) Construction (Constant Dollars)
1901-05	45	24	33
1906-10	70	44	51
1911-15	86	53	55

Note: True intensity of investment activity is actually masked by a bias due to price changes in columns 2 & 3.

Source: K. Buckley, op. cit., p. 7.

It is interesting to note that such high rates of investment were sustained despite the depressed years of 1907/8 and 1913.

Domestic capital was attracted primarily to Municipal securities. The building of homes, the paving of streets, the erection of water systems and a variety of other such similar activities were induced by an increasing population and resulting urbanization. Though adding considerably to the nation's capital equipment, the very nature of these activities makes measurement of the actually resulting growth, most difficult. It is estimated that for some one hundred and forty localities, real property values rose five-fold, from $337 million to $1,895 million after the turn of century, reflecting, to a large extent, increased prices of property sites for manufacturing, trading and residential purposes. A rise of twenty-one per cent in average municipal tax rates is in itself indication of increased Municipal expenditure on capital improvements. For some eighty years, 1905-13, almost $1 billion was spent on buildings, raising the amount of building in progress during the latter years by three-fold over that in the former years.[32] Census figures show that the number of dwellings in Canada increased

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[32] Cost of Living Report, 1900-14, (Vol.II), p. 1049, based on information from the Department of Labor, Building Permits.

37.6% in 1900-14.[33] The only periods showing a decrease over preceding years were the recession years 1907/8 and 1913. This intense activity in construction was undoubtedly, both cause and effect of a real-estate boom, which commenced at the turn of the century with the agricultural extension of the West. It absorbed a great deal of capital and was most effective in Eastern and Western cities and and townships, where resulting industrialization was most rapid. Information pertaining to the level of rents charged during this period tends to reinforce this conclusion, but this topic will be dealt with in a following chapter.

Total foreign investment in Canadian land and timber[34] ranked third in importance for total foreign capital and as second most attractive item for American capital. Of total foreign capital invested in lands and timber, American investment was most significant, being 1.8 times as much as investments made in these by British and other countries respectively.

Most of foreign capital investments in Canadian lands, were made largely during periods of speculative land booms. It is, therefore, not surprising to note that outside capital in Western Canada is reported to have been of greater

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[33] Ibid.

[34] See Table 45 above.

significance only when the boom there was already well under way. And indeed, when comparing prairie farm investment with the country's gross national domestic capital formation, as is done in the following Table 50, the former as a percentage of the latter was at its peak during the earlier period, 1901-5, rather than later on, when foreign capital in the West became more significant.

TABLE 50

PRAIRIE FARM INVESTMENT COMPARED WITH GROSS NATIONAL DOMESTIC CAPITAL FORMATION 1901-1915 (MILLIONS OF DOLLARS)

Period	(1) Gross Domestic Capital Formation	(2) Prairie Farm Investment	Percentage (2 as of 1)
1901-05	1,283	221	17.2
1906-10	2,875	319	13.9
1911-15	3,279	463	14.1

Source: Ibid., p. 8.

Heavy capital outlays were needed to equip Western agriculture in so short a period. Although the census figures for 1871 point to fairly significant accumulations of capital in terms of implements and equipment, to reflect thereby some degree of mechanization and industrialization, it was not

until the turn of century that these were greatly intensified and accelerated. During the opening decades of the twentieth century, Canada acquired new agricultural areas, increasing her total improved acreage by some sixty per cent at the end of the first decade, thereby raising her land value. During the first decade of this century, as shown in the following Table 51, Canada's agricultural capital, including land values, increased by some 136%.[35] When considering this estimate on a quantitative basis, as is done in Table 52, values tend to become greatly reduced.

TABLE 51

AGRICULTURAL CAPITAL VALUES FOR THE YEARS 1901 AND 1911*
(MILLIONS OF DOLLARS)

Description	1901	1911	Percentage Increase 1911 over 1901
Farm Lands	1,007.5	2,519.8	150.12
Buildings	395.8	824.0	108.17
Implements	108.7	260.1	139.20
Total Livestock	275.1	629.1	128.60
Grand Total	1,787.1	4,224.7	136.40

Note: Figures were rounded off by the writer.

*Canada Year Book, 1913.

Source: The Cost of Living Report, 1900-14, (Vol.II), p. 915.

[35] 118.6% when land values were excluded.

TABLE 52

AGRICULTURAL CAPITAL VALUES FOR THE YEARS 1901 AND 1911

Description	Percentage Increase of 1911 over 1901
Farm Land (improved acreage)	60.8
Livestock, total number	55.7
Implements	125.0
Elevator Capacity	450.0
Farm Buildings	40.0
Cheese Factories & Creameries	1.4

Source: Ibid., p. 916. Table rearranged by the writer.

As seen above, the acreage of improved land increased 60.8% and the total number of livestock only 55.7%, while implements showed an increase of 125% and elevator capacity 450%; increases for the two last mentioned items seem quite out of proportion in relation to increases in the former two items. Farm building increased by only forty per cent, but the real increase in capital was estimated at sixty-three per cent.[36]

Practically all of the above mentioned advances were made in Canada's Western provinces and it is to their development that this capitalization of agriculture is attributed.

[36] Ibid., p. 915.

For the period 1900-1911, the province of Saskatchewan had increased its improved acreage by 975%, the province of Alberta by 817%, while the province of Manitoba has lagged behind with only sixty-nine per cent. As for the rest of the provinces throughout the country, only the provinces of Quebec and Prince Edward Island showed any increases at all, for the former a rise of nine per cent and for the latter an increase of 5.9%, the remaining provinces staying at a standstill.

The distribution of prairie farm capital both as value and percentagewise is presented in the following Table 53. As seen in Table 53, investment in land per farm held the largest share of total investment, attaining a peak in 1911. Value of livestock per farm suffered a sharp drop in 1911, from its previously held level, recovering slightly in 1916. This decline can perhaps be attributed to the decline in cattle ranching with increasing settlement, as well as to mechanization. Prairie farm investment in the construction of housing and other buildings attained its peak during 1906-10, greatly diminishing its volume in the following period, 1911-16, when all other groups of investments maintained high levels.

TABLE 53

VALUES AND PERCENTAGE DISTRIBUTION
OF PRAIRIE CAPITAL AND LAND
SELECTED YEARS 1901 - 1916

A. VALUE

Year	Total All Farms (Millions of Dollars)	Value per Farm				
		Land	Buildings	Machinery	Live-stock	Total
1901	231	2,343	522	330	982	4,177
1911	1,789	6,215	901	550	1,314	8,979
1916	2,174	6,324	1,000	759	1,864	9,947
B. PERCENTAGE DISTRIBUTION						
1901		56.1	12.5	7.9	23.5	100.0
1911		69.2	10.0	6.1	14.6	100.0
1916		63.6	10.1	7.6	18.7	100.0

Source: K. Buckley, op. cit., p. 23.

In a rapidly developing economy, investment in industrial and mining enterprises assumes favourable prospects for profit making. For the first decade of the twentieth century, the number of mines and mining works increased from 1,373 to 2,222, a rise of some 61.8%.[37] The value of mining plants and buildings increased from $42.8 million to $108.5 million, representing

[37] Ibid., p. 918.

a rise of some 153.6%, but when considering price increases, this rise was probably no more than a doubling of real capital.

As for capital employed in manufacturing, no data is available for years prior to 1870. By 1900, capital employed in manufacturing showed an increase of 535% over that employed in 1870, rising from $40 million to $254 million. This percentage gain is even higher in real terms, namely 549%, allowing for a decline in the price of capital goods such as the substantial reductions in the cost of machinery, but this was largely outweighed by increased construction costs.

The following Table 54 presents the value of fixed capital, in the form of plant, equipment and land, used for individual purposes, as well as that per establishment, per person working and per $1,000 output, in both current and (1935-9) dollars, for selected years 1870-1900.

As pointed out in Table 54, the increases of fixed capital requirements in real terms, per employee and per unit of output for 1870-1900 are quite impressive, the former more than tripling, from $439 in 1870 to $1,365 in 1900 (in 1935-39 prices).

TABLE 54

VALUE OF FIXED CAPITAL, SELECTED YEARS, 1870-1900

VALUE OF FIXED CAPITAL[c]	1870	1880	1890	1900
Current dollars[b]	40	81	173	254
1935-39 dollars[b]	65	129	289	422
PER ESTABLISHMENT				
Current dollars	1	2	2	9
1935-39 dollars	2	3	4	a
PER WORKING PERSON				
Current dollars	270	426	665	822
1935-39 dollars	439	679	1,112	1,365
PER $1,000 OUTPUT				
Current dollars	171	261	368	435
1935-39 dollars	222	299	413	451

[a]Not available

[b]Source below, p. 231.

[c]Covers value of plant, equipment and land used for individual purposes.

Source: O. J. Firestone, "Development of Canada's Economy, 1850-1900", Trends in the American Economy in the Nineteenth Century, A Report of the N.B. of E.R., New York, (Princeton University Press, 1960), p.233.

To reflect growth of manufacturing industries during the years 1870-1900, percentages are used, as is done in the following Table 55. As seen in this table, the years 1870-1900 saw a much more rapid increase in capital, one of 7.74%, than did the later years 1890-1900 with 3.86%, undoubtedly reflecting a trend toward consolidation of Canadian industry

at the end of the nineteenth century. As for the increase in requirements for fixed capital per employee, in real terms, an averate rate of 4.71% was employed in 1870-1890, over double the annual rate of increase of 2.07% of the following decade, 1890-1900. Almost twice as much of fixed capital was required by Canadian industries in 1900, to produce goods worth $1,000, as was in 1870, namely, $451 (in 1935-39 dollars) in 1900, compared to $222 (in 1935-39 dollars) in 1870.

TABLE 55

PERCENTAGE INCREASE OF CAPITAL, 1851-1900
(1935-39 DOLLARS)

	1851-70	1870-90	1890-1900
VALUE OF FIXED CAPITAL			
over the period		344.60	46.00
annual average[a]		7.74	3.86
VALUE OF FIXED CAPITAL PER EMPLOYEE			
over the period		151.00	22.80
annual average[a]		4.71	2.07
VALUE OF FIXED CAPITAL PER $1,000 OUTPUT			
over the period	85.20	9.20	
annual average	9.13	0.88	

[a]Compound rates.

Source: Ibid., p. 234.

Comparing values of capital employed in manufacturing industries in 1910 with that in 1900, an increase of some 179% is estimated, representing a rise of $800.9 million, from $446.9 million to $1,247.6 million, used as capital employed in land, building and plant, as well as working capital, as indicated in the following Table 56.

TABLE 56

CAPITAL EMPLOYED IN MANUFACTURING INDUSTRIES
FOR THE YEARS 1900 AND 1910
(MILLIONS OF DOLLARS)

	1900	1910	Percentage Increase 1900 over 1910
Land, building and plant	209.4	654.7	212.7
Working Capital	237.5	592.9	107.5

Note: Figures rounded off by the writer.

Source: Cost of Living Report, 1900-1913, (Vol.II), p. 918.

Working capital of manufacturing establishments increased by some 107.5% during the first decade of the twentieth century, while the value of lands, buildings and plants rose 212.7%, this last figure representing a gain of at least 150% on a "real" basis. Buildings, which represented a large percentage of this increased capitalization in manufacturing, have increased in value by an estimated forty per cent during this

first decade of the century.[38]

The provinces of Quebec and Ontario were important manufacturing sites, obtaining a lion's share of this capitalization, receiving together seventy per cent of new manufactures.[39] At the same time, the tremendous percentage increases pertaining to Canada's prairie provinces, are perhaps mere reflection of the relative newness of this situation, as it was only after the turn of the century that manufacturing has assumed some significance there, as can be clearly assumed from the following Table 57.

TABLE 57

MANUFACTURING CAPITAL BY PROVINCES FOR THE YEARS, 1900 AND 1910

Province	Number of Establishments % Increase 1910 over 1900	Capital % Increase 1910 over 1900
Prince Edward Island	32.2	- 3.3
Nova Scotia	24.6	130.1
New Brunswick	24.9	73.7
Quebec	35.9	129.6
Ontario	22.3	176.1
Manitoba	35.5	535.8
Saskatchewan	- -	- -
Alberta	341.0	2,062.2
British Columbia	66.1	43.7
Canada	31.2	179.1

Source: Cost of Living Report, 1900-1914, (Vol.II), p. 920.

[38] Ibid., p. 961.

[39] Ibid., p. 1049.

The main industries to have experienced intense capitalization were those engaged in the manufacture of building materials, iron, steel and other metal products, transportation and equipment, all showing increases of some 200% or more. This conclusion is corroborated to some extent, by trade statistics, which when used with the appropriate caution required, tend to indicate a rise in the importation of materials used in railway as well as in general construction. The smallest increase in capitalization amongst manufactured products was experienced by those products used for domestic consumption. Capital in textile industries increased only 79.5%, and food products only 132.7%, the manufacturing of the latter as a percentage of total manufacturing dropped from twelve per cent in 1900 to 10.6% in 1910.[40]

Comparing Canada's expansion of new capital in industries of primary production with that of other undertakings over the period 1900-1910, the following results are obtained:

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[40] Ibid., p. 919.

TABLE 58

NEW CAPITAL EXPANSION, 1900-1910
(MILLIONS OF DOLLARS)

1. Industries of Primary Production		2. Other Industries	
AGRICULTURE		RAILWAYS	700
Farm Buildings	150	ELECTRIC RAILWAYS	50
Implements	125	MANUFACTURING (Working Capital)	355
Livestock	150		
FISHING	10	CANALS AND PUBLIC WORKS	100
MINING	30	MUNICIPAL GROWTH	600
TOTAL	465	TOTAL	1,805

Note: Estimates were arrived at by discounting the price rise included in the year 1910 and substituting 1900 values.

Source: Ibid., p. 934.

For this first decade of the twentieth century, capital equipment of agriculture, mining and fishing increased by $465 million while that of construction of public works as well as that of manufacturing and municipalities increased by $1,805, an amount four times the size of the first mentioned figure. When extending the period to 1913, this difference becomes even greater, to give the ratio of five or six to one. In terms of absolute volume of investment involved, the railways, followed by municipal growth appear

to have been the most important sectors to attract the greater part of new capital. Upon closer analysis, this is perhaps not surprising. True, the tremendous increase in foreign demand for agricultural products, especially wheat, and the favourable prices ensuing thereof prompted the rapid opening of Canada's West to agricultural settlement, created a healthy economic atmosphere within the country which in turn attracted large volumes of foreign capital. But before the West could actually be made fit for agricultural settlement, heavy investment outlays of a capital intensive type were required in housing projects, in transportation facilities, in educational facilities and in a variety of public and private utilities. The process of expanding population and the settlement of new territories would, in its very nature, require the above to be the case. Also, specialization in the cultivation and exportation of wheat required a wide organization of markets and was itself directly linked to transportation and handling services, thereby also giving impetus to a variety of construction, manufacturing and distribution activities which in themselves then tended to accelerate or perhaps even necessitate the rapid process of urbanization which Canada was undergoing at that time.[41] In this sense then, the final demand within the agricultural sector through the exportation of wheat gave

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[41]See Chapter VII for population and immigration figures to attest to the above.

rise to a multiplier-accelerator effect which then worked back from there to the other sectors mentioned above which then proceeded to develop rapidly at the expense of the food producing sector in terms of capital and labor involved.

In conclusion, it is perhaps appropriate to discuss briefly the endogenous and exogenous motivating forces behind the tremendous inflow of foreign capital into Canada after the turn of the century, also the timing of this flow and, very briefly, the fluctuations which have occurred in this investment.

As the term "foreign capital inflow" implies, both country of origin and country of ultimate destination of foreign capital are involved, in the sense that circumstances and conditions in both would tend to determine the rate and direction of such a flow. In the country of origin, practical, profitable conditions are a pre-requisite to the raising and exportation of capital, while in the receiving country, favourable economic conditions, including profitability as well as security would seem desirable, rendering the flow of foreign capital, in the above sense, an exogenous as well as an endogenous phenomenon. And indeed, as observed earlier, circumstances within Canada, with the turn of the century, became most attractive to foreign investors. The country was experiencing a most rapid economic expansion

in response to favourable conditions for her exports on foreign markets. This led to the rapid opening up of low cost producing farm lands and mineral deposits,[42] all with the favourable assent and aid of local government, to ensure the security of any foreign investment within the country. Reinvestment of the bulk of such foreign capital domestically, to create an increased stock of domestic capital equipment and facilitate the hiring of more labor, itself helped generate inflationary conditions within to act as further inducement to foreign investors. Conditions in Canada remained favourable to foreign investors practically throughout the entire period 1900-1914.[43]

As for motives prompting foreign capitalists to invest abroad, "There were a thousand and one special influences determining the attractiveness of investment at home and abroad: the guarantees and land grants offered to railway builders, the chance projects brought to the notices of

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[42]Canada's rich deposits of mineral ores including nickel, copper, gold, and silver were being developed at low costs of production at that time, and though prices of these commodities were low on the world market, demand for them was high to make their exportation profitable; J. Viner, op. cit., p. 261.

[43]It is important to realize that though these favourable conditions in Canada were responsible, in large measure for this tremendous influx of foreign capital into the country, these favourable conditions themselves were dependent, in large measure, amongst other things upon the continuous availability of capital within the country, namely the importation of foreign capital.

financiers, the military ambitions of foreign governments, the competitive position of British industries, the state of business sentiment, harvest yields, movement of population and the like"[44] all pointing to the complexity of this problem. And yet, it is still important to realize that British capital played a vital role in the developmental process of many economies. "At its peak, in 1913, foreign investment took over half the total of British savings; at its peak, too, in the years between 1908 and 1913, foreign borrowing financed over half the total addition to the stock of capital in the largest borrower - Canada."[45] But then, Canada was one of Britain's major sources of supply of food and raw material at the time and offered no competition to the latter's export trade. Improved transportation facilities in Canada and her ability to open up low cost producing agricultural areas would mean, apart from larger profits to private investors, cheaper prices for Britain's imports of foodstuffs and raw materials, and would, in this sense, afford the latter a large measure of social gain. With the terms of trade moving against Britain after 1896, primary producing countries became more attractive and profitable to British capital, what with British railways having ceased to play an

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[44] A. K. Cairncross, op. cit., p. 187.

[45] Ibid., p. 2.

important capital absorbing industry as early as the 1870's, while industry in general, as a domestic outlet for capital, was not very adequate, since it did not as yet use as much capital as one has come to associate with modern, present-day industries.

It is interesting to note that the tremendous influx of foreign capital into Canada which had commenced with the turn of the century, tended to fluctuate closely with the country's favourable terms of trade as well as with her immense immigration influx at that time, with all three factors being wrapped up together in the country's process of rapid economic growth. Canadian railways, which absorbed the largest portion of foreign capital, were, in addition, largely built by foreign labor and materials, providing, in this sense, a spectacular example of capital and immigration flow into the country during this period of rapid economic expansion.[46]

Like many other factors involved in the process of economic growth, investment would also tend to occur in spurts, often in response to cycles of booms and depressions. Foreign investment inflow into Canada, as observed earlier in this chapter, was high throughout most of the period in question, though some checks did occur during the briefly

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[46] British capital in Canada, 1900-1914, increased by more than £300 million, while more than one million persons emigrated from Britain into Canada during that same period, ibid., p. 210.

depressed years of 1904, 1907-8 and 1913.[47] The brief depression of 1904 appears to have originated in Canada's export industries, as a consequence of a severe winter and hence poor harvests, and reinforced by a slump in the United States. Though no serious repercussions resulted for foreign investment in Canada, its rise appears to have slackened, likewise that of the immigration inflow into the country, what with rising unemployment, especially amongst unskilled workers.

The slump of 1907-8 appears to have been of a more complicated nature. Here, although exports have failed to increase in response to the high prices they were actually fetching on the international market at the time, it was really the tight money policy on the London and New York money markets which has forced the upsurge in Canada's domestic market, causing it to exceed foreign borrowings, and result in the depletion of domestic bank reserves. A deflationary policy then undertaken by the Canadian banks soon restored equilibrium to the country's balance of payments.

The final depression of 1913 had even less to do with the country's export situation despite the fact that export prices were dropping at the time, and perhaps because export values were still holding their own at a level above that of

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[47] Ibid., pp. 54-57.

1912. Here again, financial stringency appears to have played the major role in causing domestic investment to outrun foreign borrowings and eventually force domestic banks to adopt a restricted credit policy to avoid any further serious repercussions.[48]

Apart from the above mentioned brief setbacks, which did not really exert any serious lengthy repercussions upon the country's high rate of economic growth, the entire period, 1900-1914, may be viewed as one of great expansion in both trade and investment.

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[48] Ibid.

CHAPTER VII

POPULATION

The population paradox seems to have been with us for quite some time. To go back not so very long ago, there were those, including a number of mercantilist thinkers representing several European countries, who used to regard an increasing population as the prime requisite to the attainment of national wealth and national power, or even as wealth itself. To Adam Smith, the founder of Britain's classical school of economics, "The most decisive mark of prosperity of any country is the increase in numbers of its inhabitants."[1] The economic rationale behind the above quotation undoubtedly lay in the belief that with increasing numbers increasing wealth per capita was bound to result. And so, population rather than capital became of prime importance in A. Smith's process of growth, though he did realize the limitations provided by available subsistence, for he goes on to say, "Countries are populous not in proportion to the number of people whom their produce can clothe

[1] Adam Smith, The Wealth of Nations, (Everyman's Library, Vol. I, 1957), p. 62.

and lodge, but in proportion to that of whom they can feed."[2] Since the idea of diminishing returns did not occur to him, his general attitude concerning the possibilities of economic growth was rather optimistic. In contrast, R. Malthus and D. Ricardo[3] viewed population growth as a threat to prosperity and hence to growth, predicting that increasing populations will ultimately outrun available means of subsistence, reduce per capita income and ultimately lead to the stationary state, where no economic progress was possible. Malthus contended that progress due to population alone was bound to be much too slow if at all possible, while Ricardo held that to boast of a large labor force was merely to admit the lack of adequate capital to employ this labor. But both, though realizing that capital accumulation could if not indefinitely prevent, then at least defer this race between a growing population and diminishing subsistence by helping raise productivity, did not believe that it was in the nature of those able to accumulate capital, namely, the land owners, to do so. Though all these arguments were mere theorizing, without the existence of any facts to back them up, since reliable statistical data was not as yet available,

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[2] Ibid., p. 149.

[3] Their writings are summarized in many text books on history of economic thought, e.g., J. A. Schumpeter, History of Economic Analysis, (Oxford University Press, 1959).

they still seem to contain more than a grain of truth and controversies still continue to build up around them even nowadays. The developed Western societies of to-day have managed, with the aid of advanced technology, to prevent a state of diminishing returns. But, as one so often neglects to realize, before returns diminish, they normally tend to increase with initial augmented inputs of a particular factor. This is particularly characteristic of pioneering countries like Canada, where returns tended to increase partly because the country's growing population tapped more fertile land, but also because there were presumably external economies for the system as a whole, but this is not so for many of the underdeveloped economies of to-day. Here population growth tends to exceed the country's rate of increase in national product, which inevitably result in diminishing per capita incomes to thwart any attempt at improvement. Also, in these economies, it is customary for land owners who could if they only wanted to, add greatly to the nation's productive investment, to spend their wealth instead on ostentatious consumption.

Indeed, it is only when accompanied by an "Industrial Revolution" that an increasing population will be a mark of prosperity, since it is only then that a growing population will tend to stimulate investment and technological progress through rising local demand for capital goods and social

overhead, to encourage large scale production which will enable the nation to take advantage of available economies of scale and render the economy greater flexibility. True, the growth of a country's population, which is also the source of its labor force and hence an important factor of economic growth will depend, amongst other things, upon the level of subsistence which the economy can provide, at the same time economic growth and hence prosperity is itself dependent, or perhaps rather interrelated with its population growth. Unfortunately, it is still difficult, if not impossible, to determine the exact nature of this causal relationship and even most advanced students of demography have not succeeded as yet to solve the mystery of the determinants of population growth. Still, the knowledge that a country's production is primarily determined by trends in its prime inputs, labor and capital aided by technology, or "know-how", is in itself a helpful step forward, since it is increased productivity which will help any nation to forge ahead to a higher and better level of living.

For Canada, as for other new, pioneering countries, sparse population, thinly spread out over vast distances of wilderness, made immigration an indispensable factor to the country's development, and indeed, historically, Canada's economic ups and downs were invariably closely linked with its migration problems, which at times helped to augment

local population, whilst at others were responsible for its stagnation to the detriment of the economy. This problem of migration involved both country of origin and country of subsequent destination and, therefore, to understand better this mass exodus of people from older, settled economies into "new", underdeveloped ones, as well as its effect upon the timing of Canada's "take-off" process, it is perhaps advisable to study this problem in terms of conditions of "attraction" and "repulsion" in the places so concerned.

The British Isles, Germany, Italy, France, Spain, Russia, the Scandinavian countries and the Austro-Hungarian Empire, provided the "New World" with the majority of its immigrants. A variety of factors, involving economic conditions with their consequent political and social effects in these homelands, combined to encourage emigration. During the 1880's a heavy exodus from rural European areas resulted due to an acute agricultural depression. The spread of industrialism has increased the difficulties of European agriculture, especially so after 1875, when American food products, which were produced at relatively lower costs, commenced to flood European markets, out-pricing German agricultural commodities from their usual markets and placing French agriculture under difficulties such as it had never encountered before. The tendency to excessively

subdivide agricultural land in many European countries, intensified the difficulties of the small European farmer, greatly reducing his ability to compete with the lower cost, large scale producers overseas, rendering the two decades 1875-1895 years of declining agricultural prices, accompanied by an acute agricultural depression for Europe. Such difficult economic conditions tended to encourage the outflow of European agricultural laborers and peasants to the "New World" to seek a better deal.

In Britain, where agriculture ceased to play a major role at an earlier period, the outflow of labor was observed to be paralleled by an outflow of capital, regulated by the country's terms of trade rather than by domestic agricultural conditions.[4] Britain's domestic and foreign capital were observed to move at different intervals, the country's emigration increasing together with its foreign capital investment whenever its terms of trade tended to worsen. This is explained by the tendency of import prices, especially those of food and raw materials to increase whenever Britain's terms of trade worsened, tending to depress domestic wages and thereby further encourage mass emigration to raw material producing countries, where opportunities were then so much more attractive. In this light, it is easier to understand

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[4]C. E. Cairncross, The British Overseas, (Cambridge University Press, Great Britain, 1950), Chapter VIII.

why emigration from Britain practically came to a standstill during the 1870's and 1890's, years of a British domestic building boom which served to provide ample employment and investment opportunities at home. The reverse was the case during the 1880's and in the early part of the twentieth century.[5]

The classical economists of that time, whose opinions often tended to influence national policy, regarded emigration favourably, considering it a means to overcome what they believed to be their country's tendency towards diminishing returns from limited and over-cultivated land and at the same time help increase profit opportunities for the mother country overseas through foreign investment activities. And indeed, Government policies in older, more developed economies were usually directed toward the promotion of settlement in their overseas possessions, thereby encouraging emigration.

The attraction provided by the "New World" lay primarily in the wealth of its natural untapped resources, its immense tracts of fertile land, its liberal settlement policies and generous agricultural legislation, its almost unlimited demand for working hands, including unskilled labor, its attractive financial aid program and credit facilities,

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[5]Ibid.

and the greater religious and personal tolerance which it offered, all combined to give rise to boundless hopes for a better life. By mid-1850's, with improved transportation facilities to increase the safety and comfort of travelling, emigration on a larger scale had begun. Yet, not all the countries of the "New World" shared equally in this attraction of potential settlers. For Canada, the existence of a barren Shield acted as a formidable barrier, which together with the country's harsh climatic conditions tended to halt back any movement westward, thereby preventing the opening up of her interior to settlement. Consequently, this lack of a rapidly moving frontier affected the rest of the country. Canada's fast industrializing neighbour, the United States, offered greater attraction not only to potential European settlers, who apparently after a brief stay in Canada tended to move on to the United States, but also to Canada's own native born, who preferred the relatively smaller sacrifice required of them in the United States, whilst Australia, Argentina and Brazil also successfully competed with Canada for potential settlers. It was not until much later, towards the end of the nineteenth century and the early part of the twentieth century when practically all of America's best lands have already been occupied, that Canada's potential was fully realized by foreign settlers, who only then commenced to take advantage of the various

opportunities provided them by the Canadian economy.

Available figures depicting the movement of Canadian migration point to the great attraction of the American frontier to both European and Canadian migrants. For the decade 1861-1871, Canada had experienced a net emigration of one quarter of a million, involving the loss of one third of her estimated natural increase during that period.[6] Though experiencing some recovery during the early 1870's especially with the entry of some 50,000 migrants in 1873, when conditions within the country were still fairly prosperous, on the whole for the following twenty-three years until 1896, the years generally known as the "great depression", Canada was beset by large emigration waves, primarily to the United States, so much so that by 1891, almost one fifth of all Canadian born were reported living in the United States.

The following Table 59 depicts Canada's population movement during the three decades 1871-1901. As seen in Table 59, the increase in Canada's population for the three decades 1871-1901, was less than the country's estimated natural increase, with slightly over one and a half million immigrants entering the country and almost two million emigrants leaving it to give rise to a net loss of close to half a million

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[6] Report of the Royal Commission on Dominion-Provincial Relations, I, Canada, 1867-1939, (Ottawa, 1940), p. 28.

people. This exodus from Canada continued well into the 1890's and was so heavy during the early 1890's when domestic conditions were bad, especially in the primary sector of the economy, that Canada's population during that period was virtually stationary.

TABLE 59

CANADIAN POPULATION MOVEMENT 1871-1901
(THOUSANDS)

Period	Population at beginning of Period	Actual increase	Natural increase	Immigration	Emigration estimate	Net migration[2]
1871-81	3,689	636	799	342	505	- 163
1881-91	4,325	508	686	886	1,064	- 178
1891-1901	4,833	538	612	321	395	- 74
1871-1901[1]	12,847	1,682	2,297	1,549	1,964	- 415

[1] & [2] Figures calculated by the writer.

Source: Report of the Royal Commission on Dominion-Provincial Relations, Vol.I, (Ottawa, 1940), p. 53.

The following Table 60 presents figures of Canadian population for the years 1890-1913, as well as an index with the year 1900 as base year, to serve as a measure of population increase over the period.

TABLE 60

POPULATION OF CANADA, 1890-1913, (1900 = 100)
(MILLIONS)

Year	Population[a]	Index Number
1890	4.8	90.1
1891	4.8	91.0
1892	4.9	91.9
1893	4.9	92.8
1894	5.0	93.6
1895	5.0	94.6
1896	5.1	95.6
1897	5.1	96.6
1898	5.2	97.6
1899	5.3	98.8
1900	5.3	100.0
1901	5.4	101.5
1902	5.5	103.1
1903	5.7	106.6
1904	5.8	109.5
1905	6.0	112.6
1906	6.2	116.0
1907	6.3	118.4
1908	6.5	122.0
1909	6.7	125.0
1910	6.9	130.0
1911	7.2	134.5
1912	7.5	140.3
1913	7.8	145.8

[a]Figures rounded off by the writer.

Source: Cost of Living Report, 1900-1914, (Vol.II), p. 946.

It was only with the turn of the century that immigration into Canada began to assume significance. As seen in Table 60, Canada's population increased from 5.4 million in 1901 to 7.2 million in 1911, representing a gain of some thirty-four per cent for the decade, a rate sufficiently high

to place Canada ahead of all other countries in terms of rates of population growth, with New Zealand following with a rate of increase of 30.5% and the United States far behind with twenty-one per cent. This is clearly pointed out in the following Table 61. And indeed, for Canada, these were years of most rapid general economic growth as well.

TABLE 61

RATES OF POPULATION GROWTH, 1901-1911[a]

Country	Rate of Population Growth (%)	Country	Rate of Population Growth (%)
Canada	34.1	Austria	9.3
New Zealand	30.5	United Kingdom	9.1
United States	21.0	Hungary	8.1
Germany	15.2	Sweden	7.5
Holland	14.8	Italy	6.8
Switzerland	13.2	Norway	6.8
Denmark	12.6	France	1.6
Belgium	10.9	The Whole World	6.5

[a]Arrangement of the table by the writer.

Source: Canada Year Book, 1914, p. 41.

It is interesting to compare gross Canadian immigration with that of the United States, as is done in the following

Table 62, for the four decades 1870-1910.

TABLE 62

GROSS IMMIGRATION INTO THE UNITED STATES AND CANADA, 1870-1910

Period	Numbers		Index Numbers[a]	
	United States	Canada	United States	Canada
1870-79	2,742,137	328,876	54	47
1880-89	5,248,568	848,615	103	120
1890-99	4,057,150	372,472	80	53
1900-10	8,202,388	1,268,892	161	180
1900-13	12,158,609	1,922,714	240	273

[a]100 = average immigration per decade for the four decades 1870-1910.

Source: Cost of Living Report, 1900-1914, (Vol.II), p. 1021.

As shown in Table 62, the 1870's and 1890's were years of minimum immigration for both the United States and Canada though so much more so for the latter in terms of absolute numbers. During the first decade of the twentieth century, while American immigration figures more than doubled, immigration into Canada increased by over threefold. The short depression of 1907/8 was responsible for a decline in immigration figures during the fiscal year ending March 31st, 1909, thereafter a steady rise in immigration figures occurred up to

1913, when a decline caused by recurring depression set in once again. For the fiscal year ended March 31st, 1915, the number of immigrant arrivals into Canada was only 144,789 compared to the 384,878 arrivals of 1914. After the first World War, immigration into Canada though increasing, has failed to approach its dimensions of the pre-War years, but by that time the country was already well on its way after "take off". Whereas for Canada the first decade of the twentieth century was one of most rapid expansion and development, for the United States, the same was true of the earlier century, and the similarity between their rates of population growth during these two respective periods is quite remarkable, pointing to the tremendous attraction which economic factors tend to hold for potential settlers.

The following Table 63 compares index numbers of Canadian population with those for the world as a whole, for selected years 1900-1912, (1900 = 100), clearly showing the remarkable growth of Canadian population after the turn of the century. Immigration constituted the major factor in Canada's population increase, assuming significant proportions with the turn of the century, when it was estimated to have proceeded at an annual rate of increase of over three per cent.[7]

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[7]P. Hartland, "Factors in Economic Growth in Canada", Journal of Economic History, (Vol. XV, No. 1, 1955), pp. 13-22.

TABLE 63

POPULATION INDEX NUMBERS, SELECTED YEARS, 1900-1912
(1900 = 100)

Year	Index Numbers	
	Canada	World
1900	100.0	100.0
1906	116.0	102.3
1910	130.0	104.7
1911	134.5	105.6
1912	140.3	106.5

Source: Ibid., p. 946.

In 1901, out of a total population of 5.4 million in Canada, 4.7 million or 86.98% were Canadian born and only 0.3 million or 5.8% were foreign born, while in 1911, of a total population of 7.2 million, 5.6 million or 77.98% were Canadian born and 0.8 million or 10.44% were foreign born. This decrease in the number of Canadian born as a percentage of total population was caused largely by the entrance of immigrants into Canada during the decade. Actually, the number of immigrants entering Canada during this decade was almost double the increase in the number of foreign born in Canada, suggesting that almost one half of the immigrant arrivals into the country since 1900 have either gone on to the United States after having entered Canada on transit, or else, have arrived here with the intention of participating, as temporary labor, in the country's construction boom. And

indeed, information pertaining to money orders payable abroad, tends to substantiate this last suggestion.

Immigrant arrivals into Canada came mostly from older, more advanced societies, bringing along with them skills, techniques and capital goods which were most useful for the exploitation of the country's untapped resources as well as for the cultivation of its virgin soils. Mostly individuals came, or small groups with family ties and only a small proportion of them came organized under the centralized supervision of the Government or of some other organization, and that primarily during the pre-1900 years. In pre-Confederation years most of Canada's immigrants came from the British Isles, and in any five year periods up to 1880, British immigrants constituted fifty per cent or more of total immigrant arrivals, thereafter at least twenty-five per cent of total immigrants came from Britain. The census of 1881 published for the first time information concerning the origin of immigrants into Canada, pointing out that fifty-nine per cent of them came then from the British Isles, while thirty per cent were of French descent. This situation was altered during the last few years of the nineteenth century, when Canada, stimulated by the influx of a variety of new European ethnic groups entered a new phase of economic growth. This change in origin of immigrant arrivals into Canada is shown clearly in the following Table 64.

TABLE 64

ORIGINS OF THE PEOPLE IN CANADA, IN 1901 AND 1911, POPULATION INCREASE DURING THE DECADE AND RATIOS PER CENT OF POPULATION

Origin	1901	1911	Increase in Ten Years		Per cent of Population	
			Absolute	Per cent	1901	1911
Total British	3,063,195	3,896,985	833,790	27.22	57.03	54.08
French	1,649,371	2,059,890	405,519	24.59	30.71	28.51
German	310,501	393,320	82,819	26.67	5.78	5.46
Total Austro-Hungarian	18,178	129,103	110,925	610.22	0.34	1.79
Belgian	2,994	9,593	6,599	220.41	0.06	0.13
Bulgarian & Rumanian	354	5,875	5,521	1,559.60	0.01	0.08
Chinese	17,312	27.774	10,462	60.43	0.32	0.39
Dutch	33,845	54,986	21,141	62.46	0.63	0.76
Finnish	2,502	15,497	12,995	579.38	0.05	0.20
Grecian	291	3,594	3,303	1,135.05	0.01	0.05
Hindu	- -	2,342	2,342	- -	- -	0.03
Indian[a]	127,941	105,492	- 22,449	- 17.55	2.38	1.46
Italian	10,834	45,411	34,577	319.15	0.20	0.63
Japanese	4,738	9,021	4,283	90.39	0.09	0.13
Jewish	16,131	75,681	59,550	369.16	0.30	1.05
Negro	17,437	16,877	- 560	- 3.21	0.32	0.23
Polish	6,285	33,365	27,080	430.87	0.11	0.46
Russian	19,825	43,142	23,317	117.61	0.34	0.60
Scandinavian	31,042	107,535	76,493	246.42	0.58	1.49
Swiss	3,865	6,625	2,760	71.41	0.07	0.09
Turkish	1,681	3,880	2,199	130.81	0.03	0.05
Various	1,454	18,310	16,856	1,158.45	0.03	0.25
Unspecified	31,539	147,345	115,806	367.18	0.58	2.04
Total	5,371,315	7,206,643	1,835,328	34.17	100.00	100.00

[a]Included half-breeds in 1901

Source: Canada Year Book, 1914, p. 60.

In 1901, persons of British origin in Canada constituted 57.03% of total population, declining to 54.08% in 1911. The number of total British born in Canada rose by 27.22% over the decade, while that of foreign born increased 170.33%. When considering these foreign countries of origin individually rather than collectively, their significance is greatly reduced since their numbers were rather small. The number of Canadian born increased 20.29%.

Canada's population was not evenly distributed throughout her provinces. The following Tables 65 and 66 throw light on the regional distribution of Canadian population for the forty years 1871-1911.

TABLE 65

POPULATION OF CANADA BY PROVINCES AND TERRITORIES, SELECTED YEARS, 1871-1911.

Province	1871	1881	1891	1901	1911	Percentage Increase	
						1901 over 1890 [a]	1911 over 1901
Prince Edward Island	94,021	108,891	109,078	103,259	93,728	- 5.34	- 9.23
Nova Scotia	387,800	440,572	450,396	459,574	492.338	2.04	7.13
New Brunswick	285,594	321,233	321,263	331,120	351,889	3.06	6.27
Quebec	1,191,516	1,359,027	1,488,535	1,648,898	2,003,232	10.77	21.49
Ontario	1,620,851	1,926,922	2,114,321	2,182,947	2,523,274	3.25	15.58
Manitoba	252,228	62,260	152,506	255,211	455,614	67.16	78.52
Saskatchewan	- -	- -	- -	91,279	492,432	- -	439.48
Alberta	- -	- -	- -	73,022	374,663	- -	413.08
British Columbia	36,247	49,459	98,173	178,657	392,480	81.98	119.68
Yukon	- -	- -	- -	27,219	8,512	- -	68.73
N.W.Territories	48,000	56,446	98,967	20,129	18,481	- -	8.18
Total: Canada:	3,689,257	4,324,810	4,833,239	5,371,315	7,206,643	- -	34.17

[a] Cost of Living Report, 1900-1914, (Vol.II), p. 949.

Source: Canada Year Book 1914, p. 42.

TABLE 66

RELATIVE IMPORTANCE OF EACH PROVINCE, ITS POPULATION AS PERCENTAGE OF TOTAL POPULATION, FOR THE YEARS 1891, 1901 AND 1911

Province	1891	1901	1911
Prince Edward Island	2.3	1.9	1.3
Nova Scotia	9.3	8.6	6.8
New Brunswick	6.6	6.2	4.9
Quebec	30.8	30.7	27.8
Ontario	43.8	40.6	35.0
Manitoba	3.2	4.8	6.3
Saskatchewan	0.2	1.7	6.8
Alberta	0.5	1.4	5.2
British Columbia	2.0	3.3	5.4
Yukon	- -	0.5	0.01

Source: Cost of Living Report, 1900-1914, (Vol.II), p.949.

The first decade of the twentieth century experienced the greatest population increase in Canadian history, attaining a peak of two million people, more than half of whom went to the West, in accord with the latter's prospective profitability and where population increased from 420,000 in 1901 to some 1.3 million in 1911, as shown in the following Table 67.

TABLE 67

POPULATION OF THE PRAIRIE PROVINCES,
SELECTED YEARS, 1901-1916

Province	1901	1906	1911	1916
Manitoba	255,211	365,688	461,630	553,860
Saskatchewan	91,279	257,763	492,432	647,835
Alberta	73,022	185,412	374,663	496,525
Total	419,512	808,863	1,328,725	1,698,220

Source: Canada Year Book, 1921, p. 113.

Canada's population increase appears to have been primarily a Western phenomenon, especially so after 1900, when the population of Saskatchewan and Alberta increased by over 400% during the decade 1901-1910, that of British Columbia by 119.68% and that of Manitoba by 78.52%. Prince Edward Island, the Yukon and the North-west Territories have all experienced population declines over the same period, with the remaining provinces, while population there did show an upward trend, none had approached the increases experienced by the Western provinces, where population gains in absolute numbers, have been more than half as much as that in Eastern Canada. Settlers came to the West from within as well as from without the country augmenting its population ratio from seven per cent to

twenty per cent of Canada's total population. Upon comparing this with the other provinces, it appears that the provinces of Ontario and Quebec, the country's industrial centres, though experiencing a declining trend, still maintained the largest concentration of population, Ontario alone by 1911 being inhabited by over two and a half million people, and Quebec by slightly over two million. All the other provinces were still below the half million mark, with Saskatchewan, the third largest province, containing a population of only 492,432.

It is interesting to note the destination of immigrant arrivals into Canada throughout the country, also the movement of Canadians from Eastern provinces Westward, as is shown in the following Tables 68 and 69.

Although, as indicated in Table 68, for each year except the last two years, Western Canada has attracted a larger number of immigrants than did Eastern Canada, the overall, final excess was not so much greater, with the four Western provinces, namely, the three prairie provinces and British Columbia, absorbing fifty-four per cent of total immigrant arrivals and the Eastern provinces, namely, Quebec, Ontario and the Maritime provinces - forty six per cent.

TABLE 68

TOTAL IMMIGRATION INTO CANADA, DESTINATION BY PROVINCES
JULY 1ST, 1900 - MARCH 31ST, 1914

Fiscal Year	Maritime Provinces	Quebec	Ontario	Manitoba	Saskat-chewan	Alberta	British Columbia	Not Shown	Total
1900-1	2,144	10,216	6,208	11,254		14,160[a]	2,600	2,567	49,149
1-2	2,312	8,817	9,798	17,422		22,199[a]	3,483	3,348	67,397
2-3	5,821	17,040	14,854	39,535		43,898[a]	5,378	1,838	128,364
3-4	5,448	20,222	21,266	34,911		40,397[a]	6,994	1,093	130,331
4-5	4,128	23,666	35,811	35,387		39,289[a]	6,008	1,977	146,266
5-6	6,381	25,212	52,746	35,648	28,728	26,177	12,406	1,766	189.064
6-7*	6,510	18,319	32,654	20,273	15,307	17,559	13,650	395	124,667
7-8	10,360	44,157	75,133	39,789	30,590	31,477	30,768	195	262,469
8-9	6,517	19,733	29,265	19,702	22,146	27,651	21,862	32	146,908
9-10	10,644	28,524	46,129	21,049	29,218	42,509	30,721		208,794
10-11	13,236	42,914	80,035	34,653	40,763	44,782	54,701		311,084
11-12	15,973	50,602	100,227	43,477	46,158	45,957	51,843		354,237
12-13	19,806	64,835	122,798	43,813	45,147	48,073	57,960		402,432
13-14	16,730	80,368	123,716	41,640	40,999	43,741	37,608		384,878
Total	126,010	454,625	750,716	438,553		786,925[a]	335,982	13,211	2,906,022
% distribution	4.3	15.6	25.8	15.1		27.1	11.6	0.5	

*1906-7 = 9 months only

[a]Saskatchewan & Alberta

Source: Canada Year Book, 1914, p. 90.

The above difference could perhaps be attributed to failure of the Maritime provinces to attract as many immigrants as did British Columbia, since the prairie provinces appear to have attracted practically the same percentage of immigrants as did Quebec and Ontario, namely, 42.2% for the former provinces, and 41.4% for the latter.[8] This would suggest then that the high rate of increase in Western population was not entirely the creation of an immigration influx, but that internal population movements, especially from Eastern Canada, have also contributed. During the earlier years, from 1872-1881, some such Westward movement had occurred, especially by farmers from Eastern Canada, raising the prairie population from 43,000 to 100,000, with sixty per cent of this increase concentrating in eastern Manitoba.[9] In 1901, only seven per cent or eight per cent of all Canadians were living in the West, whereas by 1911, twenty per cent, with an estimated total of over 350,000 from Eastern Canada, as is shown in the following Table 69.

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[8] Cost of Living Report, 1900-1914, (Vol.II), p. 950.

[9] Wilfred Malenbaum, The World Wheat Economy, 1885-1939, (Harvard University Press, 1953), p. 147.

TABLE 69

DISTRIBUTION IN WESTERN CANADA OF NATIVES OF EASTERN PROVINCES, 1911

Province of Birth	Migrants		Distribution of Migrants			
	Total	Living in West	Manitoba	Saskatchewan	Alberta	B.Columbia
P.E.Island	13,966	6,810	967	1,515	1,846	2,482
N. Scotia	32,311	19,755	2,949	3,400	5,003	8,403
N.Brunswick	25,077	12,507	1,563	1,916	2,876	6,152
Quebec	113,077	41,332	10,755	12,969	10,112	7,496
Ontario	296,744	272,331	73,077	96,206	57,530	45,518
Total	482,059	352,735	89,311	116,006	77,367	70,051

Source: Cost of Living Report, 1900-1914, (Vol.II), p. 951.

As seen above, almost one quarter of Western population gain occurred at the expense of losses suffered by the other provinces, especially Ontario, with Saskatchewan benefitting the most. This internal population movement has considerably altered local occupations, at times interrupting productive industry, involving a move away from mixed farming toward wheat and grain production. Similarly, a large influx of immigrants into any country is certain to upset its age and sex balance, alter the country's capital requirements in terms of dwellings, educational and health facilities, raise the

level of local demand for food and other consumer goods, and generally interfere with local economic, social and political affairs.

For a relatively new, pioneering economy such as Canada, it is not surprising to note that young people dominated the scene. Of every thousand of population of known age, 812.9 persons belonged to the age group of under forty-five years of age, as is clearly shown in the following Table 70.

TABLE 70

PROPORTION PER THOUSANE OF POPULATION BY AGE, SELECTED YEARS 1871-1911

Age Periods	1871	1881	1891	1901	1911
Less than 1	30.6	28.0	24.9	24.5	25.7
1-4 years	115.6	108.5	100.0	95.2	97.4
5-9 "	140.7	128.3	121.2	114.7	108.7
10-19 "	239.9	227.4	219.7	210.9	198.6
20-29 "	171.4	176.0	178.1	173.6	189.3
30-39 "	111.4	113.1	122.1	129.3	141.9
40-49 "	80.0	83.8	88.4	98.5	100.1
50-59 "	54.8	58.1	62.4	67.9	69.1
60 & over	55.1	63.3	70.1	76.4	71.0
Not Given[a]	0.5	13.6	13.1	9.1	5.1

Note: Figures were rounded off by the writer.

[a]As there were only five persons in every thousand, or 0.5% of total population for whom an age was not given, numbers of unknown age were not eliminated in making the above computation.

Source: Canada Year Book, 1914, p. 71.

For the forty year period, 1871-1911, the five age groups including all those twenty years of age and over, indicated an upward trend, while younger age groups were on the decline. The largest proportion per thousand of population of persons under the age of ten was found in Quebec, with a total of 273.508 in 1911 and 271.456 in 1901. British Columbia, on the other hand, contained the smallest proportion of this age group, with 166.345 in 1911, followed by Ontario with 200.316 per thousand in 1911, both provinces occupying the same relative position in 1901 as well. The largest proportion of population within the prime-working age group of 20-45 was to be found within the Western provinces, with British Columbia in the lead, and gradually declining upon movement Eastward. This situation is not surprising, in view of the tremendous opportunities, even though still within a pioneering framework, offered by the West, attracting primarily the relatively young and healthy. The largest proportion of older people, seventy years of age and more, was to be found throughout the older areas of settlement, with Prince Edward Island in the lead, followed by Nova Scotia, New Brunswick, and Ontario, each with 52.9, 46.6, 38.1 and 34.7 per thousand respectively, while Alberta, Saskatchewan, British Columbia and Manitoba have each contained only 8.2, 8.8, 12.3 and 13.3 per thousand respectively, the

lowest proportion for the entire country.[10]

Just as a preponderance of a young population is a characteristic of a pioneering economy, so can the deficiency in female population relative to male population be similarly explained. This proportion was undoubtedly affected by the process of immigration, where it is quite usual for the male element to predominate. Female deficiency tended to be greater in rural than in urban areas, attaining by 1911, the level of 16.48% in the former and only 5.05% in the latter. This deficit seemed most pronounced in the prairie provinces, while Ontario and Quebec, the country's industrial centers, were actually boasting an excess of female population.[11]

In 1911, some sixty-two per cent of the total male population and 57.34% of the total female population were reported as single, a rather large percentage for a country of young people, but then perhaps the hazardous, pioneering conditions as well as the uncertainty tending to envelope a newly arrived immigrant could tend to discourage the formation of family ties. The smallest number of families formed in Canada was reported for the periods of 1870-74, and 1890-94, with the highest number in 1910-1914, undoubtedly

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[10] Canada Year Book, 1914, pp. 65-66.

[11] Ibid., pp. 56-57.

encouraged by the prosperous conditions following the Western expansion. In the one decade, 1901-1911 the number of families in Canada has increased by 447,000, rising from 1,070,747 in 1901 to 1,517,742 in 1911, this last figure being almost double that of 1881, namely, 812,136. The number of families within the various provinces tended to follow in order of their relative size, Ontario leading with some 552,406 in 1911, followed by Quebec with 381,448, then Saskatchewan with 122,075 families and Nova Scotia with 100,820, while all other provinces remained below the 100,000 mark.[12]

These complex factors of population age and sex composition are important in helping determine the country's ratio of labor force to total population. Though there is a definite relationship between this ratio and the country's level of development, this relationship is rather complex and cannot be easily determined, since additional factors such as the country's economic structure, the society's educational level and progressiveness reflected in attitudes towards the status of women in the labor force, the age at which children may leave school and commence to work, the age of retirement and the like, all become equally involved adding to the complexity of the matter.

Before venturing to discuss Canada's labor force and

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[12] Ibid., p. 59.

its various problems, it is perhaps well to say a few words as to the implication of this term "labor force". In its broadest sense, a country's labor force will be concerned with the number of its working population who contribute to the community's total output of goods and services. The quality of this labor force is also of significance, namely, hours and hardship of work, level of skill and knowledge, capacity to work which is itself a function of nutrition, health and the like.

Since the supply of a country's labor is primarily a question of population and of the availability of employment opportunities, Canada has always suffered a shortage of labor, making it essential for the country to economise in its use, often with the aid of mechanization, especially so during periods of great industrial expansion, when labor tends to become most important to the country's development. Labor shortage was more acute in pre-1900 years, when Canada stood low on the list of countries whose rate of population showed an increase, markedly improving with the turn of the century, when only after one decade Canada commenced to lead all other nations in population rates of increase, as has been pointed out earlier in this chapter.

The following Table 71 compares population figures with those of the labor force for selected years 1851-1911.

TABLE 71

POPULATION AND LABOR FORCE, SELECTED YEARS 1851-1911
(THOUSANDS OF PERSONS)

	1851	1860	1870	1880	1890	1900	1910	1911
Population	2,483	3,263	3,673	4,308	4,820	5,356		7,206
Civilian Labor Force:								
Employed	694	952	1,119	1,134	1,590	1,781		2,724
Unemployed	29	40	47	86	84	74		
Total:	723	992	1,166	1,429	1,671	1,855		
Armed Forces					1	6		
Total Labor Force:	723	992	1,166	1,429	1,672	1,861		
PERSONS PER THOUSAND OF POPULATION								
Labor Force	291.2	304.0	317.5	331.7	347.5	347.5	394.0	

Note: Source for the last column: Canada Year Book, 1914, p.600. Writer was unable to fill in the rest of the information.

Source: O. J. Firestone, "Development of Canada's Economy, 1850-1900", op. cit., p. 229.

According to the census of 1911, four out of every eight persons ten years of age and over, or three out of every eight persons of the entire population of the Dominion of Canada, were reported as gainfully employed, representing 49.39% of

the former and 37.93% of the latter,[13] a rather high percentage, in general terms, but not so when considering the abnormally high percentage of the relatively young people in the country.

Canada's total labor force showed an increasing tendency and on the whole has even grown more rapidly than the country's population, but its proportion to total population tended to vary from time to time in accordance with the population's age distribution and the then current economic conditions and employment opportunities. The fact that Canadian labor force bore such a high proportion to the country's total population[14] is often attributed to the relative "newness" of the country, since this phenomenon is rather uncommon in older, more established economies, where the proportion of realized wealth was already so much greater. The high level attained by Canada's labor force in 1910, namely, 394 persons within the labor force per thousand population, is attributed to the influx of a large group of young immigrants mostly within the working age group, after the turn of the century, as well as to the availability of ample employment opportunities following the opening up of Western Canada to settlement. This addition to the labor

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[13] Canada Year Book, 1921, p. 598.

[14] See Table 71 above.

force since 1900, did not consist entirely of permanent labor supply, which is a long term factor, but also included the short term phenomenon of temporary immigrant workers, who primarily came to participate in the country's construction boom and benefit from the high rates of wages paid. It has thus been estimated that after the turn of the century, for every two Canadians entering the labor market for the first time, three immigrants also offered their services. In the decade 1900-1910, Canada's permanent labor force has increased by almost thirty-five per cent, this figure rising to forty-five per cent when extending the period to 1913.

The somewhat abnormal sex and age distribution of Canada's population, which was responsible for the country's relatively large sized working age group, gave rise to the following situation according to the 1911 census:-

Of the total male population ten years old and over, some 79.54% or nearly four fifth were gainfully employed, rising to 92.73% when excluding all those under fifteen and over sixty-five, further rising to 96.28% when considering only those within the main productive age group of 25-64 inclusive.[15] Of the total female population ten years old and over, 11.07% were gainfully employed in 1891, 12.01% in 1901 and 14.31% in

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[15] Canada Year Book, 1921, p. 599.

1911, representing an increase from one ninth to one seventh of the total of female population, in twenty years, 1891-1911. A maximum of 27.78% is obtained for 1911 within the age group of 15-24, declining to the minimum of 12.14% when only the age group 25-64 is included, undoubtedly because of marriage and increased home duties associated with this age group.[16]

The heavy influx of immigrants into Canada, as well as local population movements within the country had tremendous effects upon the accustomed domestic life of the population, to a greater or lesser extent. The natural procedure of growth of towns and villages which under normal circumstances would tend to succeed agricultural settlement, in the Canadian experience it tended rather to parallel it and at times to even surpass it. The analysis of the distribution of Canadian population between urban and rural areas, can act as an index, even if only an indirect one, for the distribution of the country's labor force. For an agricultural country such as Canada, the growth of her urban population has been out of all proportion to her rural increase. At the time of Confederation in 1867, over eighty per cent of total Canadian population was living on farms or in some other type of rural settlement, deriving their livelihood

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[16] Ibid.

from primary sources. From 1873-1896, significant changes in the distribution of Canadian population had taken place, raising the country's urban population from twenty per cent of the total to thirty per cent, while towns and cities absorbed almost seventy-seven per cent of the total population increase in the thirty years 1871-1901. By 1901, thirty-seven per cent of Canadian population was classified as urban and by 1911 45.5%, which is only slightly less than that of America, a country with so greater a population, wealthier resources and greater industrialization.

The following Table 72 helps clarify the above statement by comparing Canada's urban and rural population with that of the United States for selected years 1880-1911.

TABLE 72

URBAN AND RURAL POPULATION, SELECTED YEARS, 1880-1911
(PER CENT)

	UNITED STATES				CANADA			
	1880	1890	1900	1910	1881	1891	1901	1911
Urban	29.5	36.1	40.5	46.3	14.0	31.0	37.0	45.5
Rural	70.5	63.9	59.5	53.7	86.0	69.0	63.0	54.5

Source: Cost of Living Report, 1900-1914, (Vol.II), p. 1022.

Though in 1880/1 the percentage of urban American population was more than double that of Canada, by 1910/11, their

percentage distributions were practically the same, pointing to the rapidity of Canadian development and fast rate of industrialization. With the opening of Western Canada to agricultural settlement one would have expected rather the preponderance of rural settlement, and yet, for the country as a whole, the increase in urban population has been more than double the rural increase, namely, 1.3 million for the former and only 0.6 million for the latter, as shown in the following Table 73.

TABLE 73

INCREASE OF RURAL AND URBAN POPULATION OF CANADA BY PROVINCES, 1901-1911.

Province	Total Increase	Rural Increase	Urban Increase
Nova Scotia	32,764	- 23,981	56,745
P.E.Island	- 9,531	- 9,546	15
New Brunswick	20,769	- 1,493	22,262
Quebec	353,814	39,951	313,863
Ontario	340,327	- 52,184	392,511
Manitoba	200,403	70,511	129,892
Saskatchewan	401,153	287,338	113,815
Alberta	301,641	180,327	121,314
B. Columbia	213,823	100,318	113,505
Yukon	- 18,707	- 13,430	- 5,277
N.W.Territories	- 2,933	- 2,933	
Canada	1,833,523	574,878	1,258,645
	1901	1911	1901 1911
Increased % of Total:	62.36	54.47	37.64 45.53

Source: Ibid., p. 954.

As indicated in Table 73, Canada's urban population showed an increase in every province but especially so in Ontario and Quebec, the country's prime industrial and commercial centers, which tended to attract a great many of the artisan immigrant arrivals. For the decade July 1st, 1901 - March 31st, 1911, of a total of some 397,000 immigrants to Ontario, 392,511 are reported to have settled in urban Ontario, whereas for Quebec, though only some 240,000 immigrants are reported to have entered the province during the same period, the increase in its total urban population was estimated at 313,863, suggesting the movement of a number of rural French-Canadians into Quebec's urban centers. For the Maritime provinces, which are reported to have received only 4.3% of the total immigrant arrivals into the country, in the twelve years 1900-1912, a like probability was suggested.[17]

As for the country's rural population, this appears to have risen only in five out of the nine provinces, namely, in the four Western provinces and in Quebec, whilst Ontario has experienced a decline of some 52,184, or 4.81% in 1901-1911, with a somewhat similar decline for the Maritime provinces over the same period, namely, 10.81% for Prince Edward Island, 7.26% for Nova Scotia, and 0.58% in New

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[17]W. J. A. Donald, "The Growth and Distribution of Canada's Population", Journal of Political Economy, (April, 1913).

Brunswick, to be attributed both to the lure of the West, as well as to inability to cope with the competition offered by the West. This can be substantiated when observing, for instance, the figures presented for Prince Edward Island. While that province lost some 9,546 of its rural population over the decade 1901-1911, its urban population has increased by a meagre 15, suggesting the movement of most of the above rural settlers to more attractive agricultural areas, primarily in the West. Even the Western provinces of Manitoba and British Columbia had experienced population movements to urban centers and only in Alberta and Saskatchewan did the increase in rural population exceed its urban increase, the latter constituting only one third of the total population increases in the two provinces, undoubtedly because of the predominance of wheat and other grain growing in these two provinces.[18] Canada was reported to have shown the highest rate of urbanization in the world, after the turn of the century, with a rise of eight points in the fourteen years 1900-1914, while England's and Norway's urbanization during the same period is reported to have risen by only one point, that of France by two points, Denmark's by three points, New Zealand's by five points and that of America and Germany by six points, pointing to the

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[18] Canada Year Book, 1914, p. 49; also, Cost of Living Report, 1900-1914, (Vol.II), p. 955, f.n.

tremendous rate of economic and industrial expansion occurring in Canada at that time.[19]

Available information suggests that for Canada, this growth of urban population after the turn of the century has been primarily a phenomenon of large centers, reputed to have accounted for half of the country's entire urban increase. And indeed, Canada's ten largest cities in all of her nine provinces, have increased their population by over half a million in the ten years 1901-1911. While only two large centers with populations of over 10,000 have suffered declines, since 1901, many small towns and villages have experienced severe population declines. This is not surprising in view of the tremendously fast rate of expansion which the country was experiencing at that time, which would tend to make the availability of economies of scale both of production as well as of consumption so much easier and cheaper in large population centers than in small ones. The percentage of all Canadians living in cities of over 50,000 inhabitants rose from twelve per cent in 1901 to nineteen per cent in 1911, as shown in the following Table 74.

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[19] Cost of Living Report, 1900-1914, (Vol.II), p. 956.

TABLE 74

PROPORTION OF CANADA'S POPULATION LIVING IN CITIES AND TOWNS OF VARIOUS SIZES, DURING THE YEARS 1891, 1901 AND 1911 (%)

Over 50,000			Over 20,000			Over 10,000			Over 5,000			Over 2,000		
1891	1901	1911	1891	1901	1911	1891	1901	1911	1891	1901	1911	1891	1901	1911
9.5	12.2	18.5	14.3	16.1	22.6	17.1	18.5	28.2	21.5	23.9	32.6	25.6	30.1	38.1

Source: Ibid., p. 959.

While in 1901 there were only two cities in Canada with populations in excess of 100,000, namely, Montreal with 267,730 and Toronto with 208,040 people, three cities of over 50,000 inhabitants and twenty-one cities of over 10,000 people, the latter containing a total of some 996,806 inhabitants, in 1911 Canada had four cities with an average population of over 100,000, namely, Montreal with 470,480 people, Toronto with 376,538 people, Winnipeg with 136,035 people and Vancouver with 100,401 people, also some forty-four cities with an average population of over 10,000, containing a total of some two million inhabitants. 32.7% of all Canadians were then reported to dwell in towns and cities with populations of over 5,000.[20]

Economic factors would seem to be the prime instigators of such an urbanization movement. The opening up of the West to agricultural settlement gave impetus to a variety of construction, manufacturing and distribution activities, which then tended to accelerate or perhaps even necessitate the process of urbanization. Population and immigration figures presented so far in this study seem to corroborate this, pointing to the fact that the rate of growth of these has been greatest in Western Canada, where numerous towns and villages were established as centers of tertiary service

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[20] Canada Year Book, 1914, pp. 48-49; also, Cost of Living Report, 1900-1914, (Vol.II), p. 955.

industries, to cater for local wholesale and retail trade, to provide financial and transport facilities, to supply grain farmers with their machinery and equipment as well as process their products. Certain other economic and social aspects could perhaps also be included here, namely, the greater attraction provided by cities because of easier working conditions in the form of shorter and more regular working hours, higher wages, the availability of greater social facilities, a smaller degree of isolationism, and the like. Improved transportation facilities after the turn of the century may also have added an impetus to this greater population mobility. This greater mobility tended to alter the occupational structure of the Canadian society. The withdrawal of large numbers of people from rural areas into urban centers tended to increase the proportion of food consumers. This problem of the occupational distribution of Canada's labor force will be dealt with in greater detail in the following chapter, when considering the country's production and distribution aspects.

To sum up briefly, the size of a society relative to its actual or potential resources, had always been and still is of the utmost importance. Problems involving population determinants, also the consequences resulting from population increase or decrease, have apparently always been of prime interest, often resulting in conflicting ideas, primarily so,

since this factor known as population, does not remain uniform, but varies. It is this variation in population which involves both size and quality, in the presence of a quasi stationary economic environment which is largely responsible for the world's diverse standards of living.

Until the very last few years of the nineteenth century, Canada was a population deficit area, beset by large waves of emigration. Here was the case of a country richly endowed with economic possibilities but beset by problems of underpopulation, probably because of the great sacrifice that their development would have entailed, in view of the marginal nature of the country climatically and geographically, a situation which would normally tend to result in poverty and lack of variety of goods and services, restricted domestic as well as overseas markets, a limited division of labor and consequently limited productivity. One could argue that the availability of advanced technology to be borrowed from Canada's fast industrializing neighbour, the United States, as well as from her mother country, the United Kingdom, could greatly stimulate the country's rate of economic growth, by helping introduce a variety of innovations to save labor, raise the marginal productivity of capital and thereby stimulate further productive investment. But this is not quite so. Even in to-day's world of automation, labor still plays an important indispensible role and cannot be replaced, at

least, not entirely. Even those who are prone to be carried away by the potential might and ability of the machine, hesitate at the prediction of an ultimate disposal of man's services. It seems that man will always be needed, even if only to build the machine, start or stop it, in short, to direct and guide it. During the nineteenth and early twentieth centuries the services of manpower were indispensible, and together with capital formed the prime inputs of production, and were equally motivated by technology. As such, some sort of balance between their growth became essential. True, technological progress could raise the marginal productivity of capital and thereby stimulate productive investment, but should the resulting capital stock grow more rapidly than the economy's labor force, in the end, a resulting shortage of labor to operate this increased stock, be it in the form of machines or some other productive device, might ensue. As long as some labor is required for their operation production will be limited by the availability of this needed labor. Also, a growing discrepancy between productivity and population growth would tend to limit the society's ability to generate sufficient aggregate demand, without which no productive investment can occur, nor can the society then take advantage of its available full employment potentials. Such a situation is bound to lead to an eventual economic stagnation.[21]

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[21] On the problem of "secular stagnation", see A.H. Hansen, "Economic Progress and Declining Population Growth", American Economic Review, (29: 1-15, 1939).

In this sense advanced technology when acting all alone without a corresponding population increase, would tend to create bottlenecks to halt growth rather than generate it. And indeed, some Canadian economic historians claim that Canada of the pre-1896 years has indeed been immersed in a state of economic stagnation. To agree or disagree here would first require the thorough analysis of the country's productivity rates as well as its rates of growth at that time and since these are topics which will be dealt with more closely in the next two chapters, an opinion must be reserved until then.

After the turn of the century, when practically all the best lands south of the border have already been alienated, Canada commenced to develop at a most impressive rate. Her population increased rapidly, as shown earlier in this chapter, stimulated by an influx of immigrants of a suitable variety, namely, literate, relatively skilled, provided with a stock of tested knowledge brought along from older, more advanced societies. As will be shown in following chapters of this study, Canada's physical output rose at an even faster rate than did the country's population, resulting in a constantly growing per capita product. Availability of advanced techniques together with a variety of needs arising from the country's fast moving geographic frontier provided ample opportunities for productive investment. Expanding

population and the settlement of new territories would in their very nature require tremendous investment expenditure of the capital intensive type, namely, housing projects, educational facilities, transportation facilities - railways - which are very costly, and a variety of other public utilities. A widened domestic market tended to extend the division of labor, thereby increasing productivity also stimulating the introduction of newer and better innovations to further help raise productivity, thereby to increase the level of income per capita, itself conducive to further population growth. Resulting urbanization and at such a high rate as shown before, served to further increase productive investment as well as provide ample employment opportunities for the expanding labor force. In this sense, Canada's population growth at that time, acted as a stimulus to economic growth while the opening up of Western Canada to agricultural settlement was in itself a prime inducement to this tremendous population upsurge. Since Canada has originally started off with a small population, it is logical to assume this population growth as a consequence of the country's rapid economic growth rather than as its antecedent. Further acceleration in the rate of population growth after industrialization then served to quicken the country's overall rate of economic growth.

It was not very difficult for Canada, relatively

speaking, to absorb this increased population and consequent labor force increase, in view of the country's generally adaptable and flexible factors of production. The variety and quantity of the country's natural resources which by far exceeded local rates of population growth involved smaller costs for development than would have otherwise been the case, especially so having chosen to concentrate upon the development of the country's primary resources.

Since the proportion between any country's productive consumers, namely, those who contribute to total output of goods and services, and its non-productive, or supported consumers, namely, the very young and the very old, who remain outside the country's labor force, is primarily determined by the country's population age distribution, the Canadian age structure was most advantageous. The relatively small size of the country's very young and very old age groups lessened the number of dependents, reducing the burden usually placed upon consumption. At the same time, long life expectancy made available youngsters potential future productive agents. The high proportion of an economically productive age bracket, 15-64, including people of superior health, energy and adaptibility facilities, gave rise to a high ratio of adult man-power in the labor force to total population, to establish an efficient labor force.

Before closing this chapter, it is perhaps well to say

a few words regarding population density. In 1911, Canada's average density per square mile, calculated for a total of some 3.7 million square miles, was 1.93 per square mile. The United States population density at the same time stood at 30.69, that of Australia at 1.53 and that of New Zealand at 9.63 per square mile - a variety of densities, but all countries of high productivity rates. For Canada, on an inter-provincial basis, Newfoundland showed the lowest density of 1.47 per square mile and Prince Edward Island the highest, with 42.91 per square mile, while all other provinces varied between these two extremes, with the three Western provinces of Alberta, Saskatchewan and British Columbia each with densities of less than two persons per square mile, to indicate ample room for additional settlement.[22]

It is generally believed that diminishing returns will set in with increasing population density and that normally, there would be a high positive correlation between the availability of large tracts of cultivable land per worker and a high productivity per worker, whereas a small amount of land per worker would normally tend to result in poor output, depending of course upon the quality of the land involved, the amount of available capital, the state of existing

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[22] Canada Year Book, 1914, p.42.

technology, efficiency of organization and so on, in the absence of which, or in case of deficiency, as is often the case in present day underdeveloped economies, low and poor outputs per worker will inevitably result. This problem of productivity is rather complex, and its measure must be undertaken with the utmost of care. Labor as a measure of productivity, namely, net output per worker by itself is an incomplete measure and may turn out to be a hazardous venture, since labor is not the only factor involved in this problem, also the problem of labor involves qualitative as well as quantitative aspects, to further complicate matters. A much more complete measure would include the combination of output per unit of labor and per unit of capital, namely, output per unit of real resources, to provide a measure of total productivity and will also take into account ways in which production is organized, the introduction and use of innovations and the like, all necessary for the ultimate increase in productivity. The following chapter will deal with Canada's production and distribution aspects.

CHAPTER VIII

ECONOMIC ORGANIZATION

Previous chapters of this thesis have dealt with various aspects concerning land, labor and capital as production agents involved in the developmental process of Canada. As stated earlier in the introductory chapter of this work, it is intended to show, throughout this thesis, that the core of the developmental process of the Canadian economy lay in the solution of problems concerning the country's agricultural sector. These are assumed to have involved primarily the production of wheat, to permit the exportation of a large surplus thereof to overseas markets. It is believed here that the cultivation of wheat on a large scale permitted the more natural evolution of the country's comparative cost structure, creating in a sense a so-called "wheat economy", which then, or perhaps rather in the actual process of its creation, proceeded to act in the Schumpeterian sense,[1] as a "key propulsive sector" to induce growth throughout the rest of the economy. This "wheat economy" provided a stimulus for the

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[1] J. A. Schumpeter, The Theory of Economic Development, (Oxford University Press, New York, 1961), Chapter II.

inflow of foreign capital, which was then distributed in such a manner as to help increase output, employment and income, thereby stimulating and inducing growth throughout the economy. A multiplier-accelerator effect arising from an increase in final demand within the agricultural sector, the result of the exportation of wheat, then commenced to work back to a variety of complementary industries, stimulating growth of tertiary industries, which in turn proceeded to stimulate the manufacturing or secondary industries of the economy.

The timing and pace of economic development tend to differ for different countries and are often determined by a variety of factors. For Canada, it is assumed here that for almost three decades following Confederation, only the foundations for subsequent development were being prepared through a series of important government policies, but that the actual process of accelerated growth did not commence until the second half of the 1890's. Reasons for this seem to vary, involving a combination of factors of varying importance to the economy's actual "take off" process, as will be discussed in greater detail later on in this chapter. These factors, when briefly summarized, would include the fulfilment of conditions such as rising foreign demand for Canada's prime staple, wheat, the rise in the country's export prices which exceeded that of the rise in its import prices for the

years 1896-1913, turning thereby the terms of trade in Canada's favour. By that time also all the best American lands were almost completely occupied, implying that America had to be first launched upon its developmental process before Canada could attain her chance to develop, as it was only then that the attractiveness of Canada's millions of free, or else cheap and fairly fertile land, came to the notice of foreign, as well as local settlers, and to capital. A decline in transportation costs, internally due to an enlarged competitive railway net and externally due to a decline in freight rates, helped create a favourable price-cost relationship for wheat. Likewise, a favourable Government policy helped facilitate cheap and ready credit domestically as well as overseas.

The British Industrial Revolution and its spread to other countries, together with the opening up of the "New World" to settlement, were initially responsible for the tremendous expansion in the output of a variety of goods and services experienced by the world during the second half of the nineteenth century, an output by far outrunning that of any previous period in history. The "New World" commenced to flood European markets with a variety of food products and raw materials produced at relatively low costs, and primarily the outcome of rising physical productivity aided by the accumulation of capital and improved technology.

With increasing productivity, real income also commenced to increase, stimulating a greater and more diversified demand, creating new opportunities for investment, and increasing the productive capacity of these economies. At the same time, the enormous improvements in technology stimulated the production of manufactured articles and provided wider markets, both in Europe and in the "New World", especially in America, for the greater use of iron and coal, the two basic products of heavy industry.

Canada, during the closing years of the nineteenth century and the opening one and a half decades of the twentieth century, emerged as a country undergoing maximum intensity of economic activity, leading to most rapid economic development. This process was associated with growing demands for labor and construction materials for the building of towns, cities and villages, with all their associated public works; with the modernization and commercialization of agriculture and its growing needs for machinery and implements; also with the construction of railroads to help link these places together. This process was accompanied by a tremendous increase in domestic prices, the problems and significance of which will be discussed in the next chapter.

Inasmuch as production is a major feature of any country's economic activity, it can perhaps be best studied in terms of total amount and composition of goods and services

produced by the economy and their distribution among the various sectors within the economy. By quantifying some of the key magnitudes with which economic reasoning often deals, it is possible to make use of such a study as an aid in understanding the general functioning of the economy, including, for our purposes here, the tendencies of the Canadian economy towards long term economic growth during the 1896-1914 period. For this purpose it is intended to deal in this chapter, with the value of national output, to show the proportions of it originating in the various industries, or sectors, such as the primary, secondary and tertiary sectors, which combine to form the country's total value of national product while in the next chapter problems concerning total national income, its composition and distribution will be dealt with.

Before proceeding to discuss the individual sectors contributing to the economy's total national product, it is perhaps advisable to consider, if only briefly, the general trends experienced by the country's total national product over the period in question.

The following Table 75 presents Canada's gross national product in both current and constant (1935-39) dollars, while Table 76 indicates the percentage increases in gross national product, for the years 1851-1900.

TABLE 75

GROSS NATIONAL PRODUCT, IN CURRENT AND IN (1935-39) DOLLARS, FOR SELECTED YEARS, 1851-1910
(IN MILLIONS OF DOLLARS)

	1851	1861	1870	1880	1890	1900	1910
TOTAL							
Current Dollars	169	319	459	581	803	1,057	2,235[a]
1935-39 Dollars	406	582	764	982	1,366	1,877	
PER CAPITA							
Current Dollars	68	98	125	135	167	197	314
1935-39 Dollars	164	178	208	228	283	350	
PER PERSON WORKING							
Current Dollars	244	355	410	433	505	592	820
1935-39 Dollars	585	611	683	731	859	1,052	

[a] O. J. Firestone, Canada's Economic Development, 1867-1953, (Bowes & Bowes, London, 1958), pp. 188-9. The remaining two figures for 1910 were calculated by the writer.

Source: O. J. Firestone, "Development of Canada's Economy, 1850-1900", op. cit., p. 222.

Total gross national product, in current dollars, seems to have undergone a sixfold increase, from $169 million in 1851 to $1,057 million in 1900, it then more than doubled in the following decade to a level of $2,235 million by 1910. Gross national product per capita has almost trebled from $68 in 1851 to $197 in 1900, an increase of 190% in value and of 113% in constant (1935-39) dollar terms, to give an average annual increase of 1.56%, a rate only slightly below that of population growth of 1.58% for the same period.

TABLE 76

PERCENTAGE INCREASE IN GROSS NATIONAL PRODUCT, IN (1935-39) DOLLARS: SELECTED PERIODS 1851-1900

	1851-70	1870-90	1890-1900	1851-1900
TOTAL				
Over the period	88.2	78.8	37.4	362.3
Annual Average[a]	3.38	2.95	3.23	3.17
PER CAPITA				
Over the Period	26.8	36.1	23.7	113.4
Annual Average[a]	1.26	1.55	2.15	1.56
PER PERSON WORKING				
Over the Period	16.8	25.8	22.5	79.8
Annual Average[a]	0.77	1.11	2.05	1.20

[a]Compound rates.

Source: Ibid., p. 223.

Extending the period to the next decade, a one and a half times increase is evident, to a level of $314 per capita for 1910. As for gross national product per working person, this more than doubled from $244 in 1851 to $592 in 1900, indicating a rise of 143% in value and of eighty per cent in real terms, with an average annual increase of 1.2%,[2] increasing to $820 in the next decade. The above point to the fact that despite a significant increase in Canadian population and hence in the country's working force, especially during the

[2]The above calculations were taken from O. J. Firestone's article, ibid.

latter years of the nineteenth century and after the turn of the twentieth century, real output per capita and per working person managed to increase substantially. These gains become progressively larger in each of the sub-periods concerned, pointing to the rapid economic growth experienced by the Canadian economy at that time.

PRIMARY SECTOR

The production of food and raw materials is of prime importance to any economy. It is often agreed that industrialization ought to wait upon agricultural improvement, when and where there is no surplus of labor, since it is only those whose labor is no longer required in the production of food, that may undertake other pursuits. For this to be possible, technological improvements must first occur, to enable increased production with smaller numbers of people and improve production beyond the automatic increase in productivity arising from removal of excess population in the agricultural sector. An automatic increase in the per capita production within the agricultural sector will be insufficient when operating on its own, since absolute output will tend to diminish rather than increase with the removal of population. For Canada, in view of the country's natural comparative cost advantage in the primary sector, a rapid increase in the country's agricultural output appeared highly

favourable, especially so when it became evident that it was only through the agricultural sector that Canada could form her links with the outside world markets, a most important and desirable procedure to enable the Canadian economy commence its process of economic growth.

The following Table 77, presents value added and national income originating[3] within the Canadian primary sector, including agriculture, fishing and trapping, mining and forest operations, for selected years 1851-1910, while Table 78 deals with Canadian agriculture, in greater detail, for selected years, 1870-1910.

As shown in Table 77, total value added by the four industries which together constitute the country's primary sector, rose from a low $79 million in 1851 to $386 million in 1900, representing a gain of some 389%, then, in the following decade, rising by more than one and a half times to reach a level of $675 million by 1910. Yet, this sector's total contribution to the country's gross national product experienced a decline from forty-seven per cent of the total during the early period to thirty-seven per cent in 1900, continuing this downward trend to reach a low of thirty per cent by 1910.

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[3]The term "value added" is used as a measure of new production stemming from the particular industry concerned, while the term "national income originating" represents all the factors of production netted, so as to avoid duplication.

TABLE 77

VALUE ADDED AND NATIONAL INCOME ORIGINATING WITHIN CANADA'S PRIMARY SECTOR, FOR SELECTED YEARS, 1851-1910 (IN MILLIONS OF DOLLARS)

Year	Agricul-cure	%	Fishing and Trapping	%	Mining	%	Forest Opera-tions	%	Total	%
1851[a]	54		1		1		23		79	
1860	122	32.0	3	0.6	2	0.6	33	14.0	160	47.0
1870	153	33.3	5	1.1	4	0.9	44	9.6	206	44.9
1880	186	32.0	11	1.9	6	1.0	50	8.6	253	43.5
1890	217	27.0	13	1.6	11	1.4	53	6.6	294	36.6
1900	282	26.7	17	1.6	35	3.3	52	4.9	386	36.5
1910	509	28.8	21	0.9	59	2.6	86	3.9	675	30.2

[a]Figures for the year 1851 were obtained from O. J. Firestone, "Development of Canada's Economy, 1851-1900", op. cit.

Source: O. J. Firestone, "Canada's Economic Development, 1867-1953," op. cit., pp. 188-9.

As for the four individual groups making up this sector, value added by the country's agricultural industry, which held the leading position within this sector throughout the period, increased from $54 million in current dollars in 1851 to $282 million by the turn of the century, and almost doubled to $509 million in the next decade. As shown in Table 78, value added by agriculture progressively increased in terms of current and constant dollars, as well as per occupied farm, per thousand acres of farm land, here, with the exception of the last year,

1910, and per gainfully occupied persons, but did not manage to do so as a proportion of total contribution to gross national product, since its share there declined from thirty-two per cent earlier in the period to twenty-seven per cent in 1900 rising only slightly to twenty-nine per cent by 1910.

TABLE 78

VALUE ADDED IN AGRICULTURE, IN CURRENT AND IN CONSTANT (1935-39) DOLLARS AND GROSS NATIONAL PRODUCT, CANADA, SELECTED YEARS, 1870-1910

Year	Value Added in Agriculture		Value Added in Agriculture			Value Added as a Percentage
	Current $ (millions)	Constant $ of $)	In Constant Dollars			
			Per occupied farm	Per 1000 acres farmland	Per gainfully occupied	
1870[a]	145	172	467	4,772	321	31.6
1880	186	231	498	5,093	349	32.0
1890	217	290	535	5,006	395	27.0
1900	282	399	781	6,291	556	26.7
1910	509	547	802	5,020	586	22.8

[a]Covers four provinces only, but estimates relating to all Canada have been used for comparison with text.

Source: Ibid., p. 199.

As for fishing and trapping, value added by these industries increased from a low one million dollars in 1851 to $21 million in 1910 increasing also its proportionate contribution to gross national product from 0.6% to 1.6% in 1900, then declining to 0.9% in 1910. Value added by mining operations increased

from one million dollars in 1851 to $35 million in 1900, continuing to rise to $59 million in 1910, while its proportion of total contribution to gross national product behaved similarly to that of the fishing and trapping industries, rising from a low 0.6% during the earlier period to 3.3% in 1900, then declining to 2.6% in 1910. Finally, value added by forest operations more than doubled from $23 million in 1851 to $52 million in 1900, rising further to $86 million in 1910, with this group's proportional contribution to total gross national product experiencing a steady decline, from fourteen per cent in the earlier period to four per cent in 1910. This decline is attributed primarily to the replacement on the world market, of sawn lumber prepared in the forest, by square lumber prepared in the mill, causing thereby a shift towards secondary industry at the expense of the primary sector, since saw mill operations were, at that time, included in the manufacturing sector of the gross national product.

The reduction in contribution of the entire primary sector to the country's total output can be attributed mainly to failure of the sector's most dominant industries, agriculture and forest, to maintain their relative positions amongst the other member sources of total value added. But this is not surprising since it is generally believed that the greater the rate of economic development experienced by an economy, with its subsequent increase in income per capita, the greater

will be the tendency of its output composition to shift away from the primary sector towards the secondary and tertiary sectors, to cause a decline in the share of the former in the country's total national product, as was indeed the case for Canada, to be seen later on in this chapter. Increased mechanization and commercialization of the agricultural industry tended to raise the productivity of the labor employed within that sector, removing thereby a major hurdle to development. But with the resulting increase in income, the demand for products of this agricultural sector tended to decline while that for other sectors tended to rise, to cause a uniform and rather sharp decline in the primary sector's share in the country's total labor force, as will be observed later on in this chapter.

When a country is experiencing remarkable economic progress, this does not necessarily mean that all its regions or sectors are sharing equally in this progress. At times, large parts of such a country may fail to stay abreast with the rest of the economy, as was indeed the case for large sections of Eastern Canada, to be seen later on in this chapter. This gave rise to uneven rates of economic development, much of which could perhaps be traced to major imperfections in the various factor markets upon which the economy happened to depend, to be clarified later on.

The increase in Canadian agricultural production was

quite remarkable, especially during the first decade of the twentieth century when agricultural production has risen some thirty-seven per cent. This increase in production could probably be attributed almost entirely to the new grain producing areas of Western Canada, where the cultivation of wheat became outstanding. By the end of the period, some seventy-five per cent of the land in Western Canada was devoted to cash crops, of which wheat accounted for some eighty to eighty-five per cent, while the rest of the land was devoted to fodder and to the raising of livestock. Other products besides wheat produced by prairie resources, included oats and barley, which in 1913, reached the total value of some $90 million constituting some six-tenths of the country's total production of each, also flax, fish, minerals and timber, but the market value of all these products together was still less than that of wheat alone. In 1913, the value of wheat produced by the three prairie provinces totalled $141 million, representing some 209 million bushels of wheat cultivated on an area of ten million acres of land and sold at an average price of 67.5 cents a bushel. For Canada as a whole, the total value of some 232 million bushels of wheat which were produced on eleven million acres during that same year, amounted to $156 million, showing that the share of the Western provinces in the country's total production of wheat was as high as nine tenths,

constituting practically most of the total wheat production. Yields per acre in 1913, which for the whole of Canada averaged 21.04 bushels, were for Manitoba 19 bushels, for Saskatchewan 21.3 bushels and for Alberta 22.7 bushels, the three provinces averaging together some 20.8 bushels per acre.[4] The country's total production of cereals, including wheat, oats, corn, rye, barley and rice, increased by some thirty-five per cent in 1900-14, an increase primarily attributed to the new agricultural areas of Western Canada, which helped reduce production costs and thereby check the rise in prices of these products. Total production of cotton, flax, fibre and jute also increased rapidly while that of wool and hemp remained stationary over the entire period. Total Canadian production of wine, hops and tobacco showed a declining trend, likewise the country's total meat supply relative to growing population. Western Canada did experience considerable gains in its livestock numbers during the opening years of the twentieth century, but its cattle head remained practically stationary after 1910, while only slight gains were recorded for swine and sheep. For the country as a whole, total livestock figures remained almost stationary over the entire period.

While acreage under wheat in Western Canada continued

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[4] Cost of Living Report, 1900-1914, (Vol.II), p. 948.

to expand, from 4.2 million acres in 1900 to 8.9 million acres in 1911 and 15.4 million acres in 1916, to provide the real basis for the economic expansion of prairie agriculture, acreage under wheat in Eastern Canada continued to decline, and for the first time was being surpassed by Western acreage in mid-1890's. Though cereal production in Eastern Canada dropped from a total of some 208 million bushels in 1901 to 201 million bushels in 1911, its fodder crops have more than doubled, while improved techniques and superior methods have helped the expansion of its dairy industry.

The Maritime provinces failed to participate in the country's overall rural prosperity. This failure could perhaps be attributed primarily to the unfavourable conditions for farming within these provinces, namely, poor soils and consequently scattered farms and small fields, which tended to increase local production costs as well as reduce yields of produce, making it almost impossible for these provinces to compete with the other, better favoured agricultural regions. Consequently, the Maritime rural population decreased by almost two-thirds, from a level of some 340,000 people in 1891 to 114,000 in 1911.[5]

For the country as a whole, acreage under its various distribution experienced an upward trend. As for individual provinces, field crops tended to dominate acreage

[5]Report of the Royal Commission on Dominion-Provincial Relations, op. cit., p. 78.

everywhere, with Ontario in the lead in 1901, followed by Quebec, but with the latter devoting only half as much of its acreage to field crops as did the former. By 1911, while Ontario still had the largest acreage under field crops, its cereal production, as mentioned previously, had greatly declined while its feed produce had increased. Here Ontario was closely followed by Saskatchewan, where cereal production, especially that of wheat, dominated, and where acreage expansion under wheat was tremendous. Next came Quebec, where feed crops again dominated, closely followed by Manitoba and then by Alberta, with wheat leading total field crop production in the last two mentioned provinces.[6]

When viewed in terms of the geographic, physiographic, and climatic conditions prevailing within these various provinces, understanding of acreage distribution there follows readily. Ontario, with its relatively milder climate and greater population concentration would naturally tend to lead in the production of food; the prairie provinces, with practically no alternative to wheat growing, would tend to concentrate their efforts in that field and with their suitable conditions for large scale farming would be expected to succeed in reducing unit costs of production,

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[6] Canada Year Book, 1914, p. 171.

and drive Ontario wheat off the competitive market. British Columbia, a heavily forested province, with very little land suited to farming, had only its valleys for the cultivation of fruits. As for land value, the influx of immigrants and the intense specialization of the prairie provinces in the cultivation of wheat with all its effects upon the rest of the economy, would tend to raise land values. Whereas in 1901 the average value of Canadian land amounted to $22.13 per acre, by 1911, average land value had increased to $30.41 per acre, with land value being highest in Ontario at $35.03 per acre in 1901, followed by Quebec with $24.27 per acre, and cheapest in Alberta with $6.12 per acre, followed by Saskatchewan with $7.32 per acre. But in 1911, British Columbia advanced to the fore, showing the highest land value at $67.28 per acre, probably due to the stepping up of mining activities as well as to the greater demand made upon the province's scarce arable land, followed by Ontario, the country's most highly industrialized province, at $41.77 per acre, and then by Quebec at $40.88 per acre, with Manitoba next at $30.47 per acre, while lowest land values were shown for New Brunswick, at $14.21 per acre.[7] The above situation points to the greater demand for land within the country, especially so in Western Canada, where land which could have still been had free under the Homestead

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[7] Ibid.

Act, was being sold for high prices because of competition amongst settlers for better lands, encouraging thereby speculation and raising land values. The relatively depressed Maritime provinces have also experienced lowest land values at the time.

Wheat was grown practically all over the country, but as an important crop it loomed high only in a few provinces. Movement of wheat production has most definitely been in a westward direction. As late as the 1890's, of a total area of 2.7 million acres under wheat, approximately fifty-two per cent was in Ontario, thirty-three per cent in Manitoba and only four per cent in Saskatchewan and Alberta together. By 1910, of a total acreage of some 8.9 million acres devoted to wheat, only some ten per cent was located in Ontario, thirty-one per cent in Manitoba, forty-seven per cent in Saskatchewan and ten per cent in Alberta, the three prairie provinces together accounting for some eighty-seven per cent of the country's total acreage under wheat and producing some eighty-three per cent of the country's total wheat production, pointing to a most intense specialization in the production of wheat. This was to be expected, since the provinces of Ontario and Quebec are actually more of natural grass and forest regions, with arable lands more suited to growing fodder crops; whereas the three prairie provinces, though handicapped by nature, in terms of climate and rainfall,

were made suitable with the aid of scientific plant breeders, agronomists and engineers to cultivate wheat, a crop easily adaptible to a variety of conditions.

Comparing index numbers for the production of wheat in Canada with that of the United States, for selected years 1870-1913, the following results are obtained:

TABLE 79

WHEAT PRODUCTION IN THE UNITED STATES AND IN CANADA, INDEX NUMBERS,* SELECTED YEARS, 1870-1913

Year	United States	Canada
1870	51	22
1880	108	43
1890	87	55
1900	113	73
1910	138	305
1913	166	307

*100 = average of the years 1870, 1880, 1890 and 1910.

Source: Cost of Living Report, 1900-1914, (Vol.II), pp. 1022-23

As seen above, whereas in 1913 American wheat crop was not quite double that of its crop during the year 1890, suggesting a gradual development in the production of wheat in the United States, in Canada, it was five times that country's 1890 crop, pointing to the very rapid expansion

of Canadian wheat production.

It is interesting to compare Canadian wheat production, acreage under wheat and yields per acre with the same aspects of wheat elsewhere, as is done in the following Table 80.

During the years 1885-89, world wheat production increased 44.8%, world acreage under wheat had risen 24.5%, and the average yield of world wheat per acre 16.2%. Almost sixty per cent of the above increase in world wheat production is attributed to increased acreage and the remaining forty per cent to rising yields. During later years, namely, 1909-1913, world production had risen by only twenty-two per cent, and acreage under wheat by twenty-three per cent, while yields per acre showed a slight decline, so that here, increased production could be attributed entirely to increased acreage.[8]

Technical changes in wheat production became significant in the nineteenth century. The opening up of new lands under the stimulus of improved transportation significantly affected wheat production. As these new lands could produce wheat abundantly, unit costs of production were greatly reduced and with improved transportation facilities, charges for moving grain also declined significantly.

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[8] Wheat Studies of the Food Research Institution, Vol.IX, Oct.1932 - Sept.1933, (Stanford University Press, California, 1933), p. 258.

TABLE 80

WHEAT PRODUCTION IN MILLIONS OF BUSHELS OF 60 LBS., ACREAGE IN MILLIONS OF ACRES AND YIELDS IN BUSHELS OF 60 LBS., IN FIVE YEARLY AVERAGES,[a] FOR SELECTED YEARS 1885-1915

Period	World[b]			Four Major Exporters[c]			Canada			United States
	Production (mil. of bushels)	Acreage (mil. of acres)	Yield (Bushels)	Production (mil. of bushels)	Acreage (mil. of acres)	Yield (Bushels)	Production (mil. of bushels)	Acreage (mil. of acres)	Yield (Bushels)	Yield (Bushels)
1885-1889	2,325	198	12	622	54	12	37	3	15	12
1890-1894	2,637	208	13	758	59	13	43	3	14	13
1895-1899	2,773	219	13	842	67	12	58	4	13	13
1900-1904	2,907	233	13	919	72	13	77	4	20	14
1905-1909	3,369	247	13	1,046	74	14	121	6	18	15
1910-1915	3,824	277	14	1,262	88	14	229	11	17	16

[a]Arrangement into five-yearly averages and rounding off of figures were done by the writer.

[b]Excludes large areas in China and in South Western Asia, also many insignificant producers.

[c]United States, Canada, Australia and Argentina.

Source: Wheat Studies of the Food Research Institution, Vol.IX, October 1932-Sept.1933, (Stanford University Press, California, 1933), pp. 264-6.

Though world wheat production experienced an overall fluctuating trend, this trend commenced to move in the upward direction after the turn of the century, and especially during the years just prior to the first World War, when production was exceptionally high. The four "new" wheat producing countries, namely, the United States, Canada, Australia and Argentina, collectively termed the overseas exporters, experienced a long trend increase in production, especially after 1908, but even earlier years, 1898, 1901 and 1905/6 were years of high production, when these four wheat exporting countries contributed approximately from one quarter to one third of total world wheat production. Canada, a wheat deficit country in the 1890's, greatly increased her wheat production, to command first place amongst the world's wheat exporters, retaining only one third of her crop for domestic use and exporting the rest. The years 1905/6 and 1908 onward, especially 1911-13 and 1915, were years of increasing wheat production for Canada.

World acreage under wheat showed, in general, an upward trend. The United States, the U.S.S.R., Canada, Australia, Argentina and the Danubian countries contributed in that order, on the basis of acreage expansion. But percentagewise, Canada experienced the largest increase. By 1910, Canadian acreage under wheat was four times that of its acreage in 1885-1891, and by 1915, acreage under wheat was almost

twice that of the 1910 acreage. Actually, the upward movement in Canadian acreage under wheat had commenced in 1890, but then it rose only slowly, though steadily. It was only in 1905 that the upward trend in acreage under wheat commenced a period of growth unparalleled in any other frontier area of the world, averaging an annual increment of one million acres. From 1905-1925, over fifteen million additional acres were brought under wheat, representing a threefold increase in twenty years. Canada was followed by Australia, the United States, the U.S.S.R., India, Argentina and south-west Europe, but the bulk of the increase in world acreage under wheat was primarily due to the four overseas exporting countries.

As observed in Table 80, yields of Canadian wheat per acre appear to have been, on the average, the highest in the world, especially after the turn of the century.

It seems quite logical to assume a high correlation between wheat production and acreage expansion, also between wheat production and yields of wheat per acre. This latter factor is largely determined by natural elements, namely, by climate, temperature, rainfall, snow cover and the like, all almost entirely beyond the control of man, but then, yields are also deeply affected by agricultural organization, capital intensity, labor inputs and the like, all under the direct control of man. As for the expansion of acreage

under wheat, this tends to depend upon a variety of factors. For instance, an attractive new price situation can help increased acreage and be used as a measure of response to demand; other factors influencing acreage expansion will include favourable freight rates, to establish a favourable price-cost relationship, reductions in costs of production implicit in improved techniques, as well as special techniques to render possible the cultivation of wheat in wider areas. Results obtained in Table 80 suggest that in the immediate pre-War I years, the increase in world wheat production was primarily due to an increase in acreage under wheat, whereas in earlier years, improved yields per acre seem to have been the dominant factor. For the world, excluding Russia, wheat crops during the years 1896, 1906 and 1915 were exceptionally large, but in 1906, yields per acre were also exceptional, whereas in 1896 and 1915, both yields per acre and acreage under wheat were significant. It is perhaps possible to generalize and say that wheat crops over long periods of time, tended to be more closely related to change in acreage, but that yields per acre were also important, though perhaps more so in the short run than in the long run.

For Canada, both factors, namely, expanding acreage and increased yields seem to have played important roles in the country's production of wheat. Certain technological

advances were a necessary condition for Canadian acreage extension, especially in the three prairie provinces. The country's special climatic conditions necessitated the breeding of certain crop varieties, to combine suitability, high quality and early ripening. This situation was recognized by Canadian authorities fairly early in the country's history. In 1886, an experimental farm was set up in Ottawa as a federal responsibility, with four branch farms in widely different parts of the country. The earlier maturing variety, the Red Fife, introduced in 1900, tended to shorten the required growth period and thus avoid the hazards of frost, enabling the Canadian wheat belt to push further north, while hardier varieties, better able to resist drought facilitated western extension. Techniques of dry farming were widely distributed among farmers on the Canadian prairies by railway agencies. A system of fallowing was engaged to help conserve soil moisture. The development of the Marquis variety of wheat, introduced around 1905-6, made possible cultivation in Northwestern Canada. Increased resistance to rust, which was made possible in the 1920's, reduced a serious hazard in the eastern section of the prairies. Some five million acres of wheat became available after 1925 in Manitoba and Saskatchewan, where a profitable crop could not have been harvested otherwise. Similarly, the western section of the Canadian prairies

became productive with the discovery of a variety of wheat resistant to the sawfly menace.

Improvements in the varieties of wheat planted were introduced mostly after the commencement of the Canadian movement Westward, and in this sense could be claimed to have had no influence upon this movement. And yet, earlier settlement of the prairies, namely, the attempt in 1812 to grow an English winter variety in Manitoba ended in complete failure and it was not until the discovery of the hard spring, Red Fife variety, that wheat could be made to grow on the Canadian prairies. The discoveries of the other above mentioned varieties helped the further extension of acreage under wheat as well as the attainment of better yields per acre. In addition, wheat farming was quite impractical in Western Canada until the completion of the transcontinental railway in the 1880's, also, until a wheat fallow system of farming was introduced, no Western wheat could be brought under a market system.

No doubt, wheat production was expanded by the simultaneous progress into new areas, by the adoption of improved methods, stimulated by a market situation which favoured lower cost producers. And indeed, rises in production as well as in acreage were marked during periods when frontiers were being extended and when technical methods were rapidly being improved, embracing increased mechanization as well as

the scientific application of mass producing methods, which permitted the reduction in the number of working hands in agriculture.

The following Table 81 shows the increased use of machinery in agriculture, at the same time pointing to the simultaneous steady rise in the value of production accompanying it.

TABLE 81

GROSS VALUE OF AGRICULTURAL PRODUCTION AND VALUE OF FARM MACHINERY AND EQUIPMENT, IN CURRENT AND CONSTANT (1935-39) DOLLARS, CANADA, SELECTED YEARS, 1870-1910
(IN MILLIONS OF DOLLARS)

Year	Gross Value of Production		Value of Farm Machinery & Equipment [b]	
	Current $	Constant $	Current $	Constant $
1870[a]	206	244	6	-
1880	265	329	-	-
1890	306	408	-	-
1900	406	571	109	207
1910	726	779	257	520

[a]Covers four provinces only, but estimates for all Canada have been used in comparisons in the text.

[b]At date of decenial census.

Source: O. J. Firestone, Canada's Economic Development, 1867-1953, op. cit., p. 193.

Though the 1870's saw some degree of mechanization in agriculture, with the development of the reaper and the string

binder, it was only after the turn of the century that a greater degree of mechanization came to the fore, with the use of the tractor and the combine. In Western Canada, the trend in economic organization was toward an increasing use of machinery as well as an increase in the size of land per worker, showing a marked tendency towards extensive rather than intensive cultivation, as is clearly pointed out in the following Table 82.

TABLE 82

RELATIVE EXPANSION OF LAND IN PRAIRIE AGRICULTURE[a]
SELECTED YEARS 1881-1911

Year	Number of Farms		Occupied Acreage		Improved Acreage	
	All Canada (No.)	Prairie as % of Total	All Canada ('000 acres)	Prairie as % of Total	All Canada ('000 acres)	Prairie as % of Total
1881	464,025	2.2	45,358	5.9	21,866	1.3
1891[b]	-	-	-	-	-	-
1901	511,073	10.8	63,422	24.3	30,166	18.5
1911	682,389	29.2	108,969	52.9	48,734	47.1

[a]Source - decenial census.

[b]Data for this year omitted, as not available.

Source: K. Buckley, Capital Formation in Canada, 1896-1930, (University of Toronto Press, 1955), p. 16.

The extent and rapidity of Canada's frontier development after 1900 can thus be clearly realized; also the

relatively large units of land typifying Western agriculture. This trend is not surprising, since in more arid areas, larger farms in terms of land and capital are usually more advantageous. The invention of labor-saving machinery also encouraged the operation of larger farms. In contrast to the West, the trend in other Canadian provinces was one of a declining use of land, as well as in the number of farms, as is evident in the above Table.

From 1873-1896, the number of occupied farms throughout the country increased forty per cent and already by 1891, the size of the average farm was nine per cent larger than that of 1871, and the number of those gainfully employed per 1000 acres of occupied farm land showed a decline of some fourteen per cent.[9] During the later period, 1896-1913, the area of occupied prairie land increased from ten million acres to seventy million acres.[10] The number of farms on the Canadian prairies alone increased, during the same period, by almost 200,000, while the value of property there, including buildings, machines and livestock, increased by almost $500 million. Between the years 1891-1911, the average size of the farm increased by forty-nine per cent and the use of machinery more than doubled, reflecting a thirty-two per cent decline in the number of those gainfully

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[9] O. J. Firestone, op. cit., p. 197.

[10] J. A. Stovel, op. cit., p. 105.

employed per 1000 acres of farmland. The operation of larger farms, as was the case in Western Canada, required the use of more expensive operating equipment, thereby helping to increase the number of tenant farmers and reduce the number of farm owners. With the advance of settlement, the number of farm and land owners declined, while tenancy showed an upward trend.[11] This is perhaps not surprising. In any new country, the earlier stages of settlement tend to be characterized by a high proportion of owner to tenant farm operators, but with the passage of time, as more land is constantly being taken up, the quantity of free land is reduced and the only way remaining to operate better land is to rent it. And indeed, tenancy tends to be highest on choisest lands and in better established districts, while ownership is more prevalent in less developed areas of such lands. In addition, during periods of falling prices, an inflexible cost structure of the farm economy tends to turn owner-farmers into tenants, as was the case in Canada during the years 1911-1921. It was customary for prairie tenants to rent land on a three year lease, on a crop-share basis. This form of tenancy if surprisingly primitive for a country as advanced as Canada, is perhaps understandable when considering the country's

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[11] G. E. Britnell, The Wheat Economy, (University of Toronto Press, 1939), p. 45.

variable and difficult climate, also the usually unhappy consequences emerging from a habitually varying income, so common in farming activities.

Mechanization implied progress. Fallow land began to disappear and yields per acre commenced to increase with the wider and more intensive use of fertilizers and with the availability of improved tools and equipment. A labor shortage on farms, resulting from the availability of alternative employment opportunities in adjacent towns and villages also helped stimulate mechanization, which in turn, helped reduce the number of working hands required on the farm, by bringing about a decline in the average number of hours required to produce a bushel of wheat or a unit of any other agricultural product.

It is interesting to note the relationship between price and output of wheat for the world as a whole and for Canada in particular, during those years of expanding wheat acreage and production. Generally speaking, the price level of all goods and services would tend to vary with the demand for these goods and services as well as with the supply of money; and would vary inversely with the supply of these commodities and with the demand for money. During the eighteenth and nineteenth centuries there was a close relationship between the general movement of agricultural prices and the ratio of the supply of gold and the demand for it in

Europe and in North America; but long run changes in the supply of agricultural products and in population in themselves tend to imply an increase in demand sufficient to cause price changes. On a competitive market, which the wheat market most certainly is, price is defined as the equilibrium point determined by the interaction of supply and demand, where the supply and demand factors are interpreted as rates of growth for a given price level. For wheat, as a world product, the individual farmer will have no control over price, which would normally tend to vary greatly according to world conditions and be determined by supplies coming from large or short crops in the different parts of the world. Even if the demand for wheat throughout the world is inclined to move in a somewhat regular pattern from year to year, this will not be the case for the individual wheat producing and exporting countries, where demand might fluctuate markedly in any year, depending on supply conditions in other wheat producing and exporting countries, as well as on crop conditions within wheat importing countries.

Secular fluctuations in price levels tend to involve alternate secular periods of expansion and contraction of demand relative to the actual or potential supply of the goods and services involved. It is logical to assume that the supply of wheat will be determined by its price as well

as by the general preference pattern for wheat, be it for consumption purposes, for seed, for industrial use or for future use involving storage. As the production of wheat involves time, the relationship between its price and supply will involve a lagging cycle of readjustment, causing long term price changes which interact with long term shifts in the rate of growth in the quantity of wheat produced. Past experience would seem to be a good index by means of which to guage a farmer's expectations, and only the price of grain at the time of sowing could be useful to him as an indicator for his expectations. Because of this, agricultural production is slow to respond to a fall in demand and agricultural prices therefore tend to fall farther than do industrial prices. The interplay of economic forces is rather complex and inter-relationships with noneconomic factors are numerous, tending to render predictions impractical.

To return to the levels of the international price of wheat during the period in question, the general movement of world wheat prices, absolutely and relatively to other commodities, was in a downward direction, commencing in 1885 and continuing to approximately the first World War. The trend in the world's generally deflated prices has been a declining one, except for a partial recovery in the early 1900's and unto the first World War year. Considering world

wheat prices in greater detail, it seems that for the year 1884-5, world wheat price stood at a low of about $1 per bushel, and even the deflated overall world price had fallen from a level of above $1.40 in 1881 to $1.17 in 1885. In 1887, world wheat price was still lower, at $0.94 per bushel and the deflated price also continued to decline. In 1894, both actual and deflated world prices had hit new lows of $0.65-$0.65 per bushel. From 1885-1900, world wheat price was at least as high as its ratio to the price farmers had to pay for their needed non-agricultural commodities and services, but then, only in twelve out of the thirty-nine year period, 1900-1939, did wheat prices reach such a parity level. In 1891-2, world wheat prices were high due to an underestimation of supply. This was followed by three years of rapidly declining prices, high yields and carry overs. The year 1897-8 reflected a true shortage of wheat supply, as the year 1896-7 was characterized by abnormally bad weather throughout the wheat producing areas, except the United States, where crops were good. Consequently, prices rose. A very large crop in 1898-9 altered the above situation, reducing prices once again.[12] The years 1907-8 and 1908-9 were characterized by low world wheat harvests, with a decline of some 165 million bushels

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[12]Wilfred Malenbaum, The World Wheat Economy, 1885-1939, (Harvard University Press, 1953), pp. 178-9.

in the Danubian countries and some 150 million bushels in the overseas exporting countries, as compared with the 1906 crop.[13] Wheat prices for the year averaged some eighteen cents above the price level of the preceding year, despite a general financial crisis at the end of 1907. In 1908-9 prices rose even higher, to forty-five cents more per bushel than previously, but by 1914, price stood at eighteen to twenty cents below this high mark, and world wheat production was still lower than in the preceding year, 1907-8. Peak prices thus tended to reflect abnormally small crops. Excess acreage and production tended to be smaller in those years than at any other time.[14] The pattern of falling prices appears to have been broken only when special, temporary conditions, such as an abnormally low output due to climatic conditions affected the market. On the whole, price movements reflected a lowering of wheat prices relative to the price of other commodities. As for world acreage under wheat, it seems that after 1900 a divergence between actual acreage under wheat and acreage actually required to satisfy existing demand started to take place. Some studies concerning the relationship between the supply of wheat and the demand for it for human

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[13] Ibid., p. 197.

[14] Ibid.

consumption failed to prove statistically that the decline in the "real" value of wheat was primarily due to the excess supply over demand for human consumption. It has been calculated that for the year 1903-4 the average excess between actual and "necessary" acreage amounted to eleven million acres, rising in subsequent years from 14.9 million to thirty-one million acres, to make excess acreage 6.9% of "necessary" acreage in the earlier period, then increasing it from 8.6% to fifteen per cent towards the end of the period under consideration, suggesting that the market price was influenced by the more elastic demand for wheat for non-food purposes than that for human consumption. This conclusion tends to be consistent with world wheat production which was expanding in such a manner as to make prices be determined by the non-food demand for wheat where wheat was not the generally preferred grain. It would seem that the important determinants of world wheat acreage and production were not closely associated with returns from its output. Frequently, price influences operated so that production tended to exceed the anticipated level, causing market disequilibrium. Consequently, the pattern of world wheat output did not seem to reflect the pattern of its prices, whereas on the other hand, world wheat supply did seem to have decided influences upon world wheat prices.

For Canada, the country's general price level was exceptionally high in 1873, with prices thereafter commencing to decline until 1882-4, when a moderate recovery was in evidence. Thereafter, prices fell rapidly until 1897, when the price level attained its lowest mark since 1848, especially for food and other products included in domestic consumption. Yet, since the price of imports into the country was still lower than that of its exports, the terms of trade were generally inclined to Canada's advantage. In 1897, a rise in the general price level commenced and in the short period of some five years this rise succeeded in making good the loss of the early 1890's. By 1907, despite some interruptions in this trend occurring in the years 1899 and 1903, the general gain in price level amounted to some thirty-seven per cent. The years 1910-12 witnessed a rapid upward trend which was even higher than that of the years preceding 1907. By the end of 1912, the country's general price level stood at a point approximately forty-eight per cent higher than that of its low in 1897. By 1913, a check to this rising trend commenced to set in. All this is clearly pointed out in the following Table 83 where the percentage increase in the price of grain and fodder in 1913 over that during certain earlier years is depicted.

TABLE 83

PERCENTAGE OF INCREASE SHOWN BY ALL PRODUCTS TOGETHER, ALSO BY GRAINS AND FODDER, IN 1913

	Compared with decade 1890-1899	Compared with 1890	Compared with 1897	Compared with 1912
All Commodities	35.5	22.8	47.0	0.8
Grains & Fodder	36.8	17.2	69.7	18.2*

*Decrease.

Source: Cost of Living Report, (Vol.II), p. 27.

During the years 1896-1914, the price of cereals was seventy per cent higher than in earlier years, despite a declining trend which set in after the first decade of the twentieth century.

The years 1894-6 have experienced low prices in wheat at sixty-one to sixty-six cents per bushel. The year 1909 saw a high price for Canadian wheat at $1.09 per bushel, primarily due to a general shortage of wheat on the market, while the thirteen years, 1896-1909 averaged an increase of some forty-five cents a bushel. By 1914 the price of wheat was some twenty cents a bushel below the above high.[15]

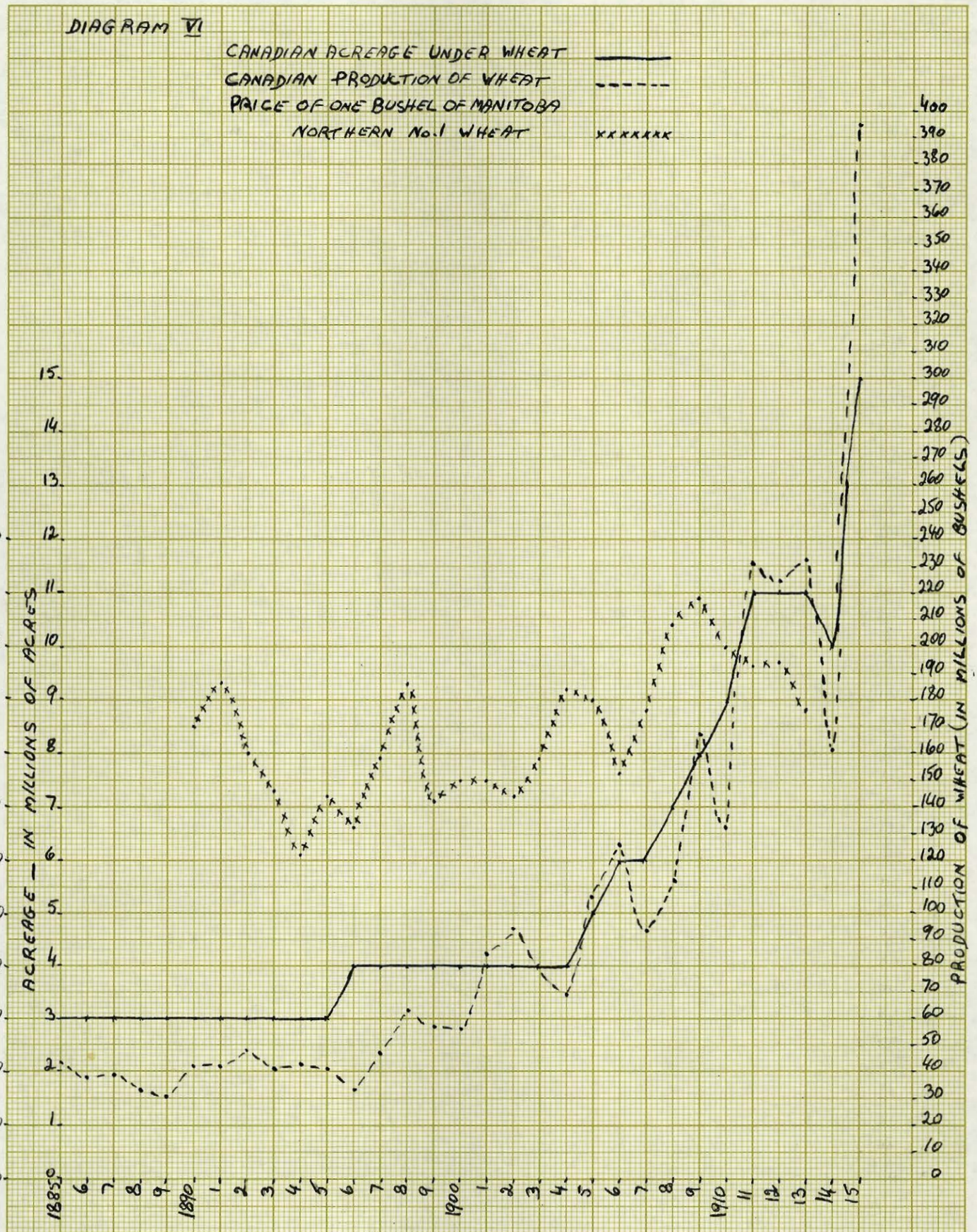
When comparing the expansion in Canadian wheat production with wheat prices and with acreage under wheat, as is

[15] Cost of Living Report, (Vol.II), pp. 34-5.

done in Diagram VI, it seems logical to assume that since variations in output or yields are only short-run phenomena, investment in farming, especially on the Canadian prairies, where the cultivation of wheat was of prime importance, would be expected to vary directly with the price of wheat rather than with variations in output or yields. The Diagram shows that an upward trend in prices was generally reflected in a sharper trend in wheat acreage, which in turn was probably responsible for the increase in land values even during the earlier stages of Western development, when much land could still be had free. On the other hand, it is quite probable that investment would tend to vary with the size of the farm, and since large scale farming was found to be more advantageous on the prairies, a relatively larger investment per farm was called for regardless of the price of wheat.

Price, when reflecting normal conditions, namely, normal yields, was undoubtedly an important factor, and the assumption of a positive relationship between price, or return per acre and subsequent acreage, is quite a logical one. But to say that price was the dominant factor in Canada's expansion of wheat production would be an overstatement, since other factors, within specific conditions, have also played an important role. For example, the cost of transportation has been of great significance to Canadian prairie

DIAGRAM VI



SOURCE: CANADIAN ACREAGE UNDER AND PRODUCTION OF WHEAT — WHEAT STUDIES of the FOOD RESEARCH INSTITUTION, VOL. IX, OCTOBER 1932 — SEPTEMBER 1933 (STANFORD UNIVERSITY PRESS, CALIFORNIA, 1933) PP. 264-6
PRICE OF ONE BUSHEL OF MANITOBA NORTHERN No. 1 WHEAT — COST OF LIVING REPORT (II) PP. 34-5

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farmers, adding enormously to their overall burden, since the prairies, situated in the heart of the continent, were quite remote from water transportation. A decline in freight rates would hence be an important requisite to help form a favourable price-cost relationship for wheat, which is most essential for a profitable production. Different price effects tend to result in different time patterns of usage for an excessive output of wheat. As excess acreage, and hence excess production was increased, prices tended to fluctuate rather about lower average levels.[16] The timing of disposition of a wheat crop, also certain monetary influences, were also of significance. There appears to have been a closely related pattern of growth between increased wheat acreage and production and certain other elements common in the development of "new countries", namely, railroad expansion, population growth attributed primarily to an influx of immigration and the like. For Canada, although existing evidence points to a lag between the movement of railway mileage and that of her rising acreage, especially in the prairies, during a fairly large part of the period under consideration increased acreage seems to have been most significant during those periods when railway mileage within the same area was also increasing

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[16]Wilfred Malenbaum, op. cit., p. 197.

rapidly and when the immigration component into that area was also rising significantly, especially from the end of the nineteenth century to the commencement of the Great War, as pointed out earlier in Chapters VI and VII. In this sense, the rapid increase in output, which soon exceeded domestic requirements, provided an expanded potential for export, with a pattern of growth which was not necessarily closely related to the market demand for wheat, since, as pointed out earlier in this chapter, the pattern of wheat prices tended to be in a downward direction relative to the price of other products. In this sense then, increased acreage and production, which were in Canada, at least until 1914 in a continuously upward direction, could perhaps be regarded as the outcome of economic development rather than as the consequence of market conditions for wheat. But at the same time, it would be wrong to completely discount the price element, which under certain circumstances, such as the planting of wheat in the Canadian dry belt, must have played a significant role, at least until after the first World War. Also, originally, earlier in the period, the forging ahead of wheat as the country's prime export product must have occurred in response to the good prices once obtainable for wheat, stimulated by an increasing population in the rapidly industrializing Europe, where an increasing national income and income per capita gave rise to

an increased wheat consumption. Once cultivation was made possible on the prairies, output was tremendously increased and once this expansion had begun, it snowballed, requiring very little effort to keep it going. For "new countries" generally, where areas were vast and consequently costs of production relatively low, acreage expansion would tend to be an almost automatic by-product of economic development, making the expanded production of wheat almost an incidental result of economic growth rather than its motivating force, especially so in the earlier part of the twentieth century, when large outputs of wheat, as mentioned earlier above, tended to follow a pattern of growth similar to that followed by the other factors involved in the country's developmental process, namely, railways, immigration, urbanization and the like. It is possible that for Canada, as for any other "new" land, a pioneering, expansionist spirit tended to prevail amongst a large section of the population, leading them to gamble on expected potential of new areas, the expectations of which were apparently already fixed in their minds even prior to arrival into this country, rather than adopt a cautious attitude and await actual results before commencing investment, tending thereby at least in the short-run, to outweigh considerations of actual current earnings from wheat. This perhaps helps to explain the relatively heavy investment in large farms, the domination

of the machine in production and the excessive speculative activity, which resulted in an excessive demand for land with its consequent rise in land values, which in itself, may have made returns to agriculture seem more attractive, apart from the actual price of wheat, especially during the period of expansion. Government action directed to enhance settlement, greatly encouraged this expansionist movement, and was perhaps also greatly responsible for this increase in acreage and in production. The question of timing of Canada's Western development and the relative importance of the country's agricultural sector as a leading one, will be discussed at the end of this chapter.

SECONDARY SECTOR

There can be no economic development without manufacturing, since the latter is the means for providing the materials essential for the very process of economic growth. Manufacturing itself is consequent upon transportation facilities, and indeed, it seems that in Canada, the years of greatest increase in output of manufactured products were those of marked activity in railway construction.

The following Table 84 presents the value added by Canada's secondary industries and their percentage of the total gross national product, for selected years 1860-1910.

TABLE 84

VALUE ADDED AND NATIONAL INCOME ORIGINATING BY CANADA'S SECONDARY INDUSTRIES, SELECTED YEARS, 1851-1910. (IN MILLIONS OF DOLLARS)

Year	Manufacturing	Per Cent	Construction	Per Cent	Total	Per Cent
1851[a]	31		7		38	
1860	48	18.0	13		61	22.5
1870	87	19.0	14	3.0	101	22.0
1880	110	18.9	22	3.8	138	22.7
1890	189	23.5	41	4.6	226	28.1
1900	223	20.8	113	4.2	264	25.0
1910	508	22.7	306	5.1	621	27.8

[a]Figures for 1851 were obtained from O.J. Firestone, "Development of Canada's Economy, 1851-1900", op. cit.

Source: O. J. Firestone, Canada's Economic Development, 1867-1953, op. cit., pp. 188-9.

As seen above, value added by the Canadian secondary sector showed a steady increase, its figures almost doubling from $138 million in 1880 to $264 million in 1900, with a most marked increase in the last decade, 1900-1910, when values more than doubled from $264 million to $621 million. As a percentage of gross national product, these secondary industries have experienced a steady increase until 1890,

when having reached the peak of twenty-eight per cent, commenced to decline, reaching a level of twenty-five per cent in 1900, but in the following decade managed to return practically to their peak level of 1890. As the share contributed by the construction industries to the country's gross national product remained almost stationary, the above gains could then be attributed almost entirely to the increased contributions made by the manufacturing industries.

Value added by manufacturing alone increased from $31 million in 1851 to $223 million in 1901, a sevenfold gain, but when allowing for the slight price increase which had occurred during that period, the gain decreased to 6¼ times, to represent an average annual increase of 3.82%. Gains then more than doubled to $508 million in the next decade. As a proportion of gross national product, this increased from eighteen per cent in the earlier period to twenty-one per cent in 1900, rising to twenty-three per cent by 1910. When considered in terms of current and constant dollars, value added by manufacturing industries increased over the period 1851-1870 by about one and four-fifth times in current dollar terms and by some ninety-five per cent in constant dollars. From 1870-1890 the gain was 117% in value and 159% in volume, while in 1890-1900, increases were eighteen per cent and twenty-seven per cent respectively.[17] Value

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[17]Based on Table 84, in O.J. Firestone, "Development of Canada's Economy, 1851-1900", op. cit.

added by construction increased fivefold, from $7 million in 1851 to $41 million in 1900, but its share of total value added remained almost the same. By 1910, construction was 2.7 times its 1900 level and as percentage of gross national product, an increase of one per cent was evident.

Since the number of manufactured articles is rather large and as it is difficult to eliminate influences of changing prices, the process of determining gains from the manufacturing industries tends to become most complex. In addition, classification of the various industries included in this sector tended to vary for the different censuses taken, with earlier census data favouring the inclusion of operations such as plumbing and carpentering in the manufacturing sector, while subsequent censuses favoured their exclusion, to make comparisons rather difficult. Nevertheless, even if comparisons as such could lead to hazardous conclusions, the use of earlier data as a guide to broad trends of events at the time can still be most useful.

In pre-Confederation years, Canadian manufacturing operations were restricted to the processing of simple foods, primarily that of milling grain into flour. The turning of logs into lumber for export was also an important activity. At the time of Confederation, the manufacturing industry was still simple and decentralized, with a multitude of small units producing boots and shoes, cloth, leather, alcoholic

beverages and foundry products, scattered throughout the towns and villages, producing for the local market and requiring very little capital and almost no specialized skills, with most of the needed more specialized capital goods being imported. In 1851, these simple industries were responsible for almost three-quarters of the industry's total output for the year. The only more advanced industries were shipbuilding and the carriage and wagon industry. In agricultural settlements, direct production was still prevalent, each family providing practically all of its needs and consequently, getting very little beyond the mere necessities of living. Many craftsmen were reported to be living by barter. Simple agricultural implements, such as the threshing machine and even the more complex heavy rake reaper, were being produced in almost every town.

The 1871 census points to a more diversified manufacturing, with flour and grist milling, saw milling and ship building now being reduced from their level of one half of total manufactured output in the 1850's to less than one third. A textile industry had been developed and some beginnings were made in iron and steel products, such as vehicles and agricultural implements. Shop crafts and local services became quite important. The tariff policy of the country at the time, in addition to high transportation costs offered some protection especially to those domestic

industries of heavy or bulky goods. The share of gross value of manufactured products accounted for by those simpler industries mentioned above, declined successively from seventy-four per cent in 1851 to sixty-one per cent in 1870 and further to fifty-one per cent in 1890 and to forty-nine per cent in 1900, showing thereby increasing diversification. During the second half of the nineteenth century the growing importance of steel caused a decline in the use of wood in shipbuilding, bringing ultimately to the decline of that industry in Canada. In 1870, one fifth of the country's total manufactured output, excluding saw and flour mills, was still reported to be provided by a large group of craftsmen living by barter. Total value added by manufacturing in 1870 was only nineteen per cent of the country's gross national product, compared to agriculture's fifty per cent, indicating that agriculture was still the country's leading sector at that time.[18]

The standard of living attained by a country is often reflected through the changing patterns of its manufacturing industries and through the relative importance of the various branches within that sector. In Canada, by 1890, products such as bread and confections, refined sugar, butter and cheese commenced to appear amongst the country's ten leading

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[18] O. J. Firestone, Canada's Economic Development, 1867-1953, op. cit., p. 204.

manufacturing groups by value of output. Larger scale manufacturing industries were established in Ontario and in Quebec to cater to a growing national market. This required a much more complex division of labor which in itself helped raise the economy's standard of living. And yet, by the end of the nineteenth century the Canadian economy was still not as advanced as were the economies of the United Kingdom or the United States, since it was still lacking a primary iron, steel, or other metal industries, its chemical industry was still in a primitive state and many consumer and capital goods still had to be imported. But the foundation for a more advanced industrial system had been laid, to permit the tremendous upsurge in manufacturing activity which was to come in the second half of the twentieth century. Rising prosperity in the late 1890's accelerated the expansion of Canadian manufacturing industries, so that by 1900, their total output was twenty five per cent higher than that of 1890. With the turn of the century, Canada's industrial expansion and diversification became quite remarkable, a large portion being devoted to more highly manufactured goods. Added importance was given to the sectors of iron and steel industries, to paper and printing, to various other metals, chemicals and their products. The slaughtering of meat and its packing became Canada's most important industry, while the production of

butter and cheese replaced that of boots and shoes in the fourth place. Increased urbanization created larger markets for factory produced goods and helped increase real output, employment and income per capita, to help meet the country's rising demand.

The Canadian census of 1911 divides the country's manufacturing sector into fifteen groups. Amongst these, the second smallest rate of increase appears to have occurred in food products and household articles and the third smallest increase in textiles. This slower rate of growth is perhaps not surprising, since production here is largely dependent upon domestic demand, which is itself a function of growing population and a greater per capita income. Though these were in evidence at the time, a shift has occurred in the number of people employed in these industries, reasons for which will be given later on in this chapter, when dealing with the occupational distribution of the country. Building materials, metal products, vehicles and vessels for transportation purposes showed gains of 200% or more, while miscellaneous material rose 126%.[19]

Comparing manufacturing activities in the United States with those in Canada, for selected years 1870-1910, the following becomes evident.

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[19] Cost of Living Report, 1900-1914, (Vol.II), p. 1057.

TABLE 85

MANUFACTURING IN THE UNITED STATES AND IN CANADA

Year	United States		Canada	
	Value of product[a] (Millions of Dollars)	Index[b] Number	Value of product[a] (Millions of Dollars)	Index[b] Number
1870	4,232.3	41	221.6	41
1880	5,369.6	52	309.7	58
1890	9,372.4	92	476.3	89
1900	11,406.9	111	481.1	91
1910	20,672.1	202	1,166.0	219

[a]Exclusive of neighbourhood industries and hand trades included in years prior to 1900.

[b]100 = average of the five years 1870, 1880, 1890, 1900 and 1910.

Source: Cost of Living Report, 1900-1914, (Vol.II), p. 1021.

As seen above, the decades of greatest increase in the output of manufacturing goods were 1880-1890 and 1900-1910, which were also decades of marked activity in railway construction. Growth of large-scale production in manufacturing in Canada is evident from statistics, but this tendency has still been less marked in Canada than in the more highly developed and industrialized United States, where population was so much larger and therefore able to absorb a larger volume of standardized commodities. In both countries,

but much more so in absolute terms in the United States, the increase in manufacturing was so great, especially for the decade 1900-1910, when in the United States it almost doubled and in Canada it more than doubled, that agriculture failed to keep pace with this industrial expansion. On the whole, industrialization appears to have been a more gradual process in the United States than in Canada.

Substantial gains were also achieved in real value added by manufacturing per employee. In 1900, the value added in constant dollars per person working in the manufacturing industry was about seventy-three per cent higher than that half a century earlier. Value added per person working in manufacturing industries increased ten per cent for the period 1851-1870, forty-seven per cent for 1870-1890 and 6½% for 1890-1900. Yet, these failed to keep pace with increases in gross national product per capita for the entire economy, which amounted to seventeen per cent for 1851-1870, to 22.5% for 1890-1900 and to eighty per cent for the entire period 1851-1900. It was only in the years 1870-1890 that value added per person in manufacturing was higher.[20]

Extending the period to include the 1911 census, the extraordinary growth of Canada's industrial activities during

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[20] O. J. Firestone, "Development of Canada's Economy, 1851-1900", op. cit., p. 235.

this first decade of the twentieth century become apparent. During this ten-year interval the number of manufacturing establishments has increased by 4,568, or 31.18%, the value of capital employed by $800.7 million, or 179%, the number of employees on salary by $127.8 million, or 205% and the value of products had risen some $684.9 million, or 142%. Actually, already by 1905, the value of both capital and products of Canadian manufactures has, for the first time, exceeded the level of $100 million, the former reaching $401 million and the latter $447.6.[21]

It seems that with the turn of the century, the manufacturing interests of the various provinces became dependent upon factors such as geographic position, natural resources, widened markets, light taxation, or a variety of tax concessions and cheap materials, all within a framework of competition, rather than a dependence upon an artificial tariff. While all provinces have increased their manufacturing activities during the first decade of the twentieth century, their importance as industrial centers tended to vary. By 1910, Canada had a total of over half a million persons engaged in manufacturing plants, earning a total of $241 million and producing $1,166 million worth of products, more than double the value of products produced in 1900.

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[21] Canada Year Book, 1914, p. 251.

Of all the provinces, Ontario was the most industrialized in terms of manufacturing production and employment, producing, by 1910, one half of the country's total manufactured goods, employing slightly over one half of the country's working force engaged in manufacturing activities and paying slightly over one half of the country's total manufacturing wages and salary bill. This is not surprising, since the greatest increase in manufacturing activities has occurred within the iron, steel and coal industries, the smelting and refining of metals, the paper and printing industry, building materials, agricultural implements and machinery, heavy equipment, transportation vehicles, repair and replacement factories and shops, all activities best suited to the province of Ontario, in view of its natural resources, geographic location, greater mildness of climate, size of population to provide both an adequate labor force and a large local market, all making for the greater diversification of manufactured production.[22]

Quebec followed as the country's second largest industrial province producing, by 1910, slightly over one-third of the country's total value of manufactured products, employing slightly over one third of the country's labor force engaged in manufacturing activities and paying slightly over one third of the country's total manufacturing wages

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[22] Ibid., p. 253.

and salary bill. Quebec, a province with the second largest population, also possessed suitable natural resources, adequate water power to work them, vast forests, and an important port within a favourable geographic location.

By 1910, British Columbia, though still far behind the other two provinces, emerged from a position of fifth in line in 1900, to become the country's third most important industrial center, with an important port on the Pacific. A region of lumbering and fishing, its activities were primarily concentrated in sawmilling, pulp and paper and fish processing.

The Maritime provinces did not fare so well. Their activities, based primarily on forest and sea, namely, pulp and paper, sawmilling, printing, fish processing, some iron, steel and coal production, although important activities, could not compete well in markets of central Canada, so that their sales were restricted to the home market which was much too small to encourage larger production. Of these provinces, Nova Scotia was in the lead, followed by New Brunswick, with Prince Edward Island way behind, probably due to the greater emphasis placed upon agricultural activities within this last mentioned province.[23]

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[23] Ibid.

The three prairie provinces did not at first contribute a great deal to the country's total value of manufactured products. The joint contribution made by the provinces of Alberta and Saskatchewan in 1900, amounted to $2 million, or one two-hundred-and-fortieth of the total. Contributions made by these three provinces increased greatly during the next decade, when Manitoba's contribution increased fourfold and the province of Saskatchewan managed to come to the fore. With wheat as a prime activity, subsidiary or complementary activities have arisen, such as flour milling and the handling of wheat. Elevator capacity increased over fourfold, from an index number 1900 = 100 to 423.4 in 1910, rising to 551.1 in 1913. Transportation, being so closely related to Western wheat production with the railway as the best or even only means available to transport wheat to seaports or to other marketing centers, gave rise to the manufacture of railway rolling stock within the area, also to repair shops, to supply centers for parts, to the manufacture of vehicles and the like. Since the raising of cattle also assumed importance within the prairie economy, slaughtering and meat packing became an important industry, likewise the production of butter and cheese. Minerals such as petroleum assumed importance in Saskatchewan and Alberta at a later date.[24]

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[24] Ibid.

A new country, embarking upon its process of economic development, would tend to determine the kinds of manufactures which it will undertake by the type of available raw material, especially where transportation problems involving high costs exist. And indeed, Canada's earlier manufacturing activities were simple, even primitive, as mentioned above, involving the production of bulky commodities which would have been too expensive to transport, when transportation facilities, internally and externally, were still limited and costly. It seems quite natural that those manufacturing industries devoted to the exploitation of the raw materials with which the particular region happened to abound were of prime importance in the first half of the nineteenth century. For a heavily forested country, it is then not surprising that forest industries have occupied a prominent place, including the preparation of timber for construction purposes, and later on the development of an important pulp and paper industry. Also, in a food-producing country, it is not surprising to note the importance of a food producing and processing industry, likewise the manufacturing of agricultural machinery and implements. With greater economic development after the turn of the century, came the development of heavy metals, iron, steel and also that of coal and cement. It is interesting to note that in certain European economies such as France, Germany, even

Russia, heavy industry played a vital role in the initial stages of the developmental process of these countries and only later came the development of finer industries, chemical, electrical and the like.

For Canada, as for any other developing economy, the interaction of the interdependent factors of specialization, exchange and money, facilitated by a variety of factors including a growing domestic and external demand, an improved transportation system and the like, all combined to form a base for a highly efficient production machine, making possible the spectacular volume of output attained by the economy. The growth and prosperity of many Canadian cities and large towns became a function of the conditions of their manufacturing industries. In the period immediately preceding World War I, a trend toward consolidation of formerly independent manufacturing plants was in effect, involving large economies in the purchase of materials and in selling expenses and was facilitated by a growing domestic and external market.

TERTIARY INDUSTRIES

The tertiary, or service industries consist of diverse types of activity, ranging from commerce and transport services to government and personal services, all of which differ widely from country to country. Though the mere existence of service industries within a country need not necessarily

be related to that country's stage of development, and indeed, in many poor countries, tertiary activities on a personal level are important, the relative contribution of such services to the country's gross national product must undoubtedly be highly correlated to the country's stage of development. Information obtained from statistics concerning long-run changes in income and occupation suggests that in wealthy economies, with a relatively high per capita income scale, the broad tendency is towards a rising trend in the relative importance of the tertiary or service industries; that the diversion of labor from primary production to tertiary industry is both a consequence and an indication of a rising standard of living. According to Colin Clark, "Low real income per head is always associated with a low proportion of the working population engaged in tertiary production and a high percentage in primary production. High average income per head compels a large proportion of producers to engage in tertiary production. The reason for this growth of the relative number of tertiary producers must largely be sought on the demand side. As incomes rise the demand for such services increases and being non-transportable they must be supplied by workers within the country concerned."[25] He further maintains that with economic

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[25]Colin Clark, Conditions of Economic Progress, (Macmillan & Co. Ltd., London, 1940), pp. 6-7.

development, the proportion of working population engaged in primary production, namely, agriculture, forestry and fishing, declines in proportion to tertiary production and the proportion engaged in secondary production, namely, manufacturing and construction, rises to a maximum and then begins to fall, indicating that each nation reaches a stage of maximum industrialization beyond which industry begins to decline relative to services. Since, in reality, there are many exceptions to the rule, the above can be taken only as a very wide generalization, fitting the development of only some of the economies, since available data presents no evidence of any such necessary or predictable tendency. There is really no reason why the demand for every one of the categories which together make up the tertiary sector should follow the same trend. Moreover, on the supply side, the proportion of the labor force in the tertiary sector depends on many different factors which need not necessarily depend on secular changes in the national income, implying that any observed correlation between economic progress and occupational distribution is a statistical accident rather than an indication of a significant economic law.[26]

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[26]The above is based on a critique by P. T. Bauer and B. S. Yamey, "Economic Progress and Occupational Distribution", in Studies in Economic Development, ed. Bernard Okun and Richard W. Richardson, (Holt, Rinehart and Winston, New York, 1961), pp. 219-228.

The following Table 86 presents value added and national income originating by Canada's total tertiary industries, covering public utilities, government and other services, also their percentage contribution to total gross national product, for selected years, 1851-1900.

TABLE 86

VALUE ADDED AND NATIONAL INCOME ORIGINATING BY CANADA'S TERTIARY INDUSTRIES (PUBLIC UTILITIES, GOVERNMENT AND OTHER SERVICE INDUSTRIES) FOR SELECTED YEARS, 1851-1910
(IN MILLIONS OF DOLLARS)

Year	Total	Percentage
1851	32	
1860	63	19.0
1870	96	20.9
1880	130	22.4
1890	214	26.7
1900	311	29.4
1910	752	33.6

Note: Figures for the year 1851 were taken from O. J. Firestone, "Development of Canada's Economy, 1851-1900", op. cit.

Source: O. J. Firestone, Canada's Economic Development, 1867-1953, op. cit., pp. 197-8.

Hence, value added by Canada's tertiary industries increased ninefold in dollar terms, from $32 million in 1851

to $311 million in 1900, while within the next decade it more than doubled to $752 million, increasing its contribution to gross national product from nineteen per cent to twenty-nine per cent in four decades, then to thirty-four per cent in the first decade of the twentieth century. Growth within this sector appears to have been fairly evenly distributed throughout the whole period. The groups making up this sector and acting as prime contributors to this increase included transportation, trade, finance, personal and professional services. Available data suggests that average annual earnings per employee in a number of service industries, notably the railways, increased more than did that in the commodity producing industries, undoubtedly giving further impetus to the increase in value added by the tertiary sector as a whole.

The following Table 87 presents value added and national income originating by all the sectors which together constitute the Canadian economy, for selected years 1860-1910.

TABLE 87

VALUE ADDED AND NATIONAL INCOME ORIGINATING BY INDUSTRY, CANADA, ALL SECTORS, SELECTED YEARS, 1860-1910 (IN MILLIONS OF DOLLARS)

Year	Total	Per Cent	Adjustment[a]	Per Cent	Grand Total[b]	Per Cent
1860	284		35		319	
1870	403	87.8	55	12.2	459	100.0
1880	515	88.6	66	11.4	581	100.0
1890	734	91.4	66	8.6	803	100.0
1900	961	90.9	69	9.1	1,057	100.0
1910	2,048	91.6	96	8.4	2,235	100.0

[a]Adjustment item comprises rent, direct taxes less subsidies plus net investment income for 1870-1910. Actually, value added by rent showed an upward tendency throughout the period. Interest and dividends received and paid abroad are a negative factor, tending to reduce value added. Value added by indirect taxes minus subsidies increased from $2 million in 1851 to $96 million in 1900, but their proportion to gross national product declined from twelve per cent to nine per cent. Custom duties and excise taxes showed a moderate increase over the period.

[b]Covers gross national product for 1870-1910 inclusive.

Source: Ibid., pp. 188-9.

Of the above total, the individual contribution of each of the sectors involved was as follows:

TABLE 88

PERCENTAGE CONTRIBUTION TO GROSS NATIONAL PRODUCT, FOR SELECTED YEARS 1860-1910

Period	Agriculture	Total Primary	Total Secondary	Total Tertiary	Other
1860					
1870	33.3	44.9	22.0	20.9	12.2
1880	32.0	43.5	22.7	22.4	11.4
1890	27.0	36.6	28.1	26.7	8.6
1900	26.7	36.5	25.0	29.4	9.1
1910	28.8	30.2	27.8	33.6	8.4

Source: Ibid.

Although the productivity increases experienced by the tertiary or service industries were only slightly above that experienced by the manufacturing sector,[27] available data still points to the fact that for Canada, it was really the rapid growth in commercialism rather than that of industrialism which so stimulated the country's rapid economic growth after the turn of the century. Canada of the nineteenth and early twentieth centuries was a dependent economy, a small integral part of a larger international economy, a

[27]For the period 1851-1900 value added per working person amounted to 1.13% in manufacturing, 1.55% in agriculture, 1.17% in the service sector and 1.20% in all sectors. O. J. Firestone, "Development of Canada's Economy", op. cit.

fact which tended to make international trade the motivating force behind Canadian development, directing the flows of its capital and immigration. Late in the 1890's, wheat became the causative variable of the country's economic prosperity, not merely in terms of actual figures involved, which were quite minor during the 1890's, but rather in terms of expectations linked to future possibilities of wheat for the Canadian economy. These expectations led to a concentration of activities in this field and resulted in an early excessive specialization, even when it was only towards the end of the first World War that wheat became the country's largest single export in terms of dollar value, with the greatest percentage of Canadian wheat coming from the prairie provinces and with Canada emerging as the world's prime exporter of wheat in 1927, as discussed earlier both in this chapter and in Chapter III.

Dependence upon the production and exportation of this single staple, wheat, gave rise to linkage effects of a definite type, confined within a particular direction, so different from, say, linkages which would have arisen from the development of iron and steel, or a coal industry.[28] The production and exportation of wheat required a wide

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[28]For an interesting discussion pertaining to the linkage effects of various industries, see A. O. Hirschman, The Strategy of Economic Development, (New Haven, 1958), Chapter 14.

organization of markets and was directly linked to transportation and handling services. Pressing demand for these made their operation a sufficiently profitable undertaking, to stimulate trading communities throughout the regions concerned. This perhaps helps to explain the relatively important position occupied by the Canadian tertiary industries, though, at the same time, it is important to realize that railroads and a good deal of overhead were created to a great extent before the wheat economy boomed, implying here a response not merely to a profit-based inducement mechanism alone, but also to the other factors discussed earlier in this chapter.[29] Multiplier effects commenced to operate in agricultural processing plants, in port facilities, in railway operations, in financial institutions and the like, all helping facilitate external economies, as well as involve considerable investment outlays. During that period, as observed earlier in Chapter VII, Canada was undergoing rapid urbanization, as well as a tremendous influx of immigrants, which created added demand for housing as well as for a variety of public and private services, involving still greater investment, but at the same time creating more income. The income effect of the complementary industries produced a multiplier effect through growth of a variety of

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[29]See pp. 320-1 of this chapter.

locally oriented manufacturing and service industries to meet the needs of a growing population. In so far as this income was spent locally, as it undoubtedly was to a considerable extent, since many such services could not be imported and had to be provided on the spot, it acted as a stimulant to demand, creating a new cycle of events to further stimulate domestically manufactured goods, raise income within this sector and create a new multiplier-accelerator process. Modern means of transportation and commerce associated with the production of wheat, also the substantial increase in urban communities which grew at a considerably faster rate than those in rural areas, were thus responsible for the country's accelerated growth process. This may appear to contradict a generally accepted notion that during an industrial revolution it is usual for the manufacturing sector to assume the lead in productivity increases and spread and stimulate through linkage effects development and growth throughout the rest of the economy. That this was not quite so for Canada could perhaps, in addition to what has already been stated above with regard to wheat as the country's prime activity, be attributed to the timing of Canada's actual industrial revolution considered to have occurred during a world-wide economic depression in the nineteenth century which tended to limit the benefits to be derived from such a revolution. Also the

small size of the domestic market at the time acted as a limiting factor, and together with a dependence on outside capital and managerial skills was responsible for the country's state of decentralized industry and for the small size of its plants and firms.

OCCUPATIONAL DISTRIBUTION

Differential rates of development among the various sectors of the economy are also reflected in changes in the occupational distribution of the economy concerned. To generalize once again, though keeping in mind the possibility of numerous exceptions, wealthy economies have tended to experience a decline in the share of labor force in agricultural activities, whereas that employed in manufacture, mining and construction activities has not shown any significant changes in many of the wealthy countries, and that employed in the service industries has been in an upward direction. For Canada the situation within this sphere has been as follows:

At the time of Confederation and during the early 1870's, agriculture, forest and fishing were prime Canadian occupations. Service industries were relatively unimportant and manufacturing was on a very small scale, more in the nature of handicraft, scattered throughout the country. The above is clearly illustrated in the following Table, where

percentages given for the year 1871 may perhaps be taken as approximately correct for 1867 as well.

TABLE 89

PERCENTAGE DISTRIBUTION OF CANADA'S LABOR FORCE, SELECTED YEARS, 1871-1911

Year	Agriculture	All Primary	Manufac-turing	Construc-tion	Tertiary
1871	50.0	51.0	13.1	18.0	17.0
1881	48.1	51.2	13.8	15.6	19.4
1891	45.8	49.5	16.8	10.1	24.8
1901	40.2	44.3	17.3	10.6	27.8
1911	34.3	39.5	19.9	7.2	33.4

Source: Ibid., pp. 184-5.

As seen above, almost the entire increase in the number of those gainfully employed was absorbed in the tertiary industries, including commerce, transportation and various public and private services.

In greater detail, transportation has doubled in relative importance, and so have the service industries, including public utilities, trade and finance institutions, personal and government services, all have grown rapidly in importance, probably under the stimulation of an increased demand created by an influx of immigrants at the turn of the century, also

by the commencement of large-scale agriculture on a specialized basis in Western Canada. Some sixty per cent of those gainfully employed became exclusively concerned with the production and sale of wheat, while others were engaged in commercial and distributive trades established to serve farming communities.

The number of workers in trade and merchandising, as well as in the manufacture of mechanical and textile products has increased, but the number of those engaged in the production of food and clothing had declined. Actually, the increase in the number of employees in construction and transportation and their decline in food industries was not as great as it might appear at first glance. Though the latter's relative importance as employers was declining, they still retained large numbers of "permanent" labor, whereas the former industries were bound to include large numbers of "temporary" workers, who, as suggested by the number and amount of money orders sent abroad from Canada, entered the country merely to participate in its prosperity. The long-run occupational trend in the manufacturing industries for the years 1890-1910 was on the whole in the upward direction. Any decline indicated by the construction industries was probably exaggerated by changing terminology, namely, the listing of construction workers in the 1911 census as "civil municipal employees". As no statistics are available

for the building trade as such and since that trade was booming at that time, it is only logical to assume that it did absorb an increased proportion of the country's working population. The number of employees in domestic and personal services showed a relative decline, suggesting that other, more attractive occupations became available to female employees.[30]

Labor thus appears to have been diverted more rapidly from agriculture and other primary industries than elsewhere, while labor engaged in tertiary industries almost doubled in the period 1871-1911, in conformation with the assumption of this being both cause and effect of rising living standards, as was indeed the case for Canada, to be seen in the next chapter, when dealing with problems of income distributions.

Comparisons of Canada's occupational distribution with that of the United States reveals similar tendencies in the two countries. The number of persons employed in agricultural pursuits in the United States have declined by 2.8% from a level of 35.7% of total occupied labor force in 1900, to 32.9% in 1910, while the numbers of those engaged in trade and transportation have increased by 3.5% from 16.4% of the total to 19.9% in the same period and the numbers of those

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[30] Canada Year Book, 1921, p. 600.

engaged in the manufacturing industries rose by 3.9%, from 24.4% of the total to 28.3% over the same period.[31] The British census for the period pointed to a similar trend.

Such results suggest greater specialization within a country, one of a more complex nature in the manufacturing industries and one of a simpler nature in the service industries. Under conditions of increased specialization, many of those now employed in trade, transport and manufacturing would be called upon to do work which had formerly, under a more rude society, been performed by agricultural and other primary producers for themselves. Other factors which tended to replace the farmer in Canada included increased mechanization, but this tended to be balanced out by the existence of the Western frontier,which prevented, at least for the duration of its existence, the occurrence of any serious repercussions. In addition, the decline, after 1900, in the farming population in every province in Eastern Canada, with the exception of Quebec, as discussed previously in Chapter VII, added its share to enhance the decline in the importance of the agricultural sector. Greater industrialization contributed to the movement from settled rural areas in Eastern Canada to urban areas in Eastern Canada, as well as to the Western frontier. The former

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[31] In Canada, the decline in agricultural labor force between 1901-1911, amounted to 5.9%, the rise of that in tertiary activities to 5.6% and that in manufacturing to 2.6%. Source: Cost of Living Report, 1900-1914, (Vol.II), p. 953.

contributed to the increasing rate of urbanization, creating a building boom and speculations in real-estate. Census records for 1881-1931 concerning farm labor indicate that the overall employment of agricultural workers in central and eastern Canada was relatively stable over that period, suggesting that after 1881, farms in those areas were unable to absorb even the natural increase in local farm population. Movement from Eastern Canada Westward included many farmers who re-engaged in farming activities in the West, but also others who found the West's booming service, transport and construction activities even more attractive. The withdrawal of large numbers of people from rural into urban centers tended to raise the number of food consumers and reduce that of food producers, necessitating the importation of food, thereby raising distribution costs as well as the general cost of living, to be discussed in greater detail in the next chapter.

For an agricultural economy such as Canada of the nineteenth and early twentieth centuries, it is not surprising to note that farmers, with or without capital, also farm laborers, were the country's most desired immigrants. And indeed, the proportion of employable immigrants who declared agriculture as their occupation increased from twenty-five per cent of total immigrants for the years 1876-1880 to over

thirty-five per cent for the years 1909-1914.[32] Of a grand total of some 2.4 million immigrant arrivals in Canada in the thirteen years, 1900-1913, the number of those classified in productive industry, namely, in agriculture and mining, was one million, or 42.6%, the remaining 1.4 million, or 57.4% were classified as laborers, mechanics, clerks, traders and domestics.[33] The increase in arrivals classified within the former group was undoubtedly in response to the greater economic opportunities made available to persons in agriculture with the opening up of Western Canada to settlement and to the cultivation of wheat.

The largest group of immigrants from the United States consisted of farmers with some capital and of farm laborers. This was to be expected, since the Canadian West, the natural extension of the American West, when opened up, succeeded in attracting its neighbours, whether by means of propaganda, free train rides in the event of eventual settlement, or by a host of liberal agricultural and settlement legislations, especially when almost all the best American lands were already occupied. New unknown opportunities, until proven otherwise by experience, would always seem so much more attractive than available ones, especially when distances involved

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[32] Wilfred Malenbaum, op. cit., p. 132.

[33] Cost of Living Report, 1900-1914, (Vol.II), p. 953.

are not so great and when no drastic change or major adjustment in manner of living, custom or language is required of the newcomer. The next largest American group consisted of laborers, mechanics, clerks, miners and domestic servants, persons with some small capital or with no capital at all, who came to Canada in search of better employment opportunities and at very little risk.[34]

As for immigrant arrivals from the British Isles and from continental Europe, here also farmers and farm laborers constituted the largest group. As pointed out earlier in Chapter VII, depressed economic conditions within the European agricultural sectors forced farmers, farm tenants and laborers, for whom agriculture was really a way of life, to emigrate in search of better opportunities in agriculture. In England, where agriculture, if not depressed, has at least decreased in relative importance, to those who still believed in agriculture as a way of life, the "New World" and a supported passage to reach it offered excellent opportunities. This group was closely followed by general laborers and mechanics, people who had very little to lose and a great deal to gain in terms of higher wages and salaries and better living conditions. Here miners constituted the smallest group, perhaps because mining was a well established occupation in

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[34]Based on information taken from, Immigration Facts and Figures, (Department of the Interior, 1914).

England and the Continent, consisting of entire areas the inhabitants of which, fathers imparting their occupation to sons, were exclusively involved in it. To leave such a well established way of life, despite the prevalence of misery and danger associated with existing conditions, would require drive and ambition, which many of these people sadly lacked.

As for the occupation of emigrants from Canada into the United States, common laborers tended to predominate, followed by people with no specific occupation and including women and children. Next came skilled laborers. The smallest groups of Canadian emigrants to the United States consisted of professional people.[35] On the whole, these were people prone to be more severely hurt by any adverse economic conditions within the country, people who had therefore very little to risk and so much more to gain by seeking employment opportunities within an economy so much more advanced industrially and economically and that at no hazardous changes of environment, custom and language.

The shift in the occupational distribution of the Canadian labor force within the country's various provinces showed a divergence of interests and was undoubtedly conditioned by the natural resources available within these provinces, as well as by the specific stage attained for their utilization.

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[35] Cost of Living Report, 1900-1914, (Vol.II), p. 899.

Such shifts were bound to affect the proportions of other inputs, capital and land, as well.

The Canadian domestic economy had to be continuously adjusted, so as to enable it to cope with changes prevalent in conditions of the foreign markets upon which Canada's export trade was so dependent. This involved shifts in the country's labor force, from one occupation to another and hence from one sector to another, implying interprovincial migration, as pointed out earlier in this chapter and in Chapter VII. As the Canadian Western frontier was undergoing a process of integration into the national economy, the supply of labor tended to be more elastic during that period, still, difficulties, even hardships could not be avoided, especially during depressed periods. But on the whole, market induced pressures for greater productivity helped make the Canadian farmer more specialized, demanding greater division of labor, increased use of capital and advancing technical knowledge. With economic expansion came the need to provide additional plant and equipment for an increasing production, and although such additional plant and equipment are often also planned against the future, and therefore do not produce to their full capacity, they still create a rising current demand for labor, capital and materials, which need not necessarily be offset by additional supplies. The opening up of the Canadian West to settlement, in the sense

of this being an entirely "new" area, gave rise to even greater needs, in the form of extensive and expensive railway construction, to the formation of new towns and villages with their own varied and vast requirements, as well as to the general process of industrialization - the vast network of technological advances and productive industry. And indeed, with settlement of the West came every sign of a vigorous economic expansion, in the form of locally oriented manufacture, trade and services such as warehousing, processing, stores, distribution and finance facilities, insurance and transportation facilities, community services, shipping and docking facilities of the Great Lakes, all along with a widespread pattern of towns to serve local consuming markets. The 1911 census recorded an increase of 39.1% in housing for the entire country, with an increase in the tendency toward occupation of a more permanent type of dwelling. All these activities involved tremendous outlays of capital, but also created much income. A great deal of investment in Eastern Canada tended to originate from Western settlement and from the latter's specialization in the cultivation of wheat, a factor so greatly responsible for the expansion and diversification of the entire Canadian economy. From 1901-1914, wheat represented almost the entire increase in the country's exported grain, and constituted sixty-three per cent of the increase in agricultural and vegetable

production and forty-one per cent of the increase in total merchandise export. Prospective profitability in the West created markets for other industries in Eastern Canada. The country's major export industries created a variety of subsidiary industries in the form of the processing of wheat into flour, the construction of agricultural machinery and the like, some of which became important new exports.

Indeed, the years 1900-1913 were years of expansion, involving essentially expenditure on capital account, on equipment of various types - railways, harbours and a host of civic requirements and improvements, and not years of primary productive effort. This was primarily due to the fact that before Western Canada could be made fit for agricultural settlement, heavy investment of the above mentioned variety of expensive projects had to precede, at times, actual settlement, and at others, at least keep pace with it, while other activities, such as the building of schools, libraries and the like, had to follow settlement closely behind, all involving heavy investment of long period gestation. And indeed, the notable expansion in the production and exportation of wheat lagged behind Western settlement and investment activity, since the really outstanding rise in the exportation of wheat did not occur until about 1910. When the need to provide all those investment projects became urgent and concentrated into a relatively short period of

time, dislocation was bound to result, causing certain sectors of the economy to suffer at the expense of others, namely, the Canadian food producing sector, thereby affecting the country's distribution facilities and conditions, which in turn had considerable effects upon prices and hence upon the country's general standard of living, to be considered more fully in the following chapter.

CONCLUSION

In summing up it is perhaps possible to generalize and say that the motivating force behind any successful economic development lies in the ability of the economy concerned to organize its productive resources so that they yield maximum output. In view of Canada's numerous geographic, climatic and physiographic limitations, which would tend to restrict activities to specific regions, the country's excessive dependence at the time upon the solution of its agricultural problems for its well being and prosperity, may appear rather strange to the casual observer. But when remembering that agriculture was man's prime source of food and raw materials and, therefore, his most basic occupation, this dependence, particularly in view of the relative "newness" of Canada at that time, may perhaps not seem so strange after all. Despite the country's above-mentioned limitations, Canada's overall potential in terms of richly endowed

natural resources, even if of a specialized type in the form of minerals, forest, certain fertile agricultural land, ample water for power and so on, was quite tremendous, but was most restricted, apart from other things, by a limited domestic market which inevitably led to dependence upon external demand. In this sense then, the very nature of these specialized resources was responsible for a great deal of domestic economic instability by rendering the economy vulnerable to external conditions, and yet, paradoxically though this may seem, these very same resources were capable of yielding a wealth of national income, when external demand for them loomed high.

To be able to compete on the foreign market, standardization of crop and livestock to permit larger volumes of output per unit to reduce operating costs became a necessity. The introduction of power and labor saving machinery also intensified the trend toward specialization. Canada's shift of attention to wheat, a product suitable for mass production, requiring small absolute amounts of labor and hence capable of being effectively produced on family size farms to give a more even distribution of income, helped make possible the commercialization of the country's agriculture and thereby integrate the domestic economy to a world economy to facilitate factor mobility in terms of commodities, specie and labor, all within the principle of comparative

cost advantages. Although this specialization in wheat did not really alter the country's general pattern of growth in terms of its dependence upon a single export staple, it did give rise to new methods, techniques and institutions, by requiring for its successful operation adequate transportation facilities, a wide organization of markets and handling services encouraging thereby the emergence of a variety of trading communities in the Western prairies. Attraction of labor and capital to large scale construction and industrial activities altered both the country's industrial and food belt, creating greater regional specialization, while at the same time, industry, finance and transportation interacted upon each other to create an independent and integrated economy. In this sense then, wheat helped create stronger national ties to give adequate support to Confederation and its aims, but with mutual economic dependence between the various specializing sections, where predominant types of industry tended to be established in accordance with the principle of comparative cost advantages. This latter factor itself then tended to foster greater dependence upon foreign trade and external markets. Canada's Western economy remained a dependent one, depending both upon foreign markets and upon other sectors of the domestic economy, particularly Eastern Canada. Products of the West were sold largely in the East, whether for local consumption, or for

external exportation, while imports into the West either originated in the East or were brought in by Eastern merchants and transported through the East. This interplay of forces between East and West created new investment opportunities with their attendant multiplier effects in both sectors, as pointed out earlier in this thesis.

In view of the above it is perhaps possible to assume the existence of a Canadian "wheat economy" in a double sense. Firstly, as one which has stimulated the vast influx of immigrants and capital into the country after the turn of the century,[36] while the manner of distribution of the latter helped spread growth throughout the rest of the economy. And secondly, the resulting increased demand for agricultural services and commodities which increased the purchasing power within that sector, created a derived demand for other consumer goods as well as capital goods, stimulated and helped develop the country's more sophisticated tertiary sector, which in turn through its own rising demand, lent greater impetus to the development of the economy's manufacturing sector. And indeed, Canada's secondary sector commenced its more rapid development only after the turn of the century, with the processing of food, metals, textiles and chemicals. With growing industrial diversification greater emphasis was being placed on manufacturing, increased

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[36] See Chapter VIII above, also Chapters III, VI and VII.

mechanization and the use of capital. Many industries began to diversify their range of manufactured commodities to take advantage of available markets for subsidiary or complementary products to enable them to cope with fluctuating demand, while others attempted to combine sales along with processing activities.

The above raises the question of timing in Canada's "take-off" to sustained growth. Why did it occur towards the end of the nineteenth and early twentieth centuries and not earlier, in the years immediately following Confederation, or at least with the emergence of the country's national policy? The reasons are numerous, involving many factors of varying importance, many of which though in existence during the earlier years, tended to occur concurrently only towards the end of the nineteenth and beginning of twentieth centuries. These factors seemed to include the availability of abundant land fit for settlement and under most liberal conditions at a time when almost all the best American lands have been settled; the availability of capital through relatively easy credit facilities both domestic and international; the availability of skills provided by immigrants willing to settle the new frontier; the availability of technology sufficiently advanced to facilitate large scale production of wheat at a time of rising foreign demand and consequently stimulate settlement of the West; an expanded railway system

and appropriate government policies, all combining at the turn of the century to facilitate the outburst of Canada's prolonged process of economic growth. While maintaining that growth was the outcome of a group of interrelated and necessary factors, it still remains necessary to establish some hierarchy of causal significance among them, and when attempting to do so prime emphasis must then be placed upon market forces, with external demand, or rather the favourable conjuncture of world markets as the vital motivating force behind the Canadian "take-off" process, while on the supply side, government action together with the extension of the American experience, the dominant element here being the relative exhaustion of American agricultural potentiality, appear to have been of prime significance.

During the earlier part of the nineteenth century Canada's wheat market was most unstable, while towards the end of that century and particularly after the turn of the twentieth century, increased demand for wheat on European markets contributed to more favourable prices which tended to make the growing of wheat on the Canadian prairies a more profitable venture. At the same time, improved transportation facilities at home and abroad greatly reduced costs to form a favourable price-cost relationship for Canadian wheat growers, as seen earlier in this chapter. Once specialization in wheat had commenced it had to be continued, since

acreage curtailment at that time when few ready alternatives to wheat were available on the Canadian prairies, would have probably caused great dislocation and suffering. As for the railways, those had to be built before the West could be settled, but then, the Canadian transcontinental railway was completed in the 1880's while settlement was delayed so much longer, pointing to the fact that before transportation facilities can become useful to the economic growth of the society concerned, appropriate political, economic and social institutions must exist within the society concerned and which for Canada, apparently became so with the emergence of her "wheat economy". As for the introduction of appropriate farming techniques and the discovery of suitable wheat varieties to permit specialization in wheat on a commercial basis, most of those were discovered only after actual Western settlement has begun and in this sense, their actuality might perhaps be viewed as the necessary condition to the extension of the Canadian wheat belt, and to the tremendous increase in acreage and yields, so necessary for commercial trading on a large scale. But the actual experimentation and research in that direction, which have begun as early as the 1880's, may perhaps in themselves together with the expectations of their eventual success, have been responsible for this earlier settlement, to prepare for the eventual rise in production and exportation of wheat. As for most of the

American better agricultural lands being already occupied by the turn of the century, this may perhaps imply that Canada had to await the completion of the American "take-off" before being able to commence her own process. Many of the American pioneers were imbued with an "expansionist philosophy", a drive to venture into unknown spaces, and with the Canadian West regarded by many as the "last best West" their attraction in that direction was bound to follow the almost complete settlement of the American West. This, of course, only implies that non-profit motives were also significant in Western settlement, but does not deny the existence of a careful evaluation of existing investment prospects offered by the West, or else, how is one to explain the significant inflow of capital into the West. In addition, settlement of the West at that time was undoubtedly also the result of the culmination of half a century of Canadian propaganda abroad, as well as of improved communication facilities which helped facilitate the easier transmission of information abroad from those already settled in the country.

In this sense then, many of the factors involved in Canada's developmental process were present, ready and waiting before the "take-off" itself for the right time, or push to commence this process, and this was probably given to them by the emergence of favourable markets for Canadian wheat.

CHAPTER IX

THE STRUCTURAL CHARACTER OF THE CANADIAN ECONOMY

As mentioned in earlier chapters, the prime interest of this thesis lies in the aspect of Canada's long-term, staple-induced economic growth. The process of such growth is assumed to be dynamic, spontaneous and discontinuous, with its origin in technological innovations and capital accumulation spurred on by market factors, primarily those of foreign demand, so significant to Canadian economic development, and involving the introduction of improved production functions, new markets, new sources of supply and the like, all factors which tend to alter the entire productive structure of the area in a manner involving structural changes within the entire economy. Such changes would range from shifts in factor demand due to changing tastes, rising incomes, urbanization and a growing population, with the rate of growth of the latter tending up to a point, to be greatest with higher rates of growth, at least in the earlier stages of development; shifts in factor supply, rising investment, changing techniques and skills and so on, all sufficiently dominant to cause a permanent disturbance to any formerly

existing equilibrium.

The process of economic growth will hence embrace aspects of supply of natural resources, the level of available technology, the organization of markets, the psychological attitudes of the population, also a variety of socio-cultural elements ranging from type of government, religion and family life to level of education and state of health. Historically, rapid economic growth has shown a tendency to generate an excessive demand for money and goods as well as an excessive supply of securities, involving thereby problems of balance of trade deficits on the one hand and net capital inflow on the other, adding further to the complicated nature of the process of growth. The development of resources and industries is carried out in order to attain industrialization and commercialization, for these to be translated with the aid of increased productivity of man and machine into a rising output which is bound to cause substantial change in the industrial structure of the economy. This change often manifests itself in a trend away from agriculture and into industry or trade on a larger and more sophisticated scale, the rate and timing of which will differ from country to country, depending upon a variety of natural and institutional factors such as resources, class distribution of incomes and the extent of the purposive control exercized by the society. Historically, this decline in the

share of agriculture in the country's national product and the rise, at first rapid and then usually disappearing in the relative contributions of manufacture and mining as well as the increase in the share coming from the service industries, are all tendencies which appear as constituent elements of a growing economy, contributing to and being affected by growing markets - the usual outcome of an increased volume of international trade, higher living standards, greater security, expanded capital facilities, more leisure and at the same time higher real earnings despite a long-term rise in prices, which inevitably tend to accompany the process of rapid economic growth.

It is hence quite logical to assume that the process of economic growth will involve a transition to a better standard of living in the economic sense, making it in this same sense an end in itself. Still, any advantages or disadvantages incurred in this process of change cannot really be evaluated, since conflicting interests will always be the outcome of such a process. But since we do wish to find out whether this process of growth has actually resulted in a change for the better, we must look to the past for any such evidence and attempt to judge such changes according to some universally accepted standard of appraisal. As flows of satisfaction-yielding commodities and services can be compared to a certain extent, by assuming economic growth to

be a material development, it then becomes possible to measure it in terms of the country's gross national product. Hence, to understand the tendency of an economy towards long-term economic growth when given the opportunity, it becomes necessary to quantify some of the key magnitudes with which the economy is concerned and to compare such magnitudes for the period considered as the country's "take-off" period with others of an earlier period, immediately preceding it. In the Canadian case, the "take-off" period, approximately 1896-1914, is thus compared with the earlier 1867-1896 period.

As stated earlier in this work, in view of man's aim to satisfy his wants with the aid of available scarce means in a manner which will maximize his output and minimize his effort, progress here will be estimated in terms of production standards. But production will also give rise to simultaneous flows of income in the form of wages, salaries and the like, thereby permitting national output to be envisaged also as the sum of income flows. National income even when limited to income which can be measured in terms of money, can still be defined in a variety of ways. Yet, no matter how defined, it is always considered to be the end product of a nation's economic activities, and as such may act as an index of the nation's producing power, in terms of its returns, thereby permitting measurement of its

productivity.[1] On narrow economic grounds then, economic growth will be measured in terms of real product or real income, namely, in terms of total output of final goods and services in real terms, which tend to increase over a relatively long period of time. Yet, to obtain a more complete view of the situation, it is necessary to define and enumerate population as well, to obtain information in per capita terms.[2]

Although the national product aggregate attempts to present, in a single measure, the entire year's work done by the nation for its own benefit, expressing at the same time the various interrelationships between groups of consumers, investors, government and foreign countries, it is most important not to neglect all these factors when attempting to evaluate a nation's attainment of growth. Likewise, since the path to economic development chosen or followed by each nation tends to differ, being a function of each nation's own peculiarities, these must be studied as such, as will indeed be attempted for the Canadian case throughout the remainder of this chapter.

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[1]For various definitions of "National Income", see S. Kuznets, "National Income", Encyclopaedia of Social Sciences, (Vol. XI, 1933), pp. 205-224.

[2]For a fuller discussion concerning both total and per capita income as measures of economic growth, refer to Chapter I, pp. 4-10 of this thesis.

TRENDS IN NATIONAL PRODUCT, NATIONAL INCOME AND PRODUCTIVITY

Available estimates of gross national product and national income for the earlier periods with which this thesis is concerned are not official and are, therefore, often more tentative than precise. Still, when used with appropriate caution such data may be useful as indication of broad trends, reflecting the extent and nature of the country's economic growth during the period under consideration.

Canada's real aggregate national output in constant (1935-39) dollars experienced actual increases varying from 81.9% for the twenty years 1870-1890, rising to a high of 122.7% in 1890-1910, then slowing down to 66.1% in 1910-1930. As for annual averages for the above periods, those ranged from 3.04%, rising to 4.09% then falling to a low of 2.57% respectively.[3] Comparing the above annual rates of increase with those for the country's net national product and national income at factor cost for the same periods, the former showed variations ranging from 3.00% to a high of 3.98%, then to a low of 2.28% respectively, while the latter varied from 2.99% to a high of 3.95%, then to a low of 1.88% respectively.[4]

Rates of growth of all three measures considered above

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[3] O. J. Firestone, Canada's Economic Development, 1867-1953, op. cit., p. 68.

[4] Use of gross figures for broad appraisals of long-term economic change are considered to be sufficiently reliable; ibid., p. 75.

were not uniform throughout the period under consideration, showing highest percentage increases for all three during the twenty years 1890-1910, both as annual average increases and as percentage increases for the period as a whole, and lowest rates of increase during the following twenty years, 1910-1930.

When considering population trends over the same periods, it appears that these have been in an overall upward trend, even if with considerable variations in the annual rates of population gain throughout the entire period, with smallest percentage increase of 37.8% in 1867-1890, and highest of 47.6% in 1890-1910, then dropping to 44.8% in 1910-30.[5] As for annual rates of population growth, these varied from 1.61% for 1870-80, 1.13% for 1880-90, 1.06% for 1890-1900, 2.88% for 1900-1910 and 2.02% for 1910.20.[6] Here again, the first decade of the twentieth century appears to have experienced the highest rates of increase.

Population growth tends to depend both upon natural increase and net migration. This latter factor is usually related to general economic conditions, tending to be high in prosperous times and low during difficult times. For Canada, the years 1904-13 were years of most rapid immigration influx, while earlier years were often ones of low

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[5] Ibid., p. 7.

[6] Ibid., p. 61.

immigration, the smallest immigrant entry into the country being recorded for 1870-74, while a small population loss was recorded for 1890-94.[7] It would then follow that the natural increase in population in each year since Confederation must have been sufficiently large to offset population losses resulting from an excess of emigration over immigration, so as to give the country its general increase in population during that period.

On the basis of the above information, per capita rates of growth in gross national product were calculated to have varied from 39.1% for 1870-90, rising to a peak of 50.7% in 1890-1910, then showing a remarkably low rate of increase of only 14.5% for 1910-30, while annual average rates of growth for the same periods varied from 1.67%, rising to 2.07%, then declining to 0.68% respectively.[8] Comparing the decades individually, even if in rough terms, it seems that real output per capita increased at an average annual rate of over 2.5% in the 1870's, 1.5% in the 1880's, a little over 2.0% in the 1890's and 3.5% during the first decade of the twentieth century.[9] As for net national income per capita in real terms, rates of increase

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[7] See Chapter VII of this study.

[8] O. J. Firestone, op. cit., p. 68.

[9] P. Hartland, "Factors of Economic Growth in Canada", op. cit.

here seen to have varied from thirty-seven per cent for 1870-90, rising to 47.2% for 1890-1910, with no change during the following period of 1910-30, whilst annual averages for the above periods ranged from 1.59% to 1.95%.[10]

When considering rates of growth per se, it would seem that the country has experienced remarkable growth not only during the years 1890-1910 but also during the second half of the nineteenth century, despite the hampering influences exerted by the so called "great depression" of the 1870's to mid-1890's. For an economy starting out from an almost entirely rural base with fairly low incomes and with an overall lower standard of living, industrialization, in which considerable progress appears to have been made in the 1890's, would naturally tend to greatly increase productivity within that sector, sufficiently so to result in the above mentioned rates of growth. But when wishing to differentiate one period from another in terms of the country's "take-off" into sustained economic growth, it can be argued, on the basis of additional data to be elaborated upon later on in this chapter, that on the whole, smaller increases in per capita values were evident for most items during the earlier years from Confederation to the later part of the nineteenth century, while very rapid growth occurred only during the subsequent period. And indeed, in the first decade of the twentieth

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[10] O. J. Firestone, op. cit., p. 171.

century the Canadian economy was, with minor exceptions, booming. The West was being opened up rapidly, while industrial activity within the country was speeding up sufficiently to alter the entire rural structure of the economy via shifts of workers from sectors with relatively small outputs per capita to ones with relatively higher ones,[11] adding their contributions towards the generally higher standards of living throughout the economy. The slowing down of these rates of growth in levels of income during later years as observed above, could perhaps be attributed to the impact created by the tremendous influx of immigration into the country, the absorption of which demanded the readjustment of the economy. In addition, payments of interest and dividends on loans made in the past became due, absorbing a large portion of capital expenditure.[12]

Additional attempts will be made in following sections of this chapter to elaborate and further substantiate the claim that the years 1896-1914 represent the Canadian "take off" period.

Canada's population appears to have grown at a rate of some thirty-four per cent during the period in question.

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[11] See Chapter VIII of this work.

[12] See Chapter VI of this work.

Comparing this rate of increase with that of national output which, as pointed out earlier was almost four times as fast for the same period, it would seem that the increase in the latter must have been due, in large measure, to increased productivity of the various factors engaged in production, namely, capital, resources and labor, as well as to changes in the distribution of this labor, where movement from sectors of lower output per capita to those of higher ones, must have accounted for some of the increase in real income per head. As already mentioned previously, productivity is here measured in terms of real output per man-year, but since available data, especially for the earlier periods, is rather inadequate, evidence on long-term changes in productivity though only approximate, is still sufficiently reliable to indicate general trends.

For the economy as a whole, gross national product per man-year in current dollars showed an increase of 27.9% for the twenty years 1870-90, 30.4% for 1890-1910 and only 21.2% for 1910-30, while average annual increases for the same periods in constant (1935-39) dollars were 1.24%, 1.33% and 0.97% respectively, indicating significant variations from the annual rates of change in real output per capita for the same periods. These variations could perhaps be attributed to differences of development aspects in each period, involving occupational shifts, number of hours worked

per week, and the proportion of population in the labor force.[13]

It seems that on the whole, economic progress in terms of real output per man-year for the earlier period, 1870-90, proceeded at an annual rate only slightly below that recorded for the subsequent period, 1890-1910. Yet, different sectors of the economy have actually experienced different rates of growth. Such different rates of growth among the various sectors of the economy would tend to be reflected in the occupational distribution of the economy. And indeed, certain individual industries have experienced fairly significant declining rates of growth, particularly during the latter period, to cause changes in the relative position of importance of various industries within the economy and bring about certain shifts in the industrial as well as the regional distribution of resources, particularly that of labor and capital.[14] Such a process appears to be natural for an economy undergoing rapid development. Historically,

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[13]Note: Annual percentage increase of population in the labor force was 1.84% for 1870-80, 2.05% for 1880-90, 1.06% for 1890-1900 and 4.17% for 1900-10, (O. J. Firestone, ibid., p.61). The above rates appear to have been greater than those for population growth in general, except for the years 1890-1900, when both rates were equal. The reduction in hours of work per week undoubtedly played an important role here, since, with the assumption of increased productivity, a larger labor force was required for production purposes, also an increased proportion of female workers in the labor force has helped increase the latter's rate of growth.

[14]See Chapter VIII of this study.

it has been generally observed that with rising incomes and in view of the secular limits placed on demand for primary products, a growing economy tends to concentrate its efforts upon pursuits of manufacturing, commerce on a more sophisticated level and a variety of other service industries, thereby diverting a large proportion of domestic labor force away from agriculture and into the above mentioned occupations, implying this diversion of labor to be both cause and effect of rising living standards as reflected by the economy's overall rates of growth. This tends to enlarge the latter's share in the country's national product. Greater mechanization and improved skills which tend to result from such activities, permit large-scale operations which in turn create greater economies and tend to raise the money value of output per worker in a great many of these newer industries, as was indeed the case for Canada.[15]

Comparing gross values of manufacturing production per man-year for all working persons with that of agricultural production, both in current dollars, the former showed increases of 35.5% for 1870-90, 10.5% for 1890-1910 and 58.7% for 1910-30, while the latter varied from 21.7% in 1870-90, 50.3% in 1890-1910 and 21.2% in 1910-30.[16] Average annual increases in constant (1935-39) dollars for the same periods

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[15] O. J. Firestone, ibid., p. 223.

[16] See Chapter VIII above.

were 1.53%, 0.50% and 2.34% respectively for manufacturing and 0.99%, 2.06% and 0.97% respectively for agriculture, pointing to higher rates for manufacturing in both first and last periods, whilst agriculture has experienced exceptionally high rates of increase during the mid-mentioned period, 1890-1910, a period of increased specialization in the agricultural production of wheat in the Canadian West. At the same time, significant productivity increases were evident in the service sector, practically doubling by 1900, and continuing this rise. In the first decade of the twentieth century, long term growth of output per man-year thus appears to have been slower for manufacturing than for either agriculture or the service industries. Despite the great decline in the number of persons engaged in agriculture by that time,[17] actual output within that sector had been steadily rising, attaining phenomenal results during the first decade of the century. This was probably partly due to increased mechanization, as well as to greater scientific application of mass producing methods, which permitted the better exploitation of the Canadian West.[18] Another aspect favouring this sector was the excellent man-land relationship in Canada, creating a high labor productivity within the agricultural

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[17] Ibid.

[18] O. J. Firestone, op. cit.

sector, permitting the latter to perform the tasks one has come to expect of it, namely, feeding a growing population adequately, and at the same time releasing labor for alternative occupations; creating the crucial export industry and providing its share of savings. Still, this sector remained vulnerable and insecure, primarily because of its excessive dependence upon market conditions, especially external ones, as well as upon uncontrollable climatic factors, which could at any time wipe out any favourable effects of an increase in physical productivity on labor within the sector. This may perhaps explain the comparatively lower returns usually expected within this sector, even in a high productivity economy such as Canada.

In terms of employment figures, with the number of persons employed in manufacture doubling for the period, 1890-1910, according to the 1911 census, development within the manufacturing sector appears to have been more rapid than that in agriculture. When considering the gross value of manufacturing production per man-hour and per wage earner in constant (1935-39) dollars, its percentage increase amounted to 46.7% for 1870-90, with an average yearly increase in current dollars of 1.93%, 40.9% for 1890-1910, or a yearly average of 1.73% and 71.8% for 1910-30, or a yearly average of 2.74%. The earlier period, 1870-90 seems to have been the only period when the average worker in

manufacturing increased his contribution to the gross national product by more than did the average worker in other sectors of the economy.[19] In later periods, the number of hours worked per week in manufacturing were greatly reduced, whereas in earlier periods, prior to the widespread use of the factory system, the number of hours per week worked in the manufacturing sector equalled that in the agricultural sector, suggesting that perhaps much of the rise in productivity within this sector in later periods was shown in increased leisure rather than in greater output.[20] The most significant increase in output per man-year in manufacturing occurred in the years 1910-30, when similar increases in agriculture or even in the general gross national product were well below that of the manufacturing sector.

With rising per capita incomes, a lag tended to develop in the rate of increase in income within the various sectors of the economy. This could perhaps be attributed to the low income elasticity of demand for foodstuffs, which tended to keep agricultural incomes relatively low, even when productivity, as pointed out earlier in this chapter, kept on rising, while the elasticity of demand for manufacturing and urban services was relatively high, influencing the composition

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[19] See Chapter VIII of this work.

[20] O. J. Firestone, op. cit.

of output away from primary products and towards a number of industries included in the tertiary sector, industries where capital-output ratios were considered to be lower and labor productivity highest. And indeed, productivity increases have been more rapid in certain public utility sectors than in the manufacturing or agricultural sectors.[21] This rapid growth of some of the service industries, as pointed out in Chapter VIII, could be taken in itself as a reflection of the fast rate of growth experienced by the Canadian economy at that time. This trend was undoubtedly greatly stimulated by the increasing use of capital in production as well as by the growing skill and intelligence of the country's labor force, both factors permitting the economy to divest greater attention in distributive and exchange activities of a more sophisticated type. And indeed, the crucial spurt which will result in an economy's "take-off" into sustained growth need not necessarily occur in the economy's output as a whole, but can and often is largely evidenced in the transformation of the country's industrial sector. This appears to have been the case for most of the industrialized countries of the European continent, where available modern techniques were used in the nineteenth century to stimulate growth of the industrial sector, particularly

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[21]Note: But lower in the personal service sector, ibid., p. 174.

the heavy industry branch, where technological progress at that time had been particularly rapid. The above may imply that a rapid rate of growth in the industrial sector, in view of the complementarity and indivisibility of the economic process, may occur only when started along many lines of economic activities in terms of linkage effects, in the sense that the building of a railway is of use only when the line is completed and not when only partially completed, in addition to its ability to stimulate growth of the iron, steel and coal industries.[22]

Canada's long term economic growth, was thus of varying proportions, not only in terms of its population growth, which occurred in spurts, but also in terms of the varying rates of its productivity. On the whole though, a given amount of labor and capital became capable of producing larger outputs, as demonstrated by the above mentioned percentage increases for output per unit input, be it due to technological improvements, a more intelligent labor force, improved managerial techniques or any other such reason. As for the timing in question, the actual annual increase in real output per man-year for 1870-90 of 1.24% was relatively large and only slightly below the most rapid rate of economic

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[22]The above is based on A. Gerschenkron's hypothesis, put forth in his article, "Economic Backwardness in Historical Perspective", op. cit.

progress which was shown for the 1890-1910 period. Since the earlier period was considered to have been, on the whole, the most depressed one of early Canadian history, this rate of progress could perhaps be attributed to brief revivals in the country's export trade, said to have occurred in 1879-1883. These undoubtedly had certain beneficial effects upon levels of employment and income of certain industries, but did not embrace the entire economy. In addition, a world-wide economic improvement, said to have occurred in 1888-1890, probably helped certain Canadian industries to revive, as well as a few others to experience even remarkable growth during the period, sufficiently so as to cause real output per person working to expand at a rate close to that of the 1890-1910 period and even above that for the 1910-30 period. Other favourable factors during the earlier years included improved terms of trade, to be discussed later on in this chapter. Still, certain disturbing factors continued to persist within the economy, having a strong bearing upon the country's general level of growth. These included overall fluctuations in employment, income and prices, with longer periods of downward trends, the frequent recurrences of depressions before the economy had a chance to recover fully; a succession of poor harvests to offset outside improvements and a greatly declining external demand, particularly for lumber, Canada's most

important commodity at that time. These were accompanied by many financial difficulties which often resulted in business failures, adding to the discouragement of foreign investment.[23] Such adverse effects for an economy so heavily dependent upon international trade for her very livelihood, were undoubtedly crucial in their bearing upon the generally lower per capita rates of growth of a variety of items of great importance to the economy during the earlier period than during the subsequent one, reducing any effective linkage effects which might have otherwise arisen, and thereby, preventing economic growth from engulfing the entire economy, also preventing any revolutionary changes from occurring within the economy, to prevent the occurrence of a "take-off" period. It is hoped to bring this out more clearly in the following sections of this chapter.

PROPORTIONS OF INCOME SPENT UPON AND BY:-

CONSUMPTION

Income flows can be studied both from an expenditure view as well as from the viewpoint of income received. The proportionate division of total expenditure within the

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[23]Note: J. Viner maintains that a steady flow of foreign capital into the country continued despite declining exports in the later part of the 1870's and again in the 1880's, but admits to a less spectacular growth of business enterprises in the country at that time; J. Viner, op. cit., p. 37.

community, namely, the composition of its effective demand at a given level of output will help determine the distribution of income throughout the various social groups which together contribute towards the production of its national product. This implies the great importance of the consuming sector within an economy, no less so than its investing sector, in helping determine the level of the society's aggregate income and its distribution amongst its various members. Whatever is produced must be disposed of, hence, the capacity to buy implies a capacity to produce. This suggests an equality between a society's gross national product and its gross national expenditure.[24]

To better understand the changing structure of an economy, some measure of demand becomes necessary. Such a measure was found in the composition of a society's family budget, assumed to depend upon the level of its income. Theoretically, expenditure patterns are expected to change simultaneously with income variations, but in practice, a lag between the two tends to occur, since the consumption pattern of a family, or the actual spending habits of a family at any time tend to be conditioned by current as well as by the immediate past living plane of the family in question,

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[24]Note: Gross national expenditure is defined in the national accounts as the total expenditure on all final goods and services measured by the total value of their sales at market price.

also by the accepted standard of living of the community within which the particular family happens to reside. This implies the importance of relative income as well as of status rather than that of absolute income,[25] and these are liable to change under a variety of influences.

The process of economic growth tends to change the industrial structure of the economy, partly in response to both domestic and foreign market conditions and partly as a result of a new discovery, the availability of new resources, or the increased domestic use made of indigenous resources. Growth in this sense will tend to impose new necessities, via the emergence of a more complex and sophisticated modern society, which will commence to demand more of its available resources both in terms of quality and quantity. This will tend to complicate production processes, and will require more expensive equipment and distribution facilities.

A rise in income followed by new wants will, therefore, tend to induce changes in patterns of consumption as well as in patterns of capital requirements, redirecting thereby employment of production factors towards a variety of more

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[25] For an illuminating discussion on this topic, see Dorothy S. Brady and Rose D. Friedman, "Savings and the Income Distribution", Studies in Income and Wealth, Vol.10, (N.B. of E.R., 1947), pp. 247-265; also J. S. Deusenberry, Income Savings & the Theory of Consumer Behaviour, (Harvard University Press, 1949),

diversified and urbanized trades. With greater economic diversification and urbanization, even the mere satisfaction of human basic needs for food, clothing and shelter will commence to require the greater relative employment of productive services in secondary and certain tertiary industries, since a great many of these cannot be imported and must be provided wherever the demand for them happens to arise. In this sense, the distribution of resources among the various employments in the society will tend to reflect both domestic and foreign demand for their goods and services.

The above statements could perhaps be best verified by studies of the consumption patterns of the economy, of both public and private sectors, also trends in investment expenditures in response to the above mentioned demand, primarily that for newly produced machinery, construction materials and the like, especially those directly or indirectly involved with wheat, during the first decade of the twentieth century. Yet, here again, lack of data for earlier periods, makes available information tentative. As for records of complete family budget surveys for Canada, the earliest available are for the year 1910, and that only for the city of Winnipeg. Official data concerning personal disposable income, which could help the study of changes in income retained by individuals after personal direct taxes, also that of personal savings, namely, personal disposable

income minus consumption go back only as far as 1926. Still, the trends indicated by available data if considered with appropriate care are quite useful and of importance to the present study.

On the basis of past and present experiences, the income elasticities of demand for commodities and services together with per capita real income are assumed to indicate the actual demand for these commodities and to determine whether this be in an upward or downward direction and at what annual rate. Generally speaking, for necessities, per capita consumption will tend to vary but little from year to year as a result of price changes, since for these, empirical demand curves tend to retain a high degree of inelasticity. With a low budget, most of it will be spent upon basic necessities. When income rises, a smaller proportion of it will be spent upon food and other immediate necessities, giving rise to greater diversification in the form of greater consumption of durables as well as in higher savings. The income elasticities of demand for better clothing, better types of housing, for more recreation and other comforts, for higher education, better health services and for a variety of luxuries are thus considered to be higher than those for food and for other immediate necessities. With growing incomes and with a more equitable distribution thereof, which is expected to occur as a result of economic development not

during the "take-off" period itself when inequality in income distribution is important, but later on, new needs and desires tend to arise, creating a relatively larger market demand for services and for durable consumer goods, which in turn, upon becoming more profitable, will induce the establishment of trading centers, a variety of marketing facilities, investment in homes, offices and factories, with a considerable multiplier effect on the country's volume of trade, so as to divert growing margins of labor, materials and money income to capital improvements, to stimulate domestic manufactures and services and away from the extractive industries, the country's prime sources of food and other necessities, speeding up thereby the diversification of the economy.

Through observation of available data concerning the quality and quantity of consumer goods and services purchased by the Canadian population during the periods under consideration, and noting the changes which have occurred in their patterns of consumption expenditure, a process implying the matching of population groups by income, some measure of the country's economic resources may perhaps be found to point out whether or not an improvement in the economy's general standard of living has occurred.

Canadian personal expenditure on consumer goods and services in constant (1935-39) dollars increased by 85.3% in

the twenty years, 1870-90, to give an average annual rate of increase of 3.13% for that period; by 104.7% in 1890-1910, to give an average annual rate of increase of 3.65%; and by 58.3% in 1910-30, to give an average annual rate of increase of 2.26%. As for per capita consumption rates of expenditure, in real terms, these have increased by 41.7% for 1870-90, at an average annual rate of 1.76%; 38.5% for 1890-1910, at an average annual rate of slightly less than 1.64%; and only 7.8% for 1910-30, at an average annual rate of 0.38%.[26] As for the share of Canadian private consumer expenditure in the country's total national product, this showed a declining trend, varying from 88.2% in 1870, 84.8% in 1890, 83.1% in 1900, 78.4% in 1910 and 71.6% in 1920.[27] The above figures reflect a long term decrease in the relative importance of private consumer spending. And yet, as will become evident later on in this study, actual improvements in living standards over the above period of time have been substantial.

Comparing the above private expenditures with government expenditure on consumer goods and services as a percentage of national product, the latter has shown an upward trend from 4.6% in 1870 to 6.6% in 1890, 7.5% in 1900, 8.1% in 1910

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[26] O. J. Firestone, ibid., pp. 12 and 78.

[27] S. Kuznets, "Quantitative Aspects and the Structure of Consumption", Economic Development and Cultural Change, Vol.X, (No. 2, Part II, 1962), p. 72.

and 10.0% in 1920,[28] reflecting the increasing role assumed by government activity in the nation's economy.

The higher gains indicated for consumption expenditure in the earlier periods could be considered the result of the country's industrial revolution and subsequent transformation of the country into a market economy. Later on, the specialization in wheat helped transform farmers formerly in mixed-farming activities and classified as producers due to their tendency to supply a great portion of their needs themselves, into consumers upon their movement to the West. But with increased incomes, preferences appeared to favor processed foodstuffs and similar products to home-produced foods. As for the relatively low increase observed for the last mentioned period, this could perhaps be attributed to the tremendous demand made upon resources for capital facilities to enable the absorption of the great influx of immigrants into the country. This may have perhaps also been the reason for the relatively smaller output per capita recorded for that period as a whole.

When considering percentage changes in actual consumer expenditure by type of product purchased, it appears that a major relative decline has occurred in expenditure on food, which fell from 34.9% in 1870 to 29.0% in 1910. A small

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[28] Ibid.

rise seems to have occurred in expenditure on clothing and personal furnishings from 16.3% in 1870 to 17.3% in 1910, similarly for shelter, from 13.6% in 1870 to 14.0% in 1910. A slight reduction was evident for household operations from 13.1% in 1870 to 10.4% in 1910, whilst increased expenditures were recorded for transportation from 3.2% in 1870 to 6.7% in 1910, this last apparently being due to the introduction of the motor car as well as to various improvements added to existing facilities in the form of parlor, sleeping and dining cars. Fairly significant increases in expenditure on luxury items such as tobacco and alcoholic beverages were recorded, likewise increased expenditure on health care and insurance, with a modest increase in the miscellaneous category.

Historically, higher living standards tended to reflect an increase in the consumption of wheat bread. On a world basis, uniform information first became available for the years 1885-89, reflecting a steady upward movement in wheat consumption with increased industrialization and a rising world population. For wheat, a necessity in highly inelastic demand, at least in the short run, per capita human consumption tends to vary little from year to year as a result of price changes. And indeed, as most reliable quantitative results indicate, a fall in the price of wheat did not generally increase its consumption as human food, though the

effects of such low prices were usually transmitted throughout the economy, manifesting themselves in reduced purchases by farmers of non-farm goods, depending upon the economic strength of this agricultural activity within the economy. Generally speaking, the agricultural sector will not readily adapt itself to adverse conditions through the liquidation of capital investment or by shifting its labor force out of the sector.[29] On the other hand, when the price of wheat moved up, people still continued to buy it, as long as they had the means, at least in quantities sufficient for their survival. Figures available for world per capita consumption of wheat indicate an upward trend for the years 1885-1904, a decline settling in thereafter to 1914, whilst for Canada, higher per capita consumption of wheat was evident for the years 1899-1904 and then again in 1909-1914.[30]

A considerable increase in the consumption of imported luxury staples such as tea, coffee, cocoa, sugar, rice and dried fruit was in evidence after the turn of the century. Spirits showed an increased consumption of 58.63% in 1913 over that of 1900, wine 54.12%, beer 60.51% and tobacco 66.00%,[31] reflecting the increased material prosperity throughout the economy at that time.

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[29]See Chapter VIII of this study.

[30]W. Malenbaum, op. cit., pp. 244-5.

[31]Cost of Living Report, (Vol.II), p. 1013.

No category of consumer goods other than food can imply a universal meaning. This is so, since in the case of food, once it provides sufficient calories in the diet, expenditure upon its purchase will tend to diminish proportionately with rising income. In contrast, expenditure on housing tends to be affected by climatic conditions, by available domestic opportunities for building, as well as by ownership arrangements; expenditure on clothing will tend to be influenced by climatic conditions and by cultural aspects. By classifying groups of goods and services in accordance with their income elasticities of demand being either greater or less than unity, it becomes possible to estimate comparative purchasing power in different economic environments as well as within the same economic set up.

With no adequate information concerning Canadian family budgets for the periods in question, it becomes rather difficult to estimate expenditures on clothing, or on any other such consumption item. As for rent, though comprehensive statistics on tenancy are usually lacking in Canada, general trends may still be discernable. Observations in general point to the fact, that due to custom, long leases, lack of property standardization and the like, it is usual for rents to move more slowly than do prices. Yet, this does not appear to have been the case in Canada, where in some locations, rents have increased by as much, and at times

even by more than did prices of food, and other general commodities, with rents for houses estimated to have risen by some 60-70% during the first decade of the twentieth century, being especially high in cities of Western Canada. This was probably in response to the tremendous immigration influx into the area. Whether or how this burden of higher rents has been met with cannot be satisfactorily answered from available information.[32]

The habit of thrift in a society is considered an indication of higher well-being, while statistics of life insurance, the bulk of which is represented in small policies owned by persons of moderate incomes, may be taken as an indication of thrift. Since the turn of the century to the first World War, Canadian per capita expenditure for life insurance is reported to have risen by seventy-five per cent.[33] Another index of advance in the standard of living of a society is the spread of education amongst its population. For Canada, available data points to the fact that the value of imported books, magazines and newspapers has risen by almost 300% in the first thirteen years of the new century, while the level of illiteracy within the country has greatly declined.

With increased expenditure not being confined entirely to luxuries and extravagances, but including also items such

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[32] Ibid., pp. 460-1.

[33] Ibid., p. 1015.

as life insurance premiums and education, to cover a larger section of the population, it is not illogical to surmize that prevalent economic conditions must have been such as to make the above possible. Yet if, accepting the proposition made earlier in this chapter, that the scale of living of the individual is largely determined by that of the community within which he resides, this could lead to the possibility that the increase in the expenditure scale could have been on a more general level than was that in the income scale. Still, whatever available data there is seems to point to the contrary, to cite but one such example, the family budget survey for Winnipeg, 1910, reported an average excess of income over expenditure of $2.03.[34]

In Canada, the years 1900-14 saw a high rate of net family formation with an annual rate of increase of 2.68%, while earlier years, 1870-80 and 1890-1900, were years of low rates of family formation, especially so the last mentioned period, when the annual average rate of increase was only 0.99%. The above may contribute an explanation to the variations in the economy's trends in consumption during the periods in question, since the rate of family formation does have important implications upon the national pattern of consumer demand, especially so on housing, personal furnishings and the like, as well as upon the country's birth rate, which

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[34] Ibid., p. 1019.

in turn tends to affect the economy's level of total demand. Likewise, the process of rapid urbanization, which for Canada, was particularly high for the first few years of the twentieth century,[35] when it undoubtedly became a significant factor in the development of the domestic market, to affect the trend of consumption in the above mentioned direction. On the whole, it is then perhaps no exaggeration to suggest that the long-term change in the composition of Canada's gross national expenditure reflects the growing diversification of the economy, a factor which contributed greatly towards its maturity.

TRENDS IN INVESTMENT AND CAPITAL FORMATION

The importance of a continuing high level of investment to the process of rapid economic growth cannot be overemphasized. Heavy investment outlays are required to help create all those facilities so essential to help raise and maintain an efficient level of productivity within the economy. Much capital is required for the establishment of transportation and communication facilities and for the creation of commercial, institutional and other service industries, all most useful to the provision of employment opportunities, and hence income for a large sector of the nation's working force,

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[35] See Chapter VII of this work.

thereby contributing towards a general rise in the level of living. But investment will tend to occur and continue only so long as there is sufficient hope for ultimate gain, hence, all investment decisions will involve at least expectations of a future return. Inducement to invest, especially direct business investment, will hence be limited by the size of the market, a phenomenon itself dependent upon the general level of productivity within the economy. This latter aspect is itself largely determined by the availability and use of capital for the country's process of production, with this last mentioned factor being itself limited by the small size of the market. The above refers primarily to private investment, since public investment by public authorities, is usually autonomous and as such will not be limited by the above mentioned factors, not denying at the same time the possibility and significance of private autonomous investment resulting from innovations and inventions in the ordinary sense, and with an appreciable amount of such investment income will tend to expand throughout the economy . But even here one cannot neglect past levels of output, which in themselves may have significant effects upon the willingness of an entrepreneur to pioneer an innovation. In Schumpeterian or Hicksian terms, surges in economic growth seem to occur in response to autonomous rather than induced investment, commencing within the sector where the innovation was

initially introduced and proceeding onwards to the older sector of the economy in association with this newer sector. This seems to have been the case in Canada, where the development of the Western frontier, which could perhaps be regarded as an important innovational process, especially when so large a part of nineteenth century investment was accounted for by geographical shifts induced by such innovations, succeeded in raising the level of income in the country's older Eastern region, as pointed out earlier in this thesis. In this sense, the intensity of growth of the Canadian economy could be regarded, at least in part, as the function of the country's level of investment to its national income, namely, as the proportion of national income produced during an earlier period which was then invested; and in part as a function of the return obtained per unit of reproducible capital employed throughout the economy, meaning, the average productivity of capital, since per capita growth in the economy's national product is in part due to factor supply in the form of capital accumulation. If this be so, it then becomes important to determine the trend in the country's ratio of national product entering capital, also the trend in absolute new investment and the trend in capital per capita. Available data for the above mentioned are often not very accurate, since national investment accounts only go back to 1926. Still, whatever available partial date there is suggests

that the rate of investment in Canada, as was also the case for most of the other young countries undergoing rapid industrialization, tended to be relatively high, primarily due to high levels of capital imports.[36] This inflow of outside funds tended to vary with external conditions as well as with the availability of opportunities within. In this manner Canada has succeeded to build up in a relatively short period of time a large supply of capital equipment.

Gross domestic investment, namely, outlays on residential and non-residential construction, including personal expenditure on new housing, new machinery and equipment and changes in inventory, constituted 14.9% of gross national expenditure in current dollars in 1870, 15.5% in 1890, 13.4% in 1900, 26.5% in 1910 and 23.2% in 1920,[37] indicating the highest proportion for 1910 and the lowest one for 1900. It may seem unusual at first glance to note that the 1870's saw higher gross investment outlays than did the early years of the new century, but not so upon closer examination. The boom in investment, though comprising a wide range of industries and activities, was most marked in the field of railway construction. In the 1870's-1890's heavy investment in social overhead, especially railways, had occurred in accordance with the National Policy adopted by the government at the time.[38]

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[36] See Chapters III and VI of this study.

37. O. J. Firestone, op. cit., p. 72.

[38] See Chapters II and VI of this study.

This investment might have been abnormally high for a country with Canada's population, but perhaps not so, when considering the vast distances involved which made transportation an unconditional necessity for the developmental process of this young country so rich in specialized territorial resources. That investment had commenced even before the tremendous boom in capital imports which was to follow later on, but this tempo of investment was reduced by 1900, as is evident by the low figures recorded above, and was taken up again in 1913, when the construction of railway lines increased almost fivefold.[39]

Investment in durable physical assets in current dollars, as a percentage of gross national expenditure showed similar trends though on a smaller scale, being highest in 1910 and 1920 at 18.2% in both periods and low in 1900 at 12.2%, while in 1870 and 1890 it amounted to 11.8% and 13.9% respectively. As for capital consumption as a percentage of gross investment in durable physical assets, this ranged from 56.2% in 1870 to 72.5% in 1900 and only 41.3% in 1920.[40] In the earlier period, expenditure on construction of plant facilities seemed the natural consequence of industrialization, yet this proportion of capital invested in new machinery and equipment in 1870 and 1890 amounted to only 39.5% and 35.0%

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[39]See Chapter V of this study.

[40]O. J. Firestone, op. cit., p. 100.

respectively, which was not very high, but then, plant and equipment used at that time were relatively simple, requiring consequently much less investment than did those in subsequent years. By 1900, with an upward trend in immigration figures already in evidence, the need for home and community facilities became urgent only later on when this influx commenced to proceed at a very rapid rate, and was accompanied by rapid urbanization.[41] The pattern of investment outlay has also changed with the growth in relative importance of the service and manufacturing sectors, involving activities which tended to use a great deal of capital equipment and requiring heavy investment outlays. By that time, a great deal of replacement of plant and equipment erected at an earlier date, became necessary. Already by 1900, as seen above, the proportion of capital consumption was about two thirds of gross investment in durable physical assets, declining with time probably due to the country's steady build up of its capital stock.

Data concerning investment outlays in agriculture are only available since 1900. Investment in prairie farm facilities has experienced a peak around 1901-05, when direct investment in prairie farms has exceeded that in railways and continued at a slightly lower level until 1915, after which it commenced to decline, while investment in railway

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[41] See Chapter VII of this study.

construction at that time surged up in that region to a remarkable level and that despite the decline in the relative importance of the entire transportation group by that time.

Technological progress in agriculture led to significant economies of large scale production, whereby an integrated production unit permitted higher yields per acre than did many small individual holdings, requiring at the same time sizable capital outlays. Such large scale agricultural operations were favoured in Western Canada, where mechanical cultivation and a uniform quality of wheat were desired, involving large sums of capital investment. And indeed, historically, to equip Western agriculture in relatively so short a time required tremendous outlays of capital.

In manufacture, one worker in 1890 is reported to have required two and a half times as much capital investment in fixed assets as did one worker in 1870, and almost five times as much capital by 1910.[42] This was undoubtedly the result of the increasing technical complexity of production as well as of the changing composition of industrial output in response to changing demands for new commodities also for the improved quality of older ones.

Relevant data concerning investment in inventories is

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[42]See Chapter VI of this work.

rather scanty for the entire period in question, especially so in agriculture where inventories tend to depend upon weather conditions as well as upon the supply-demand-price relationship. Still, it seems logical to assume that with improved transportation and communications inventory holdings in manufacture as well as in trade would tend to decline, as was expected to have been the case for Canada after the turn of the century.

Gross national capital formation as a percentage share of the country's national product indicated a steady upward trend, rising from 7.2% in 1870 to 8.6% in 1890, 9.4% in 1900, 13.4% in 1910 and 18.3% in 1920,[43] pointing to the greater emphasis placed upon capital accumulation within the economy. As for net capital formation, namely gross investment minus capital consumption in the form of depreciation and other such similar costs, as a percentage of national product in current dollars, that was highest in 1910 at 8.7% and lowest in 1900 at 3.2% with 4.3% in 1870 and 5.8% in 1890.[44] These figures point to an even greater variation in the rate of increase in net capital formation than did the gross figures. Net capital formation as a percentage of gross investment was highest in 1900 at 76.2% and lowest

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[43] S. Kuznets, "Quantitative Aspects and Structural Consumption", Economic Development and Cultural Change, Vol.X, (No. 2, Part II, January, 1962), p. 72.

[44] O. J. Firestone, op. cit., p. 112.

in 1910 at 57.1%, with 66.7% in 1870 and 61.0% in 1890.

In general, for most of the years 1900-14, Canada has experienced large rates of private capital formation accompanied by recurring government deficits which tended to exceed local savings. The domestic supply of capital funds was augmented by British, American and at times other European countries.[45] In greater detail, domestic capital formation exceeded twenty per cent of gross national product in 1901-15, attaining a level of 26.9% in 1911-15, with an unusually high level probably attained between 1911-13, made possible by the above mentioned inflow of foreign capital which was of greater significance between 1905-15 than afterwards. This though does not overshadow the significance of foreign capital in Canada during the years following Confederation, when, despite declining exports in the later part of the 1870's and the early 1880's, foreign capital proceeded inwards at a fairly steady pace, undoubtedly in response to the tremendous railway construction within the country, a field most attractive to foreign investors of the nineteenth century. And indeed, gross foreign capital inflow comprised some thirty per cent of the country's gross investment in 1870 and only twenty-five per cent in 1900, rising to a higher level and at times even exceeding the rate

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[45] See Chapters III and VI of this work.

of domestic investment, especially during the first one and a half decades of the twentieth century, comprising twenty-six per cent of gross domestic investment in 1900-05 and thirty-eight per cent in 1906-10.[46]

The proportion of capital imports going into Canadian industry was relatively small when compared with that going into public utilities especially transportation facilities and urbanization requirements.[47] But this apparently did not hamper the rapid rate of the country's development. On the contrary, the ability of such investment to generate income, capital and capacity simultaneously succeeded in laying down the foundation for the country's subsequent rapid rate of growth, at the same time setting the pace for future replacement as well as complementary investment outlays.

It is possible to view investment activities in relation to current as well as to expected market conditions, namely, as investment undertaken in response to supply and demand conditions. The former would include response to changes of supply in the form of a new or improved product introduced on the market, or even the increased supply of an existing product but at cheaper cost, while the latter would imply

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[46] P. Hartland, "Canada's Balance of Payments Since 1868", op. cit., p. 719.

[47] See Chapter VI of this study, particularly the section dealing with aspects of capital distribution.

response to a known trend of demand for consumer or producer goods or even both, giving rise to normal replacement investment or to one creating additional capacity.[48]

For Canada, large investment outlays in transportation and communication facilities which occurred both in anticipation of and in response to the country's Western wheat economy, opened up new investment opportunities in other spheres, being in this sense an "initiating" investment, similar to Harrod's long-period growth investment, undertaken on assessment of a future overall development, external to the specific sector of investment involved and deemed as essential to the economy as a whole. Such investment would, therefore, tend to be independent of current levels of income and current rate of growth thereof and would involve outlays related to prospective long period increases in activity or those induced by new innovations or inventions.[49] For Canada, innovations of a geographic rather than of a mechanical type per se enabled the pushing back of the frontier, providing thereby the main driving force behind the economy's capital formation efforts, by inducing direct investment in a variety of industries. Resulting regional shifts in income then proceeded to generate larger amounts of induced investment in

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[48]A. J. Youngson, "The Disaggregation of Investment in the Study of Economic Growth", The Economic Journal, Vol. LXV, (june, 1956), pp. 236-243.

[49]Ibid., p. 237.

urban improvements including housing, trade facilities and the like, all activities which had to be located on the spot in response to growing demand for their services. These must have necessitated a preliminary and continuous rise in income, since any decline in income, or an abrupt cessation in its rise would have tended to stop that induced investment, unless checked by the introduction of some new innovations to induce fresh investment. With settlement of the West, interregional specialization also specialized industries emerged to increase both investment and income. In this sense then the market factor as well as innovations, both directly and indirectly associated with specialization in wheat and rising foreign demand for it supplied the dynamic vitality to the country's agricultural sector, by giving commercial agriculture profitable prospects, inducing at the same time a variety of large-scale construction activities in villages and towns whose sole existence came to rest upon wheat. Many supporting industries emerged in transportation, in finance, in technology and in marketing, also in many other service industries directly or indirectly linked to the exportation of wheat and together contributing to a vast aggregate of investment outlay, which in Marshall's words rendered, "worth while to do a great many things which it was not worth while to do before."[50] In the long run specialization in

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[50] Ibid., p. 241. Based on evidence before the Gold and Silver Commission, Q.9831.

wheat thus stimulated commercial activities in the West itself of a sufficiently large magnitude to induce there a tremendous rate of growth which then spread to the rest of the economy with the exception of the Maritime provinces, and where it gave great impetus to manufacturing activities which then commenced to attract investment outlays in such amounts as to place agriculture there, in that respect, in a minor category. Though the above mentioned investment activities greatly stimulated the rate of domestic capital accumulation, the latter was still rather small in proportion to the vast demand placed upon it by the rapidly growing economy, making foreign capital most essential to the continuation of this rapid rate of economic growth.[51]

GOVERNMENT EXPENDITURE

The importance of innovating entrepreneurs to the economic development of Canada cannot be underrated, but it must also be realized that such entrepreneurs were able to play key roles in the country's development only with the aid of effective government incentives which helped create the congenial framework of law, order and freedom within the country. An effective government can, by means of financial policies, including taxation on the one hand and government expenditure

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[51] See Chapter VI of this work

on the other, affect factor mobility among a variety of industries and occupations and thereby influence and determine the allocation of resources within the economy.

Since government monetary, fiscal and trade policies will generally tend to motivate national economic activities as well as be responsible for many important decisions made by the domestic private business sector, no discussion concerning the expenditure of an economy's national product can be complete without an analysis of government expenditure. For Canada, a federal state, a variety of government responsibilities tend to be divided among the country's Federal Government and its various provincial governments within which the various municipal governments also tend to participate. But until the turn of the twentieth century, the country's provincial and municipal governments, primarily because of limited financial resources which often resulted in a slow growth of an administrative system, tended to play a smaller role in domestic economic development, with total per capita outlay of all provinces rising only from $1.69 in 1874 to $2.20 in 1896.[52]

Total Government expenditure on goods and services as a percentage of gross national expenditure in current dollars, increased from a level of 4.6% in 1870 to 6.6% in 1890, 7.5%

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[52] O. J. Firestone, op. cit., p. 121.

in 1900, 8.1% in 1910 and 10.0% in 1920,[53] pointing to an upward trend in government influence, in terms of its expenditure, upon the economy. The percentage of Federal expenditure on goods and services out of its total expenditure constituted 52.4% in 1870, 48.8% in 1890, 50.0% in 1900, 41.3% in 1910 and 33.3% in 1920. These figures though unadjusted may still be used as a reliable indication of trend, which here appears to have been in the downward direction, from a level of about half of total Federal expenditure in 1870 and 1890 to only one third in 1920.[54] As for the annual rate of increase in Government expenditure on goods and services in constant dollar terms, this shows a rise from 4.89% in 1870-1900, to 5.35% in 1900-1920, reflecting the active part played by the Federal Government in creating the essential framework for the country's subsequent agricultural settlement and industrial development. Transportation absorbed almost eighty-five per cent of total Dominion capital outlay during the earlier period and of that some sixty-one per cent were devoted to the construction of railways, though expenditure on the construction of canals which were financed mainly by Government bonds, was quite high in the pre-railway era, reflecting the extensive developmental activities within the

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[53] Ibid., p. 127.

[54] Ibid., p. 130.

country even during those earlier years. For almost the entire first half century after Confederation, the Federal Government appears to have participated actively and directly in the country's development, attempting to unify the country, to provide it with a broad system of transportation and communication, to encourage agricultural settlement as well as resource and industrial development on a greater economical basis, all by means of policies designed to attract immigrants and discourage emigration, as outlined in the "National Policy" of the period, at the same time encouraging and even supplementing private initiative, by means of funds and liberal policies.

After the turn of the century, with a change in economic conditions, the above emphasis in Government policy also assumed a change. The rapid influx of immigrants into the country created a growing need to facilitate their absorption, incorporating the cost of placing farmers on the land into the national cost schedule. Though the Federal Government continued to play an important role in the country's economic development, rapid growth of population and large-scale settlement after 1900 speeded up the establishment of municipal bodies, while increased income and land value resulting from the developmental expenditures made largely by the Dominion Government in improving transportation as well as other facilities, also from the rise in world demand for wheat,

which created a general atmosphere of prosperity, all helped augment the revenue of provincial governments so much so as to reduce their dependence upon the Federal Government and permit them greater participation in the economy's growth. After 1900, housing, Government and railways became the main construction activities within the country, with housing alone being financed out of domestic funds, while the other two projects were financed out of foreign borrowing on a large scale. This, though being most necessary for the initiation and maintenance of rapid growth within the economy, also created large government debts.[55] Fixed debts in an economy such as Canada, with a highly variable national income based primarily upon the exportation of a single staple, tended to result in acute friction and difficulties of public finance, especially so during periods of lesser economic prosperity.

On the whole though, the Canadian Government by means of its policies, succeeded in helping promote the tremendous increase in the output of the country's agricultural sector, through the provision of agricultural extension services, by appropriate government action on currency and credit to protect the farmer from excessively high rates of interest payments, by encouraging the farmer to adopt recommended techniques at a minimum risk to himself and by the provision of some basic marketing services, price information, standardization,

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[55]See Chapter VI of this study

transportation and communication facilities and the like, as well as by the provision of the necessary capital, all of which helped speed up national development.

INTERNATIONAL TRADE

As pointed out in earlier chapters, exploitation of Canada's specialized resources on an economic basis required the possibility of large-scale operations, which, in turn, in view of the limited domestic market, necessitated access to fairly large external markets. Consequently, the pushing back of the frontier spurred on by a rising foreign demand, greatly helped the creation of a more diversified economy through the successful development of extractive industries, implying at the same time greater dependence upon international trade. Likewise, the specific geographic, climatic and economic features of Canada, as discussed in the introductory chapter, increased the proportion of the country's needs that could be obtained more cheaply abroad. The close proximity of Canada's export and import demands thus emerges. On the one hand one notices the growing dependence of the world upon certain foodstuffs, raw materials and certain processed ones which Canada could now supply, at competitive prices, in adequate quantity and quality and on the other, a dependent Canada, forced to purchase many processed and manufactured goods, even certain raw materials essential for her export

industries, to enable her to maintain her competitiveness on the international market.

Historically, expanding international contacts have provided many a nation with a path to accelerated rates of economic growth, with Canada a leading example in this respect. International specialization based upon the principle of comparitive advantages helped promote productivity growth, by permitting production in larger quantities than would have been normally possible with a limited domestic market. Increased productivity then contributed towards rising incomes, other things being equal, which then proceeded to react upon the country's demand for foreign as well as for domestic products.[56]

For Canada, rates of economic growth were a function of available possibilities for the development of the country's natural resources and the relative ease of their conversion into cash sales on the international market. Technology helped make possible the expansion of the country's supply of arable land and of land intensive export products.[57] Consequently the development of an export trade became a key factor contributing to the country's rapid economic progress after the turn of the century and enabled the spread of growth throughout the economy.

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[56]See Chapter III of this study.

[57]See Chapters IV and VIII of this work.

In view of the above it is interesting to observe the relationship between Canada's total foreign trade, including both her exports and imports and that of her national product throughout the period under consideration and find out whether trade did actually constitute a rising proportion of the country's total output; also, the percentage distribution of Canada's gross national expenditure in the export and import of goods and services during the same period.

As pointed out in Chapter III, the value of total Canadian commodity trade was in 1900 at 35.3% of gross national product, compared with 27.9% in 1851 - when the absolute value was only one-eighth of the latter figure. From 1851-1870 an increase of 240% had occurred whilst during the period 1870-90 an increase of one third, and that despite the prevailing depression. Subsequent improvement in the later 1890's is reflected in an increase of some four-fifths in the country's total commodity trade. A moderate upward trend is evident in the ratio of the exportation of goods and services to gross national expenditure, rising from 17.2% in 1870 to 19.7% in 1900, then a decline to 16.3% in 1910, and almost doubling to 29.2% in 1920,[58] while total exports of goods and services as a percentage of gross national product have shown a steady increase from 15.5% in 1870 to 18.5% in 1900 thereafter

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[58] O. J. Firestone, op. cit., p. 72.

continuing to rise.[59]

It would thus seem that from Confederation to 1890 Canada's export trade assumed a less important role than in any subsequent period, with the proportion of the country's exports of goods and services in the country's national output declining from seventeen per cent in 1870 to only thirteen per cent in 1890.[60] Still, some foreign markets were developed during that period, imparting a certain impact upon the growth of some select Canadian industries, the dairy industry for example, sufficiently so to bear some influence upon the country's future direction and composition of trade. The exportation of services, though of relatively minor importance during the 1870's-1890's, has still shown an increase of some seventy-five per cent, to reach a level of thirteen per cent of total exports in 1890 compared to its ten per cent of 1870,[61] while the rise in the exportation of commodities has increased by less than half of the above, namely by thirty-five per cent, with the range of commodities exported being not much more diversified in 1890 than in 1870, when the country was still predominantly a rural economy.[62]

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[59]See Chapter III of this work.

[60]Ibid.

[61]O. J. Firestone, op. cit., pp. 146-7.

[62]For greater detail of the range of Canadian commodities exported, see Chapter III of this work.

With the turn of the century and continuing to the first World War, foreign trade commenced to assume a most important role in the rapid growth of the country. By 1900, the exportation of goods and services rose to almost twenty per cent of the country's gross national expenditure. In total figures, the exportation of goods and services in 1910 was more than three times that of its 1890 total.[63] At the same time a twenty-seven per cent rise in services and a 209% rise in commodities raised the share of services in the export total from its level of thirteen per cent in 1890 to fifteen per cent in 1910, due to increased dividend payments by foreign countries to Canada as well as an increase in her tourist trade. From 1896-1914, a large increase in the exportation of wheat became evident with the phenomenal growth in the wheat production of Western Canada, enabling the country to export some forty million bushels of wheat by 1910 compared with the two million bushels of 1890. This tremendous rise in the exportation of wheat increased the proportion of raw materials in the country's volume of total exports and that almost entirely at the expense of her partly processed or manufactured items which declined from a level of twenty-six per cent of the total in 1890 to only sixteen per cent by 1910,[64]

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[63] Ibid.

[64] O. J. Firestone, op. cit., p. 156.

at the same time also raising the level of agricultural and vegetable products from seventeen per cent of total exports in 1890 to thirty-one per cent in 1910, as discussed at length in Chapter III.

Changes in the composition of Canada's export trade can thus be attributed to shifts in foreign demand, primarily for wheat, but also for other foodstuffs and raw materials, as well as for some processed materials which Canada could now supply at competitive prices. These were aided by advancement in technology and science which enabled the growing of wheat on the Canadian prairies and through that the opening up of that area to settlement. In this sense, Canada's export staple increased the scope of innovations in the country's export sector, thereby making the latter a leading sector in the economy's "take-off" process.

With the emergence of an export staple and the consequent increase in the rate of growth of that export sector, the familiar circular flow was set up, involving the importation of capital on a large scale as well as that of a merchandise import balance, since over the long run a country must accept imports in payments for its exports; high rates of investment, as imports often tend to comprise a large fraction of investment and will therefore tend to fluctuate with it; full employment despite the heavy influx of immigrants, since with higher rates of growth of the export sector

the greater will be its effect upon employment and personal income also in other activities which support this export sector. A rise in property values followed to create an atmosphere of general prosperity. Actually, one would expect a debtor nation to be striving for an excess of its exports over its imports so as to be able to pay interest and dividends on its past loans, but in reality this often does not seem possible since during the actual process of borrowing, imports inevitably tend to exceed exports, particularly when exports of primary products can be used as a means for the acquisition of manufactures needed for the expansion of domestic production and consumption. This excess may be used at times as a rough estimate of the inflow of foreign capital into the country, as was indeed the case for Canada, with the exception of its pre-1900 years.[65]

In greater detail, it would seem that in the earlier period extending from Confederation to the turn of the century, imports of goods and services into the country have expanded less over the entire period than did the country's exports with the ratio of the former to the country's gross national expenditure remaining practically unchanged since 1870.[66] Likewise, changes in the composition of imports were less

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[65] See Chapter III of this study.

[66] Not really so when allowing for price changes within the economy.

extensive and less rapid than were those in its exports, since imports tended to consist primarily of items which the country could not produce itself economically and at times not at all, namely, manufactured consumer and capital goods, though to a lesser extent towards the end of the period when Canadian industry became more diversified. In greater detail, after 1900 Canada increased her per capita imports of agricultural products, fibres and textiles, pointing to a rise in the country's standard of living in terms of quality, quantity and variety. Similarly, a large increase in imports of iron, steel and other metal products reflects an increase in the importance of capital equipment for railway nets, for industrial activities in Eastern Canada and for the increasing mechanization of Western agriculture, all corresponding to the most spectacular advance in Canadian industry, public works, railway building and booming construction activities. An increase in imports of non-metallic minerals and chemicals also reflected increasing industrial activity within the economy. With rising incomes certain luxury items commenced to make their appearance in growing quantities.[67]

As was the case with the country's exports so also its imports appear to have been of lesser importance in the 1890's than in the 1870's, declining from their level of twenty-five per cent of gross national expenditure to twenty per cent.

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[67]See Chapter III of this study.

Here also the importation of services tended to increase much more rapidly than that of commodities, rising to a level of almost three times that of the 1870's while commodity imports increased only twenty per cent, so that the level of service imports rose to thirty per cent of total imports in 1890 from its fourteen per cent of 1870, undoubtedly in response to the increase in capital inflow into the country requiring higher payments of interest and dividends.[68]

The reverse appears to have been the case during the later years 1890-1910, when imports of goods and services increased at a faster rate than that of exports surpassing them by approximately fivefold.[69] During the first decade of the twentieth century foreign capital inflow into the country more than doubled, as reflected by the large increase in interest and dividend payments abroad which for 1894-1903, as pointed out in Chapter III, exceeded net capital inflow into the country. But even so, the importation of services into the country did not manage to keep pace with the increase in commodity imports, reflecting the tremendous rise in domestic purchasing power. The income elasticity of demand seems to have exceeded unity, investment goods and the kind of consumption goods which would normally fit into a higher standard

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[68] O. J. Firestone, op. cit., p. 147.

[69] Note: with the exception of 1902-3, when commodity imports and exports were in balance, as pointed out earlier in Chapter III.

of living appear to have formed a larger share of total imports. This supposition of the development of a higher average propensity to consume can perhaps be further substantiated by the actual occurrence of an increase in real income per capita at the time, as seen earlier in this chapter, accompanied by a reduction in the exportation of food pointing to the increased level of consumption within the economy; also by the tremendous increase in the country's level of industrialization, which while creating more income within the economy, also involved greater outlays of investment in more complicated capital goods. Similarly, the greater emphasis placed, after the turn of the century upon specialized agriculture, particularly in Western Canada where the production of wheat and all that was associated with its exportation became an almost exclusive occupation. As income expanded within this export sector, its increased demand could now be satisfied through imports, so as to leave productive resources concentrated mainly within the extractive industries. And indeed the largest gains were noticeable in the importation of raw materials, rising from eighteen per cent in 1870 to twenty-two per cent of total commodity imports in 1890 while imports of fully manufactured goods fell from their level of seventy-five per cent to seventy per cent, perhaps substantiating the supposition that import substitution was made possible by the great promotion of the country's export industry.

Also, the diversion of labor from the production of food to industry including that of processed foods, points perhaps to the attainment of a higher standard of living within the economy, giving rise to greater demand for a wider variety of services, which in turn helped bring about the above rearrangements.[70] Thus, though realizing the hampering effects embodied in an import policy, in the sense that imports would naturally tend to resist domestic development which would cut them out of their profits, it is still possible to view imports as agents or catalysts of development for the economy into which they are brought. This process, though by no means a smooth one, does occur through the tendency of economies to emulate one another with the aid of trading relationships. In this sense, imports may stimulate local development by paving the way for locally competing products by conditioning local consumers to a product, establishing thereby local demand and through it, creating the required domestic market to permit the economic production of the domestically competitive goods. Imports also help spread skills and know-how also the desire for a certain measure of economic independence attained through domestic production.

Practically the entire period, from Confederation to the first World War, seems to have been one of favourable

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[70]See Chapters VII and VIII of this thesis.

terms of trade for Canada. From 1870-90, while import prices declined some twenty-four per cent, the prices of the then Canadian exports rose by eleven per cent, with the country's terms of trade moving from sixty-one per cent in 1870 to ninety-two per cent in 1900, to help modify the severity of the depression engulfing the country at the time. The decline in import prices at that time could perhaps be attributed to the tremendous productivity increases experienced by the United Kingdom and the United States, both countries exporting their products to Canada. And indeed, for primary exporting countries to attain favourable terms of trade there is need for an increase in the rate of industrial demand relative to the growth of supply of primary products, so as to cause an increase in the absolute level of primary product prices and turn the terms of trade in their favour, which appears to have been the case at that time. After this the terms of trade continued to move in Canada's favour though at a considerably lower rate. From 1890-1910, while the price of imports into the country rose by six per cent, that of its exports increased by nineteen per cent, and by 1896 the general level of prices for Canadian exports was only slightly below that of its peak in 1873.[71]

An improvement in the terms of trade of Western staples

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[71] O. J. Firestone, op. cit., p. 151.

as against the manufactured goods of Eastern Canada seemed to proceed together with the expansion in the export sector of Western Canada, enlarging gains obtained from trade, creating higher income levels within the economy and attracting greater investment outlays, which with constant capital coefficients gave rise to greater output. The decline in domestic transportation costs together with increasing productivity in Eastern manufacturing activities resulting from improved technology and a growing domestic market may have been responsible for the above.

In summation, an autonomous increase in foreign demand for products of an agricultural sector operating near full capacity, helped create an atmosphere of great profit expectations within that sector. This speeded up settlement of the frontier, further expanded transportation facilities and manufacturing industries to help meet the growing demand created by such frontier activity, greatly extended the domestic market and created a cumulative rise in income. Long-term changes in Canada's gross national expenditure also seem to reflect the increasing importance of international trade to the growth and diversification of the Canadian economy, where more trade appears to have implied more growth, by helping transmit dynamism and growth to practically the entire economy. Exports appeared to dictate the economy's actual pace of growth. Trade, in accordance with the country's

comparitive cost structure whereby agriculture and the exportation of its products, primarily wheat, affected domestic factor supplies, especially that of capital accumulation, gave rise to a more efficient resource allocation, helped increase real income as well as the economy's capacity to save, at the same time stimulating investment with the aid of resulting increasing returns to investment and creating external economies through the widening of markets with the aid of extended trade. The rising pattern of real income resulting from this faster pace of growth appears to have dictated the flow of capital within the country and in this sense, the long swings in pace of real domestic development appear as both cause and effect of capital inflow and hence of fluctuations in the trade balance, with rapid growth generating a trade balance deficit resulting from an excessive demand for money and goods on the one hand and a net capital inflow on the other.

DISTRIBUTION OF INCOME

The distribution theory in its usual sense relates to the distribution of national income under free exchange, among the various population groups which contribute to its production. Given the propensities of the various economic groups as well as the state of technology within the economy, a specific proportionate income distribution pattern among

them may become evident. Still, the nature of such distribution patterns is rather complicated giving rise to a variety of problems, so as to require the utmost caution when attempting to interpret the results of such a distribution. These may be considered only as approximate reflections of the broadest of trends, especially so for Canada during the period under consideration, when comprehensive statistics of earnings are either lacking or incomplete.

In the Schumpeterian sense,[72] the Canadian "climate", with technological progress and capital formation tending to increase the share of profits in national income rather than raise wages, appears to have been conducive to profit making, and the redistribution of income to have encouraged enterprise and investment, while capital imports, accompanied by rising productivity in domestically produced goods, tended to raise wages as well.

Observing the trend in Canadian wages since 1900, a continuous and at times, such as 1911-13, an even rapid advance becomes apparent, with an overall rise of forty-three per cent for the thirteen years 1900-14.[73] In greater detail for this period, the year 1902 saw a general rise in wages following a generally advancing cost of living, which

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[72] J. Schumpeter, The Theory of Economic Development, (Oxford University Press, 1961), p. 58.

[73] Cost of Living Report, 1900-14, (Vol.II), p. 510.

accompanied prevailing prosperity in trade and industry. Shortage of labor, particularly in the building trade, intensified competition amongst employers of labor. This situation became even more intense in 1903 to cause an even greater rise in wages. In 1905, a labor shortage for farm laborers in Ontario and in the wheat growing provinces of the West, increased wages there. The depression occurring in the second half of 1907 was reflected in the downward trend in wages in 1908, with a recovery in evidence by 1909, being much more rapid in Western Canada than elsewhere following a strong upward movement in real estate values in those provinces as well as an intensified railway construction program. From 1911-13 the upward tendency in wages increased and accelerated particularly for farm help as a result of larger harvests and a growing shortage of farm hands. Though statistics concerning unemployment are lacking for that period, it is generally believed that except during the brief intervals of recession in 1903-4, 1907-8 and 1913, employment has generally been uniformly active.

In manufacturing wages tended to show an upward trend even in 1890, when rates were double those of 1870, pointing out that the low curve of prices prevailing at that time was not paralleled by a similar one in wages. In 1910, wage rates were double those of 1890. Censuses concerning manufacturing activities in 1900 and 1910 point to an increase of

some forty per cent in the average earnings of employees there. Yet, proportionately to the value of finished products at the time, which tended in the upward direction in view of increasing costs of raw materials, the wage bill seems to have rather decreased, from 23.5% in 1900 to 20.6% in 1910. Rising wages in manufacturing were often accompanied by decreasing working hours per week, which tended to enhance the price of commodities, since labor is regarded a most important element in production. This reduction in hours of work per week, for which hardly any information is available for that period, appears to have been counteracted by an increase in the proportion of population entering the labor force to result in an overall modest increase in the number of annual hours of work per head instead of in a general decline.

Domestic services appear to have experienced the largest rise in wages, one of seventy per cent for 1900-13, perhaps in view of the growing alternative employment opportunities becoming available to women at that time.[74] In agriculture, the overall rise in wages, including payments in kind, amounted to fifty per cent for the same period, with similar increases recorded for skilled and well organized labor in the printing, clothing and building industries,

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[74] Ibid., pp. 510-14.

workers in most other branches obtained a rise of some thirty to forty per cent.[75] In the utility services, especially in railways, despite the fact that capital outlays there tend to be much larger than receipts, tremendous use and demand for labor tended to raise wages there substantially. In commerce, wage earners tended to be few and quite remotely connected with the production of income as such.[76]

Real income, namely, what one receives in relation to what he has to pay for his purchases is of great importance. Yet, from available statistics for the period it is rather impossible to trace the connection between the rise in wages and that in prices. For instance, as seen above, wages of farm laborers have increased by some fifty per cent for 1900-13, but the price of farm products over the same period is said to have risen considerably more. When considering the general levels of income within the community, despite limitations of such a procedure for the period in question, the income of farm land owners even in the wheat producing areas in the West, where income from agricultural property and land values were of great importance, appears to have been lower

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[75] Ibid.

[76] The above discussion of wage trends might perhaps not mean much when omitting to discuss factor shares in National Income - the shares in particular of wages, profits and of farm incomes. Unfortunately, within prevailing circumstances, the writer was unable to trace sufficient available data pertaining to the subject, hoping to be more successful in this endeavour at a later date.

than in other sectors. It is rather difficult to distinguish between capital and income on the farm, since often, farmers are forced to pay interest rates out of capital thereby tending to reduce their own standards of living. Relatively lower incomes in agriculture are often related to lower levels of productivity of labor within that sector, but for Canada, where productivity in agriculture was relatively high, lower incomes there could perhaps be attributed to the generally low income elasticity of demand for foodstuffs. High productivity there tended to result in large harvests, providing no natural causes interfered, which in turn tended to depress incomes by their adverse effects upon prices. On the other hand much of the rural income is concealed in occupancy owned houses, or in low rentals, in self-produced food and fuel and in many services which are produced within the farm household but which in the cities have to be paid for. Also there is only one recognized earner per family in rural activities, but not so in urban activities.

It is generally believed that the rise in earnings within the Canadian economy tended to exceed its long term rise in prices after the turn of the century and that increases in national income per capita rose twice as fast as did the price level of real earnings within the economy, as will be brought out more clearly in the following section, when dealing with the Canadian price situation.

PRICES

Canada's excessive dependence upon external supply and demand has tended to complicate the procedure of her price determination especially for farm products, where many departures from the ideals of pure and perfect competition are quite common. Likewise, the increasing complexity introduced by greater industrialization and mechanization has added considerably to the difficulties involved in the attempt to define the equivalence of commodities for price comparison purposes. The price of any commodity may be affected by a variety of factors ranging from the physical to the psychological, as well as by a variety of specific services and conveniences presumed to be attached to the particular product, all of which complicate any possibility of product matching. In view of the above it is then impossible to regard the price level in itself as a barometer of an economy's state of welfare. And yet, from past observations and experiences, some generalizations may perhaps still be possible to give the general price level significance especially when in conjunction with the general level of income within the economy, it is assumed to reflect the general economic trend within. For instance, the general if not inevitable tendency of high prices to reflect an active economy, where incomes are high, employment opportunities

plentiful, and trade flourishing, while prolonged low prices may be taken to reflect falling or low wages, unemployment and a general discouragement of investment and business activity.

Canadian price trends seem to have ranged from an increase of 1.96% per annum in 1851-70, to a decline of some 0.22% per annum in the next three decades. By the end of the nineteenth century, the general price level had become a good deal higher than it had been during the middle of that century. This second half of the nineteenth century has experienced an overall price increase of some thirty-five per cent, with an estimated average annual rate of 0.62%, suggesting that the general depression prevailing for a large portion of that period, namely from 1873-1896, was perhaps not as severe for Canada as imagined, its severity being alleviated to a large extent, by persisting favourable terms of trade for Canada, by occasional recuperations in world prices which were passed on to certain Canadian industries and the like. Though trade was generally depressed due to falling demand and exports over that entire period, the country's industry did not seem to have been affected in a similar manner, since tariffs and high transportation costs managed to reduce competition from imports, at the same time though adding to the country's generally high production costs in a variety of industries, so as to make domestic

prices move more slowly than did world prices; also, the general drop in prices of commodities was partly offset by rising prices of a variety of services.

On the whole, beginning with 1873, prices which were then exceptionally high commenced to fall rapidly until 1882-4, when a temporary moderate recovery set in. Thereafter, prices declined with an almost equal rapidity until 1890, after which, in accordance with information provided by the department of Labor, prices declined rather steeply until 1896, when the country's general price level was considered to have fallen some thirty-five per cent from its peak of 1873, continuing to dampen domestic enterprise. The year 1897, with lowest price levels since 1848, is considered as the bottom year of this prolonged price decline. Thereafter, prices commenced to rise, attaining their crest in 1907, with a gain of some thirty-seven per cent. This was followed by a brief recession of one year. By 1909 prices were again on the upward move, with the years 1910-12 experiencing an even more rapid trend than those of 1907, so that by 1912, the general price level was approximately forty-eight per cent above that of the low year 1897, coming to a halt in 1913.[77]

In general terms, the years 1900-14 saw in Canada a

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[77]Based on information from Cost of Living Report, (Vol.II).

rise of some fifty per cent in the country's general cost of living. If this seems rather high, it is important to remember that it actually had its origin in an exceedingly low level of prices, especially for food and other consumption items. The country's wholesale prices have risen by forty-eight per cent over the same period and her retail prices some forty per cent, while rents have increased by 60-70%.[78] The discrepancy between wholesale and retail prices is quite normal, since the former, involving primarily industry and commerce are usually sensitive to market conditions and will tend to fluctuate rather violently with them, while the latter, which directly affect the consumer, can better absorb market reactions and will therefore tend to react more slowly, even if in the same direction as wholesale prices. An attempt at comparing weekly family budgets for the whole of Canada over that period gives an index of retail price movements and suggests that what would have cost $6.97 in 1900, rose to $7.38 in 1905, $8.88 in 1910, $9.18 in 1911 and $9.63 in 1913.[79]

Though the rise in prices appears to have been a universal phenomenon, it tended to occur at different rates within the different countries, with Canada in the lead, primarily in response to her tremendous economic expansion at the time,

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[78] Ibid., p. 322.

[79] Ibid., p. 139.

which involved high expenditure outlays on capital items of long period gestation. Though this rise in prices was still below its peak level of the early 1870's or even that of 1812-15 the period as a whole, following the turn of the century is generally regarded as one of great economic prosperity in contrast to the world-wide depression preceding it.

Similarly to variations in price levels within different countries, so have different commodities or groups of commodities responded in varying degrees to the general rise in price level within each country. In Canada, comparing prices of crude farm products with those of manufactured farm products for 1897-1912, it seems that the price of the former had risen by seventy-seven per cent and that of the latter by only sixty-one per cent, with this difference tending to be equalized in 1913 with the decline in the price of fruits and grain, while manufactured home goods in 1914 were sixty-two per cent higher than their 1897 level and crude products sixty-five per cent.[80] Comparing prices of all foodstuffs, including both crude and finished products with those of all materials, the rise up to 1913 was much greater in the former at sixty-two per cent than in the latter at thirty-nine per cent, with this discrepancy tending to diminish in 1913 to fifty-eight per cent and forty-three per cent

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[80] Ibid., p. 101.

respectively. As for raw materials and manufactured articles, the rise had been much greater in the former at sixty-nine per cent than in the latter at forty-one per cent. Actually, in 1897, the price of raw materials was lower than that of manufactured articles but in following years the price of the former had overtaken that of the latter due to the increased production in raw materials which had forged ahead of manufactured articles at an earlier period than that at which the price of food commenced to overtake that of materials. Originally, with the commencement of rapid growth and expansion within the Canadian economy the price of foods was first to have recovered from its abnormally low level of 1896, but once this readjustment was made, the price of materials began to forge ahead steadily, assuming its lead over other prices by 1900. But by 1907, the price of domestically produced foodstuffs overtook that of materials and maintained its lead to the end of the period under consideration, while prices of imported foods showed a relatively small increase of twenty-two per cent and that occurring almost entirely during the two years 1911-13. Differential movements in prices of agricultural and manufactured goods with the former exceeding the latter, would tend to have most favourable effects upon the income and purchasing power of the country's farm sector. For Canada, where the latter played so important a role in her economic development, high

incomes and increased purchasing power within this sector appeared most essential stimulants to the country's subsequent growth of the tertiary and manufacturing sectors, as seen earlier in this work.

For the entire world, the general price rise after the turn of the century also appears to have been one primarily involving food items, with countries experiencing highest rates of growth also experiencing highest increases in food prices whereas increases in prices of materials appear to have been almost the same throughout the world.[81]

For inter-provincial comparisons, it seems that in 1900, food prices were appreciably higher in Nova Scotia than in Quebec, this distinction disappearing towards the end of the period here under consideration. The share of Quebec in the country's general rise in food prices seems highest with a most rapid relative rise of forty-four per cent and that of Saskatchewan the least at twenty-nine per cent. But inter-provincial comparisons as to the actual cost of food in 1914 lists British Columbia as the most expensive province, Saskatchewan comes next, then Alberta, Manitoba, New Brunswick, Quebec, Nova Scotia, Ontario and Prince Edward Island, with an overall marked price rise upon movement from East to West, in part attributed to the fact

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[81]For figures to verify the above, see **above**, p. 336.

that the industrial centers of the country were located in the East.[82]

The supply of materials would tend to respond more easily and quickly to increasing demand than would that of foodstuffs, which in view of natural causes usually takes longer to produce. Also the production of many important foodstuffs is usually a local affair, while sources of supply of materials can be more widely dispersed, since it is relatively easier to transport such products. Consequently, failure of local sources of food supply, while levels of demand are maintained high, will tend to create distribution problems, resulting from an enlarged area of supply, and will inevitably result in rising prices. A similar analogy may be applied, within limits, to raw materials and manufactured articles. Though prices of manufactured articles tend to reflect prices of raw materials and labor costs entering into their production, the relative ease with which such articles can be adjusted tends to keep their prices at a lower level than that of the above mentioned factors entering their production. Consequently, during periods of rapid economic expansion the more rapid rise in the price of food than in materials is regarded as fairly natural. Though the demand for materials will tend to rise at such a time, sufficiently so to stimulate a rise in their prices, this though

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[82]See Chapter VIII of this study.

could be counteracted to a certain extent by the fairly immediate response to this demand usually at the expense of food production, and that occurring at a time of rising incomes and propensities to consume, will push up the price of foods to an even higher level. This was manifested in Canada by shifts in her labor force out of the food-producing sector and into that of industry and services.[83] This was further stimulated, in the short-run, by the tremendous investment outlays in transportation facilities, which also tended to divert some real resources, especially labor, from agriculture into construction, with similar effects upon the price of foodstuffs.

Other explanations pertaining to the general increase in price levels during the last few years of the nineteenth century and the first decade and a half of the twentieth century, include the transference of Canada's Western agriculture into a paying proposition in response to her rapidly growing population, to rising foreign demand and to excellent credit facilities, all of which, though contributing to the extension of the actual area devoted to the production of food and raw materials, also contributed to their general rise in price. The period was also characterized by an increase in world production and supply of gold, which tended to reduce

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[83] Ibid.

the purchasing power of money and to increase correspondingly values of a variety of commodities measured in terms of money.

In a relationship between a country's general standard of living and its effect upon the price level, it is rather difficult to distinguish between cause and effect, since a rise in the former could be responsible for an increase in the latter, while a rise in prices could also bring about a general rise in the standard of living through its effect upon profits and wages. To sum up the general trends within the Canadian economy over the period in question, it seems that the years 1851-70 experienced an annual average rise of 1.96% in the country's price index implicit in its gross national expenditure, while the years 1870-90 saw a small decline of 0.11%, representing about one-tenth of one per cent per year. This is compared with an increase in national income per capita in current dollars of 1.49% and in net national product per capita in constant (1935-39) dollars of 1.61% for 1870-90, as pointed out earlier in this chapter. The years 1890-1910 have experienced a modest annual increase of 0.83% in their price index implicit in the gross national expenditure, compared to an increase of 2.80% in national income per capita in current dollars and of 1.98% in net national product per capita in constant (1935-39) dollars. The years 1910-30 appear to have experienced substantial gains of some

2.43% per year in the country's price index implicit in the gross national expenditure, compared to an increase of 2.44% in national income per capita in current dollars and of 0.41% in net national product per capita in constant (1935-39) dollars.[84]

Evidence thus seems to point to variations in the rates of growth of the Canadian economy, but with an overall upward trend. Despite the country's long run rise in prices over the second period in question, namely, the last quarter of the 1890's to the first World War, national income per capita appears to have outstripped it, growing twice as fast as did the price level over that time, to serve as an indication of the substantial rise in the economy's real earnings over the period, especially during the first decade of the twentieth century.

CONCLUSION

The most important conclusions have already been set forth throughout this chapter as well as in the concluding remarks of previous chapters. It remains here to summarize them briefly.

As observed earlier, the overall goal of economic development entails the maximization of the rate of expansion of production so as to permit members of the society involved

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[84] O. J. Firestone, op. cit., p. 181.

greater freedom of choice between more goods and services or leisure, between higher incomes per capita or larger families, and between higher incomes to-day or to-morrow. The analytical framework of an economy's "take-off" must be in terms of a general equilibrium, whereby variables such as population, technological progress and the like are made an integral part of the analysis, and not in terms of partial analysis. In this sense, economic growth will be the outcome of a conjuncture of various forces, which, although of varying relative importance individually, cannot individually attain the same effect as will all of them acting together. Consequently, Canada's extraordinary economic advance commencing after the mid-1890's and continuing to the first World War can be viewed as the result of a favourable conjuncture of a variety of forces, but with external demand for Canadian products, particularly wheat, still in crucial position.[85] This conjuncture of forces included a rise in foreign demand for wheat, followed by a rise in agricultural prices in general on world markets as well as favourable terms of trade for Canada, an increase in the share of international trade in Canada's gross national expenditure, especially an increase in the importance of her export trade and its diversification; the widespread use and application of

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[85]See Chapter VIII for a detailed discussion of the above point.

modern science and technology especially on the frontier to permit the opening up of these low-cost producing farm lands; declining transportation costs; the complete alienation of the best American agricultural lands; tremendous population growth, due to natural increase but even more so to the tremendous influx of immigrants into the country; increasing capital inflows and the availability of easy credit facilities; urbanization and industrialization and their implications upon income distribution; increased national income and income per capita as well as increases in per capita values of a variety of items discussed earlier in this chapter; increased investment and savings and so on. Some of the above factors have occurred to a greater or lesser extent during earlier periods, as pointed out throughout this work, particularly in Chapter VIII, and at times even in more favourable dimensions than even during the latter period, but apparently were not successful by themselves to initiate sufficient momentum to launch the economy into sustained growth, or to introduce any widespread revolutionary changes throughout the economy.[86]

With Confederation the Canadian Government set out to establish a general plan for the country's future economic development, to be in terms of a whole sequence of moves in

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[86] Ibid.

response to a variety of anticipated reactions to initial actions. This involved the setting up of a general framework for future development by means of heavy investment outlays in social overhead, especially in transportation facilities, also by launching propaganda activities abroad and at home, in the form of favourable immigration policies, liberal land grants and settlement, as well as credit facilities to name but a few, all suggesting that the earlier period was one of pre-conditions to the "take-off" rather than the "take-off" itself. The above saw the culmination of its fruits in the second half of the 1890's, when the country's "take-off" into sustained growth is observed to have commenced. In the following decade and a half, a discernable rise in national income became evident, as well as highest rates of per capita growth in a variety of factors, ranging from national product and income, which became widely diffused throughout the population, to productivity, growth in population, immigration and labor force. International trade in a changed pattern grew in importance, involving both exports and imports. High levels of national income resulted in high levels of savings and investment and hence in rapid rates of economic growth.

For Canada, a country greatly below its optimal level of population, growth of the latter provided great additional impetus to expansion. The high rate of family formation at

that time, itself a function of economic conditions, had its impetus upon the pattern of local demand, encouraging investment in housing, transportation and public facilities, creating additional demand for new products, for increased output, thereby preventing capital accumulation from outrunning the supply of labor, to permit instead an optimal capital-labor ratio to be maintained while local capital continued to accumulate. This together with the discovery of new resources helped prevent diminishing rates of profits and maximized the intensity of general local economic activity contributing greatly to the rapid tempo of the country's economic growth.

This population growth was accompanied throughout by a rapid rate of technological progress, a factor which gave significance to the high rate of capital formation at that time, encouraging at the same time searches for new resources and giving rise to new population movements. Technological progress in agriculture raised its productivity so much so, that production there, especially that of wheat attained dizzy heights. It also permitted the pushing back of the frontier to allow the agricultural sector to carry out its expected tasks of feeding adequately an increasing as well as rapidly urbanizing population, earning foreign exchange, liberating labor and savings for other sectors, and with rising incomes due to increased productivity, creating a rising demand for products of the domestic industrial sector.

For a regional economy such as Canada, aspiring for regional interdependence so as to foster its precarious national unity, and where so few alternative opportunities existed, it is easy to understand the relative importance assumed by the few raw materials available for export, especially that by wheat grown on the prairies. International trade appears to have been the major, if not only means through which the country could take advantage of available economic opportunities. Rising foreign demand for wheat at the time, accompanied by attractive prices, gave rise to an atmosphere of great profit expectations, stimulating domestic demand followed by a surge in growth. Wheat became king of the agricultural sector both in terms of exports and income derived thereof, and as such had a tremendous impact upon the level of activity throughout the economy. The production of wheat became an important agent of growth, through its utilization of new resources, its encouragement of new demand for other products facilitating large imports from older areas, thereby creating basic economic opportunities for most of the rest of the country, so much so that investment attracted to some secondary and tertiary industries elsewhere in the economy often exceeded that attracted to agriculture on the frontier. Movement of labor Westward and then out of the primary sector into other sectors became the most important interregional flow of productive factors and

undoubtedly carried some capital along with it. In this sense, the frontier, with the aid of wheat, became an important innovational development, giving rise to autonomous investment which helped raise income. With trade came greater economic growth, the rate of which was dictated by the production and exportation of wheat. Domestic spending on consumption and investment, as well as Government spending and its management of public debt, also residential construction activities as well as a variety of national policies, all have undoubtedly helped generate economic growth within the Canadian economy, but only after the initial expansion in foreign demand for wheat had occurred. This places the success of the export sector, the character of the export industry and the disposition of income derived thereof in the prime position as determinants of the timing and pace of the Canadian "take-off".

There are those who maintain that Canada, in view of her appropriate cultural pattern, abundant supply of land and resources relative to her growing population, could have attained rapidly rising levels of real income even without substantial exports, since her relative scarcity of labor would tend to raise its productivity and income sufficiently to ensure growth on the basis of domestic investment and consumption alone. But these people need only remember that in reality, the attainments of the economy at that time were

indeed miraculous, in view of the marginal nature of the economy, a precarious national unity and a host of hampering economic and geographic laws. And indeed, much sacrifice is evident throughout the country's history, requiring a great deal of delicate harmonizing and co-operation between Government and private enterprise. It is misleading to judge Canadian achievements in terms of her gigantic economic and geographic neighbour to the south. The United States could not really be used as a model for Canadian development since there is really no fair comparison between the two, and standards of living attained by the former are much too high for the latter to expect in terms of existing conditions, both then as well as to-day. When viewed in terms of her own framework of conditions, the exceptional economic achievements of the Canadian economy during the first decade of the twentieth century must be given their due acclamation.

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