PART I
SUMMARY OF ANALYSIS

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(1) *Purpose of study.* This study appraises Canada's economic growth from Confederation in 1867 to 1953, the material achievements of three generations and the problems they have had to overcome. The appraisal is carried out within the framework of the National Accounts. It is based to a large extent on new estimates of gross national product and gross national expenditure and capital invested in certain industries for the period 1867–1925, together with comparable official estimates for the more recent years. The new estimates, their limitations, sources and methods of estimation are described in Sections 11 and 12, and the history of national income and wealth estimation in Canada (excluding the official National Accounts) is reviewed in Sections 13 and 14. The following paragraphs summarize the analysis in Sections 1 to 10.

CHANGING ECONOMIC AND INSTITUTIONAL SETTING

(2) *Economic and political events leading to Canadian Confederation.* In the 1860's, the people living in the six British colonies scattered across North America faced two challenges: loss of markets in the United Kingdom and the threat of expansion northward of the United States. Their answer to these challenges was to form a new nation – Canada – effectuated by the British North America Act of 1867 which brought together 3¼ million people living in what are now the provinces of Ontario, Quebec, Nova Scotia, and New Brunswick. Confederation facilitated the intensive development of the interior of British North America and the growth of industry catering to the wider domestic market.

(3) *Basic factors of Canadian economic development.* Four basic factors have governed the economic development of Canada: (*a*) the vastness of the land, (*b*) the climatic limitations of a northern country, (*c*) the nature and distribution of the resources, and (*d*) the character of the people – their attitudes, traditions, loyalties, and philosophy of life.

(4) *Vastness of the land.* Canadians occupy a land area larger than continental United States. By far the larger proportion of Canada is not suitable for agricultural settlement, but the

development of the country has necessitated the building of a comprehensive network of transportation and communication, much of it passing through sparsely settled country. This represented a heavy overhead burden even in 1953, when Canada's population was at the 15 million mark.

(5) *Climatic limitations.* These were for a long time a great obstacle to further settlement. In fact, they stood in the way of what ultimately became one of Canada's major staple industries – wheat growing on a large scale in the Prairie Region. It was not until after the turn of the present century that the dangers of frost were conquered sufficiently to make possible commercial production of grain and extensive settlement of the region. Besides agriculture, construction and lumbering operations are also seasonal operations. Inland harbours are frozen in winter, restricting water transportation. Fog, storms, and ice limit air transportation in wintertime. The search for minerals in the more northern parts of Canada can only be pushed ahead during the short summers. Even where extensive and high quality deposits are found, costs of extraction and transportation are likely to be comparatively high and production efforts may be limited by inclement weather.

(6) *Nature and distribution of resources.* Canada's natural resources, bountiful as they have turned out to be, could, in many cases, be developed only on a large scale and with great effort, technological skill, and in most cases large capital expenditures, by private enterprise and government.

(7) *Character of the people.* Canadians are usually considered conservative and less aggressive than people in other countries. But in order to make the significant economic progress of the last eighty-six years, the people have had to take bold steps toward creating an extensive framework for settlement and economic development in the expectation that they would be able to find the markets, the people and the capital to use the resources available and the facilities created.

(8) *Problem of perspective.* Comparing Canada of the 1860's with Canada of the 1950's is a comparison of: (*a*) a pioneering society with an industrially advanced nation; (*b*) a predominantly family economy with an intricate market economy; (*c*) a country with small-scale business serving local markets with one with large scale and specialized operations serving national

and international markets; (*d*) a substantially rural country with one that is highly urbanized; (*e*) a simple consumption pattern with one of great variety and containing many items requiring a high degree of processing and fabrication; (*f*) a country which for several years after its birth had no uniform medium of exchange with one whose currency is among the strongest in the world; (*g*) a largely individualistic people with one that has accepted collective action and social responsibilities; (*h*) a country in which organization of groups with similar economic interests was largely unknown with one in which there is a high degree of organization; (*i*) a country which wholeheartedly subscribed to Adam Smith's views regarding the limitation of government activities to the maintenance of law and order, with one that regards government as an important factor in economic development.

(9) *Problem of measurement.* The estimates for 1867–1925 are definitely more tentative than those for the more recent period. The estimates appear to be satisfactory as an indication of broad trends, but are not based on firm enough records to allow precise measurement.

(10) *Period covered by the analysis.* The period 1867–1953 was divided into four sub-periods for analysis of the varying rates of growth:

(*a*) 1867–1890. This includes a few years of economic expansion and prosperity from 1867 to 1873, and a period of highly unsettled economic conditions and of protracted price declines, lasting from 1873 to the mid-1890's.

(*b*) 1890–1910. Economic conditions remained depressed until 1896, when a period of rapid economic expansion set in that lasted until well after 1910.

(*c*) 1910–1930. Prosperity characterized by the opening up and intensive settlement of the Prairie Provinces, and a particularly rapid rate of urbanization until about 1913. This was followed by an economic setback that could have been serious had not the effects of World War I turned the tide. The period following World War I was in general a prosperous one, despite the short but sharp interruption of 1921 and the more moderate economic decline of 1924 with the peak in economic activity being reached in 1929. For Canada, 1930 was a fairly prosperous year although not quite up to the level of 1929.

(*d*) 1930–1953. This period covers the severe depression of the 'thirties, followed by slow recovery up to 1937 and a short recession in 1938. Six hectic years ensued with the outbreak of World War II in 1939 and the substantial military effort, and the rapid industrial expansion of a specialized character that took place during this period was succeeded by a period of great economic growth that was still continuing at the end of the period.

The years chosen for medium- and long-term comparisons are periods reflecting fairly prosperous economic conditions. In this way the influence of short-run economic changes or cyclical factors has been minimized. The use of selected years for purposes of comparison was tested against annual averages for five-year periods. In general the quinquennial averages yielded similar growth rates. It was therefore decided to use the data for selected years because they are more reliable and are available in greater detail.

POPULATION, FAMILIES AND THE LABOUR FORCE

(11) *Long-term rate of increase.* At the end of 1953, Canada's population (including Newfoundland which joined the Confederation in 1949) numbered 15.04 million, or more than four times its level at the time of Confederation, yielding an annual rate of increase of 1.67 per cent. But the number of families and the number of persons in the labour force rose even more rapidly, at annual rates of 1.78 and 1.86 per cent, reaching a total of 3.55 million families and 5.55 million persons in the labour force at the end of 1953. The more rapid rise of families was associated with a general decline in the size of the family; prosperous economic conditions, particularly in the recent period, which encouraged marriages; the opportunities open to wives to continue working after marriage; and the change in the character of immigration, with the proportion of immigrants coming to Canada as members of families higher than in earlier periods. The main reason for the greater long-term rate of growth in the labour force has been the increasing number of women working as the growth of manufacturing, commerce, and service industries created many new jobs that women were capable of performing.

(12) *Population growth.* Canada's population has been growing steadily since Confederation with an increase in every year

since 1867. The annual rate of the population gain has varied considerably as have the increases shown for the four sub-periods. The smallest increase, 37.8 per cent, is shown for 1867–1890 and the largest, 47.6 per cent, for 1890–1910, the gains for the next two periods being 44.8 and 45.9 per cent, respectively.

(13) *Effects of rapid rate of family formation.* The rate of net family formation exercised an important influence on the pattern of consumer demand. A new family in its quest for separate housing accommodation will sooner or later exert pressure on the housing market. A new household involves in most cases the purchase of furniture, appliances, and the multitude of articles required to operate the household and to keep mobile, e.g. motor cars. A high rate of net family formation also affects the birth rate. More people in turn mean more demand.

(14) *Births and deaths.* With some interruptions Canada's birth rate has been declining. It was 35.1 per thousand in 1867 and 27.7 in 1953, a decline of about one-quarter. The death rate has also been declining fairly steadily, from 17.7 deaths per thousand in 1867 to 8.4 in 1953, a reduction of over one-half. Better nutrition, greater health services, and reduction in the exertion of making a living are among the reasons for the greater life expectancy and the corresponding reduction in the death rate.

(15) *Immigration.* In general, immigration to Canada was at a high level when economic conditions were prosperous and provided opportunities for newcomers. The two periods of most rapid immigration into Canada were 1904–1913, when large tracts of prairie land were opened up for agricultural settlement and when Canada's process of urbanization was particularly rapid; and 1948–1953 (and beyond) when Canada was carrying through a major resources development and industrialization programme. The important difference between the two periods is that immigrants, because of more careful selection and other administrative arrangements, were absorbed more rapidly in the recent period than in the earlier period. Immigration into Canada was at low levels in the war periods, 1914–18 and 1939–45, and when economic conditions were unfavourable, the outstanding example being the severe depression of the 1930's.

(16) *Emigration.* The level of emigration varied greatly over the 86-year period, with the bulk of emigrants going to the

United States. The reasons for the changing rate of emigration were different for different periods. In the latter part of the nineteenth century difficulties faced by farmers in settling marginal land and the inability of industry to absorb the surplus of agricultural population led to fairly extended movement to the States. In the first three decades of the twentieth century, emigration was frequently motivated by higher wages and by easier entry into the United States from overseas via Canada because of differences in enforcement of U.S. and Canadian immigration regulations, particularly in the earlier part of this period. During the depressed 'thirties and the World War II period emigration was small; in the former case, because of the greater severity of the United States depression, in the latter case, because of National Selective Service regulations. After World War II emigration continued at low levels because of the great economic opportunities in Canada.

(17) *Net migration.* This term refers to the difference between the number of migrants entering Canada and the number leaving the country in a given period, without implying a causal relationship between the two flows. In the 1867–1953 period, in forty years net migration was a positive factor in Canada's population growth, in forty-six years a negative factor, and in one year a neutral factor. In the period 1904–1913, when immigration to Canada was heaviest, the gain from net migration represented about one-third of immigration. In the more recent period of heavy immigration, 1948–53 (and beyond), the increase in population from net migration has been more than one-half of immigration.

(18) *Changing sex and age composition.* The ratio of males to females in Canada's population has been remarkably stable over the period. Males as a rule have been a fraction above 50 per cent of the population. However, in 1910 the proportion was as high as 53 per cent, mainly because of heavy immigration of male labour in the preceding decade. On the other hand, the proportion of males of working age, mainly the age group 15 to 64, has varied a good deal; about 54 per cent in 1870, it rose to 65½ per cent in 1939. After the beginning of World War II, the rate declined again and was about 61 per cent in 1953. The drop is associated with the effects of the war and the changing age composition of immigrants and emigrants. Not since 1900 has

the ratio of males in the age group 15 to 64 been as low as indicated for 1953. But the situation at the turn of the century and that some fifty years later are very different. In 1900 about 34 per cent of the male population was less than 15 years old and 5 per cent was 65 years of age and over. The corresponding ratios for 1951 were 31 and 8 per cent, respectively.

(19) *Labour force and population.* The number of persons in the labour force was 375.6 per thousand population at mid-1953 compared with 315.5 per thousand in 1867. This proportion has fluctuated considerably since Confederation, rising to 394.2 in 1930 (slightly higher than the 1910 figure of 393.6) and to 432.3 in 1945 (when the war effort was at its height) and dropping in 1950–53 to about the 1920 level.

(20) *Implications of ageing population.* (*a*) If further growth of the country is not to be retarded, the long-term decline in the rate at which young males are reaching working age may have to be offset by larger proportionate immigration of males of working age, further increase in female participation in the labour force, extension of the working age of males, greater part-time employment of males of working age engaged in training or study. (*b*) The effects of the ageing population on the domestic market are gradual but they are significant over the long run since the requirements of older people differ in many respects from those of younger persons.

(21) *Effect of rapid growth of the labour force.* The entry of women into the labour force in times of labour shortage and their exit when pressure subsides has added flexibility to the Canadian economy. Occasional female workers represent a labour pool on which the country can draw when demands are particularly heavy; the situation is similar with respect to people of retirement age and students available for part-time or seasonal work. Furthermore, the addition of one or, in some cases, several members of a family to the working force has increased the income of the average family far beyond what is indicated by data on incomes received by the main bread-winner. Thus, real income per capita has risen not only because of increasing productivity but also because the pooling of family incomes, permits more economic use of earnings.

(22) *Quality of the labour force.* Three factors have contributed toward improving the quality of the labour force over the long

term: (*a*) higher standards of education, (*b*) higher standards of health, and (*c*) more leisure. Because of these factors the productivity of the labour force has increased and Canadians have earned higher real incomes and enjoyed a higher standard of living.

(23) *Urbanization of Canadian population.* At Confederation less than 20 per cent of Canada's population lived in urban communities. By 1951, 57 per cent lived in large cities and other urban municipalities. Over the period the farm population has declined consistently, despite temporary interruptions as a result of a back-to-the-farm movement in periods of depressed economic conditions. In 1930 farm population was still 32 per cent of the population, but by 1951 it was down to 20 per cent.

NATION'S OUTPUT AND MARKETS

(24) *Long-term rate of economic expansion.* Canada's gross national product in 1953 amounted to $24½ billion whereas in 1870 it was a little less than half a billion. After allowance for price changes, the 1953 gross national product was sixteen times the total output in 1870. Canada's population about quadrupled during this period; thus, about one-half of the increase in real output was absorbed by increasing numbers and the other half by major increases in the standard of living and a large accumulation of capital for industrial and community development.

(25) *Output, total and per capita.* Between 1870 and 1953, gross national product in real terms rose at an annual rate of 3.39 per cent and real output per capita at an annual rate of 1.65 per cent.

(26) *Variations in the rate of economic change.* Canada's long-term economic growth took place at varying rates – not only because the population and labour force grew in spurts but even more because of variations in the rate of increase in productivity. While over the entire period an annual rate of increase of 1.43 per cent in output per man-year in constant dollars is indicated, in some short periods some declines occurred (e.g. the depressed 'thirties and the immediate post-World War II years). Over the intermediate periods the annual rate of rise in productivity varied considerably; 1.24 per cent for 1870–90, 1.33 per cent for 1890–1910, 0.97 per cent for 1910–30, and 2.09 per cent for 1930–53. Some reasons for this variation are differences in the character of economic development in each period, shifts in the

industrial structure from low to high productivity industries, and varying rates of decline (interrupted by some increases) in the number of hours worked per week.

(27) *Changes in the composition of gross national expenditure.* Long-term changes in the composition of gross national expenditure reflect the strong emphasis placed on the accumulation of capital, the increasing importance of government in the economic affairs of the nation, and the somewhat greater dependence on foreign trade (though some evidence suggests a reversal of the trend in the role of foreign trade in recent periods). As these sectors of demand increased in importance, the proportion of total output used to meet the wants of consumers declined. But notwithstanding a long-term decrease in the relative importance of consumer spending, the actual improvement in the standard of living has been substantial. The percentage distribution of gross national expenditure for 1870 and 1953 respectively is as follows: consumer expenditures on goods and services, 88.2 and 61.9, gross investment 14.9 and 22.3, government expenditures on goods and services, 4.6 and 17.9, exports of goods and services 17.2 and 22.2 and imports of goods and services 24.9 and 24.0, yielding a net foreign balance of −7.7 and −1.8.

CONSUMER EXPENDITURES

(28) *Long-term rate of increase.* Personal expenditures on consumer goods and services amounted to $15.1 billion in current prices in 1953 compared with $404 million in 1870, and in constant dollars was thirteen times the 1870 level. This long-term growth was a product of both population growth and rising real consumer expenditures per capita. Between 1870 and 1953, the annual rate of increase in population was 1.68 per cent, and of consumer expenditures per capita in constant dollars, 1.40 per cent. In other words the average Canadian consumes today over three times more goods and services than his forebears did three generations ago. Besides this increase in the volume of goods and services, there has been improvement in quality and variety, which are not reflected in the figures.

(29) *Intermediate-term rate of increase.* The greatest improvements appear to have taken place in the first and last of the four sub-periods. Consumer expenditures per capita in real terms

rose at an annual rate of 1.76 per cent in 1870–90, somewhat less (1.64 per cent per year) in 1890–1910, 0.38 per cent in 1910–30, and 1.77 per cent in 1930–53. The substantial gains indicated for the earlier periods were attributable to the industrial revolution, which took place in Canada during the latter part of the nineteenth century, and by the shift from a family to a market economy that accompanied it.

(30) *Changes in the pattern of consumer expenditures.* In absolute terms, after adjustment for price changes, Canadians in 1953 spent more on most of the important items of consumer goods and services than in 1870. But the increase is more evident in some sectors than in others because as his real income increased, the average Canadian was able to devote more of his income to amenities and services. As a result, the nation in 1953 spent less in relative terms on the essentials of life – food, clothing, and shelter – than in the 1860's and 1870's. On the other hand, many new types of consumer expenditures, e.g. the motor car and electrical appliances, are being made as a result of technological developments. Other types of expenditure that have risen considerably over this period include alcoholic beverages, tobacco, health care, education, and insurance. The percentage distribution for eight major groups of consumer expenditures for 1870 and 1953 respectively is as follows: food, 34.9 and 24.8, tobacco and alcoholic beverages, 5.5 and 8.8; clothing and personal furnishings, 16.3 and 12.4; shelter, 13.6 and 12.9; household operations, 13.1 and 12.7; transportation, 3.2 and 12.6; personal and medical care and death expenses, 4.2 and 6.3; and miscellaneous which includes expenditures on recreation, holidays, religious and welfare activities, education, etc., 9.2 and 9.5.

(31) *The effect of alternative choices.* Notable shifts have taken place within most major groups of consumer expenditures as a result of changing price relationships and the development of new products. For example, as the price of liquor increased consumption per capita dropped two-thirds but beer consumption increased fivefold, more than offsetting the decline in liquor consumption in terms of constant dollars spent per capita. Another example: during the twentieth century the household has become more mechanized (with the introduction of electrical household appliances) and there has been a gradual

decline in hired domestic help as other employment opportunities opened up. On the whole, the nation gained as female labour moved from low to high productivity industries.

GROSS INVESTMENT AND CAPITAL CONSUMPTION

(32) *Role of investment.* A continuing high level of investment is important because: (*a*) it contributes directly and indirectly to the employment and incomes of a large proportion of the nation's working force; and (*b*) large capital expenditures are required to create the facilities necessary for rapid economic development, to maintain productive efficiency, and to improve the standard of living through the creation of residential, commercial, institutional, and other service facilities. However, capital expenditures have been subject to substantial fluctuations, with drastic consequences at times on the price level (through the exertion of inflationary pressure), at other times on levels of employment and income (through the snowballing effect that a rapid contraction of new investment in durable physical assets produces, if not offset by expansion of demand in other sectors of the economy).

(33) *Capital spending in relation to gross national expenditure.* Private capital expenditures on new construction and machinery and equipment amounted to $4.8 billion, or 20 per cent of gross national expenditure in 1953. This is a higher proportion than for most other industrialized nations; in the United States, for example, a roughly comparable figure is 14 per cent. Including public investment (that is, capital expenditures by government departments) the total amounted to $5.8 billion, or 24 per cent of gross national expenditure in 1953. An even larger proportion of gross national expenditure was devoted to private investment in 1929. In 1870, however, the proportion of capital expenditures to output was only about two-thirds of the ratio of the 'twenties or 'fifties.

(34) *Long-term rate of capital goods expansion.* Investment per capita in 1953 was $322 in current prices, or five times the 1870 figure in constant dollars. Investment per worker in 1953 was $886 in current prices, or about four and a half times the 1870 amount in constant prices. The chief reasons for this increased investment are: (*a*) The growing complexity of modern society and the increasing production of more highly fabricated com-

modities require considerably more expensive production equipment and distribution facilities. (*b*) Technological advances frequently necessitated extensive modernization and re-equipping of existing industries and the establishment of completely new industries. (*c*) The industrial structure has changed, partly in response to market forces both domestic and foreign, partly as a result of opportunities that followed the discovery of new resources and increased domestic processing of indigenous resources.

(35) *Changing composition of investment.* In 1953, about 43 per cent of total investment in durable physical assets involved purchases of machinery and equipment; in 1870, the proportion was about 39 per cent. Construction expenditures were more important in the earlier period because (*a*) in the early stages of industrialization the creation of plant facilities was relatively more important than it is today; (*b*) the type of equipment available then was comparatively simple; (*c*) urgent needs for shelter (and related community facilities) of a rapidly growing urban population had to be met.

(36) *Investment by type of user.* Detailed information available for the last three decades suggests a more rapid increase in investment in primary industries than in secondary industries, mainly the result of the development of new mineral resources, the mechanization of agriculture, and the relatively greater expansion of manufacturing in the 'twenties than in the 'fifties. This appears to be a reversal in the trend for the first half century when manufacturing and utilities were Canada's fastest growing industries. Residential construction also appears to have become a more important factor in total investment, particularly in recent times, when the nation, short of homes, made a major effort to catch up with a backlog built up over two decades.

(37) *Capital consumption and net capital formation.* Capital consumption was about one-half of gross investment in durable physical assets in 1953 compared with two-thirds in 1870. But the stock of capital in Canada has been rising fairly steadily since Confederation, making for a continuing increase in capital consumption, with the volume of gross investment varying a great deal over the period, the rate at which net capital formation has increased has varied even more. It amounted to 11 per

cent of net national product in 1953, 9 per cent in 1910 and 1930, 6 per cent in 1890, and 4 per cent in 1870. And, in the worst depression years, disinvestment actually took place, e.g. in 1933 capital consumption was more than double new investment. Disinvestment in that year was about 10 per cent of net national product.

(38) *Investment in inventories.* In 1953, the total change in inventories amounted to about 2½ per cent of gross national expenditure. The largest proportion of output absorbed by investment in inventories in the years selected for examination was 7½ per cent in 1951 and the smallest was 1 per cent in 1929. The very rough data available suggest that the ratio of investment in inventories to national output has not increased over the period. Agricultural inventories continue to be one of the most uncertain elements in the inventory picture. To a large extent they are determined by two factors over which Canadians have no control; the weather, which affects the size of the crop, and the demand-supply-price situation prevailing abroad. On the other hand, changes in inventory holdings in the manufacturing and trade sectors are largely determined by the judgment of Canadian businessmen as to the short run strength of the domestic market. But this judgment is often influenced by the course of economic events in the United States. Because of these direct and the indirect influences, changes in inventory holdings are a barometer not only of sentiment regarding the outlook for business, but also of the manner in which changes in the supply-demand-price situation of Canada's principal customers and suppliers affect the Canadian market.

(39) *Savings and investment.* The outstanding feature of the savings and investment pattern, for which data are available only for the last three decades, is the high proportion of new investment financed through the accumulated savings of Canadian corporations either in the form of undistributed profits, or, more important, in the form of depreciation allowances. In 1953, for example, depreciation allowances were about one-half of total capital expenditures on new construction and machinery and equipment, roughly the same proportion as in 1929 and 1950.

(40) *Gross domestic investment and net foreign investment.* In Canada, net foreign investment was at times as important as

gross domestic investment. In 1945, for example, Canada financed a large export surplus from her domestic savings – in connection with the final phase of her war effort and the assistance she gave to war-devastated countries in the reconstruction period. On the other hand, the more modest surplus accruing to Canada's account on the foreign exchange of goods and services in 1952, $173 million, was only about 3½ per cent of that year's gross domestic investment total. The net foreign balance was adverse in the other three years in 1950, 1951 and 1953, and in each case was about 10 per cent of gross domestic investment.

GOVERNMENT EXPENDITURES

(41) *Changing role of Federal Government.* For about the first half century after Confederation the Federal Government participated actively in Canadian economic development. Since World War I, however, it has placed more emphasis on assisting provincial and municipal governments to spend greater sums on regional and local economic development and to provide more diversified services, as well as to create an economic climate in which individual initiative thrives and private ventures prosper. Three events have cast their shadows on this basic long-term change in the Federal Government's role: the depression of the 'thirties, World War II, and the rearmament programme undertaken after the outbreak of the Korean War in mid-1950. Federal expenditures in two fields have assumed importance on a scale unknown in Canada before World War II: military outlays and social security payments. In 1953, out of total expenditures of about $4½ billion, $1.9 billion, or 42 per cent, was spent on national defence and about $1 billion, or 22 per cent, on social security. An additional half billion dollars, or 11 per cent, was for interest payments and $400 million, or 9 per cent, comprised payments to other governments, mainly in connection with the Federal-Provincial tax rental agreements. The remaining $700 million, or 16 per cent, consisted largely of expenditures to maintain civilian services. Of the total Federal expenditures of $4½ billion, $2½ billion represented government outlay on goods and services. Even if allowance is made for the tripling in the price level between 1870 and 1953, the Federal Government's expenditure of $11 million in 1870 appears modest indeed.

(42) *Changing role of provincial and municipal governments.* Provincial and municipal governments have been expanding capital facilities and public services during most of the period under review. The most serious stumbling blocks these governments have faced have been periodic financial difficulties, e.g. in the depressed 1880's, 1890's, and the 1930's. Provincial and municipal governments have been financially stronger since World War II and their expenditures have followed a steady upward trend in the recent period. In 1953, provincial and municipal government expenditures on goods and services were about \$1.8 billion. These expenditures were almost three times the outlay made by the Federal Government on civilian type goods and services.

(43) *Do expenditure data suggest a trend towards centralization?* In 1953, about 58 per cent of total government expenditures on goods and services were made by the Federal Government. If military expenditures are excluded the proportion is reduced to 25 per cent. In 1870 expenditures by the Federal Government were about 52 per cent of the total. The proportion declined steadily to 38 per cent in 1900, 32 per cent in 1920, and 25 per cent in both 1929 and 1933. The latter part of the 'thirties saw a reversal in this trend with the ratio rising to 30 per cent in 1939. The 1953 ratio of Federal non-military expenditures to total government non-military expenditures, 25 per cent, is therefore lower than these for 1920 and 1939. Thus, there is little evidence of a relative increase in the importance of Federal Government activity and of a decline in that of the provincial and municipal governments. In fact, there is some evidence that there is a trend in the opposite direction though it may be reversed in case of war or other emergencies.

(44) *Public investment and other government expenditures.* Data available for the recent period suggest that public investment plays a minor and diminishing role in the total expenditure pattern of government. It averaged 15 per cent of expenditures on goods and services by all levels of government from 1950 to 1953, a drop of about one-quarter from 20 per cent for 1929. The aggregate ratios, however, are the result of a decline in the proportion of expenditures by the Federal Government on public investment from 17 per cent in 1929 to 9 per cent in 1953, and a moderate increase in the proportion for provincial and

municipal governments, from 22 per cent to 26 per cent. These data are perhaps a warning to those who expect miracles from an expanding public investment programme in a period of declining levels of employment and income. Only a small part of government expenditures on goods and services has in this generation been used for public investment. A substantial change in the proportion spent on public investment projects would require not only a departure from traditional policies, but also an extensive administrative apparatus specifically concerned with the implementation of a large scale public investment programme.

(45) *Effect of government activity on levels of employment and income.* Despite the increasing influence which governments have been exerting on Canadian economic activity – especially through such indirect means as fiscal, monetary, trade, and related economic policies which affect levels of employment and income – government expenditures on goods and services excluding defence now represent only 10 per cent of the gross national product, a smaller proportion than they did in the 'twenties and the 'thirties. Total non-defence government expenditures of all types, including transfer payments to persons and governments and subsidies, varied between 18 and 20 per cent of gross national product from 1950 to 1953, a notably smaller proportion than in most of the 'thirties but a somewhat higher proportion than in the late 'twenties. If the increasing needs for defence are excepted, there is little indication that governments are taking a significantly greater share of the output of the nation than they did before the war.

FOREIGN TRADE AND THE BALANCE OF PAYMENTS

(46) *Long-term trend in the exports of goods and services.* Since Confederation a moderate upward trend is indicated in the ratio of the exports of goods and services to gross national expenditure, which has increased from 17 per cent in 1870 to 22 per cent in 1953. There have, however, been some indications in the last quarter century of a reversal of this trend. In 1950–53, exports have averaged about 23 per cent of gross national expenditure, compared with 29 per cent for 1926–29.

(47) *Long-term trend in the imports of goods and services.* The imports of goods and services have expanded less over the

period than exports. One of the main reasons is that, at the beginning of the period Canada was importing capital for the development of her transportation system, her resources, and her industries, and by the middle of the twentieth century she was in most years a net exporter of capital. Another reason is the pronounced movement of the terms of trade in Canada's favour, with the result that in 1953, Canadians were able to obtain abroad more than three-quarters as much again in volume terms with the same quantity of exports as in 1870 (see para. 51 also). Thus, the ratio of imports of goods and services to gross national expenditure was almost the same in 1953 as in 1870.

(48) *Net foreign balance.* Variations in the trends of imports and exports in response to short-term fluctuations have given the Canadian net foreign balance one of its major characteristics – an unfavourable balance in good times and a favourable one in less satisfactory years and in war years. Thus, each of the key years in this study shows an adverse net foreign balance, ranging from 13 per cent of gross national expenditure in 1910 to just under 2 per cent in 1950 and 1953.

(49) *Foreign investment in Canada and Canadian investment abroad.* The unfavourable balance on the annual exchange of goods and services with the rest of the world has been met in the past by heavy imports of capital from abroad. In the early period, the United Kingdom supplied the bulk of the imported capital, but since the beginning of World War I the United States has been Canada's major external source of investment funds. At the end of 1953 foreign investments in Canada totalled $11.4 billion, of which about 77½ per cent was owned by residents of the United States and 17½ per cent by those of the United Kingdom. The amount of Canadian capital invested abroad has expanded significantly since the turn of the century, from less than $100 million in 1900 to $4.1 billion in 1953; total foreign capital in Canada increased from $1.2 billion to $11.4 billion over the same period. From the end of 1945 to the end of 1953, capital invested abroad has doubled, an even more impressive gain than the three-fifths increase for this period in capital invested in Canada by non-residents.

(50) *Composition of exports.* Changes in the composition of Canada's export trade have been shaped mainly by four factors: (*a*) shifts in foreign demand, (*b*) scientific and technological

developments which have made possible greater exploitation of Canadian resources, (*c*) the opening up of the western hinterland and northern regions, and (*d*) the growth of manufacturing industries. In 1870 over 90 per cent of Canada's exports were based on agricultural and forest resources. While this category still accounted for two-thirds of the country's foreign sales in 1953, metals and their products have bulked increasingly large in total exports, making up 26 per cent of export trade in 1953, compared with 4 per cent in 1870. Moreover, Canadians are now processing their resources to a greater extent before exporting them.

(51) *Destination of commodity exports.* The United Kingdom and the United States have always been Canada's best customers. But while in 1870 the United States took one-half of the total exports, and the United Kingdom about 38 per cent, the situation was reversed in 1890 and 1910 with the United Kingdom absorbing 48 per cent of total foreign shipments in both years and the United States taking 43 and 38 per cent. Sales to the United States have been increasing in more recent years and that market took 43 per cent of Canada's exports in 1930, 65 per cent in 1950, and 59 per cent in 1953. The proportion of total exports going to the United Kingdom was 27 per cent in 1930, 15 per cent in 1950, and 16 per cent in 1953. Furthermore, exports to the rest of the world are now more than twice as important as in 1870 – 25 per cent in 1953 compared with 12 per cent in 1870.

(52) *Composition of imports.* Changes in the composition of imports have on the whole been less rapid and less extensive than in that of exports. Purchases abroad consist to a considerable extent of items which the country cannot produce herself. However, the growth of manufacturing and the development of synthetic products have made it possible for Canada to produce a large part of her requirements of many items previously imported. It is significant that in 1953 the five leading imports were industrial raw materials, component parts, or capital equipment, while in 1870 they were consumer goods. The growth of industry, however, has not reduced the proportion of manufactures in Canada's import trade because the new demand for imported raw materials, e.g. bauxite, has been matched by an increase in the need for machinery and component parts. Other

factors that have influenced the composition of Canada's imports are the rise in the Canadian standard of living, which has meant larger purchases abroad of such items as citrus fruit and consumer durable goods, and the development of Canada's own resources which has, especially in recent years, reduced dependence on imports of such items as non-ferrous metals and petroleum.

(53) *Origin of Imports.* In 1870, 57 per cent of Canada's imports came from the United Kingdom, mainly because that country was the leading producer of the manufactured goods that made up a large part of Canada's imports. However, since then there has been an almost uninterrupted decline in the proportion of imports coming from the United Kingdom and a steady increase in the proportion coming from the United States and other countries. In 1953, the United States supplied 74 per cent of Canada's imports, the United Kingdom only 10 per cent, and other countries 16 per cent. Four main reasons can be given for the reversal in the positions of the United Kingdom and the United States: (*a*) Canada's growing need for raw materials such as petroleum and foodstuffs, which could be obtained most cheaply from the United States, (*b*) the growth of manufacturing industries in the United States and other countries, particularly in the latter part of the nineteenth century, (*c*) the rise of new Canadian industries that produced articles previously imported from the United Kingdom, e.g. the cotton industry, (*d*) the proximity of the United States to Canada and similarities in their tastes, standards, and living conditions.

(54) *Terms of trade.* Over the long run, the terms of trade have moved in Canada's favour, mainly because the world needed increasing quantities of the basic foodstuffs and industrial raw materials which Canada could sell at world competitive prices and because prices of many manufactured products which Canada was buying were not rising as rapidly as food and raw material prices. One reason for this differential in prices was the tremendous increase in productivity achieved by Canada's suppliers of manufactured goods. In 1870 the export price index was 61 per cent of the import price index; in 1953 it was 109 per cent.

(55) *Vulnerability of Canadian economy.* While a high level of foreign trade remains a pillar of Canadian prosperity, several

developments suggest that Canada is less vulnerable to economic disturbances abroad, than it was in earlier periods. These include: (*a*) the more rapid growth of the domestic market than of exports in the recent period, as well as the increasing diversification of the economy, (*b*) the increasing dependence of Canada's customers on some industrial raw materials and other basic commodities which this country can produce of a quality and at prices that compare favourably with those of other countries, (*c*) the diminishing importance of foreign capital in Canada's *overall* economic development, even though it continues to play a significant part in some forms of resource development and manufacturing operations.

INCOMES AND PRICES

(56) *Long-term rate of growth of real national income.* National income at factor cost in current prices amounted to $19.1 billion in 1953, or an average of about $1,270 per person. This compared with a per capita income in 1870 of $110. In real terms income per capita in 1953 was almost four times what it had been in 1870. The rise in personal disposable income was somewhat less, about three and a half times, mainly because of the increasing incidence of direct taxes.

(57) *Intermediate-term rates of growth of real national income.* National income in real terms rose most rapidly from 1930 to 1953 (at an annual rate of 4.02 per cent) and at more moderate rates, 2.99 per cent and 3.95 per cent per year, from 1870 to 1890 and from 1890 to 1910 respectively. In 1910–30 the rate of growth was lowest – 1.88 per cent annually. The reasons mentioned in paragraph 29 also apply here to the variations in the rate of increase of national income. The modest rate of improvement shown for 1910–30 resulted from two factors that slowed down the immediate impact of the industrial revolution (which continued after the turn of the nineteenth century) on real national income. These were the rapid population increase mainly through heavy immigration up to the beginning of World War I which required time to be absorbed, and the need to consolidate the gains of the industrial revolution made up to that time. The efforts of the first two decades of the twentieth century, however, were to pay large dividends in the higher incomes earned by the third generation. For with the industrial revolu-

tion completed and consolidated, and the framework for expansion created, the third generation could devote most of its energies to the further improvement of living standards. As a result the average annual rate of increase in real national income per capita between 1930 and 1953 was the highest, 2.3 per cent, whereas in the preceding period, 1910–30, no gain was indicated.

(58) *Personal disposable income and personal savings.* Data available back to 1926 only suggests that over the recent period personal disposable income per capita in real terms has risen at an annual average rate of 1.69 per cent. In 1953 personal disposable income per capita in current prices amounted to $1,108, of which $102 were saved and $1,006 spent on consumer goods and services. In 1953 personal savings (as per the National Accounts) amounted to 9.2 per cent of total personal disposable income compared with 4.3 per cent in 1929.

(59) *Factors influencing the general price level in Canada.* Except during World War II, prices in Canada have been largely determined in the market place. One factor that has made price determination a rather complex operation has been the heavy dependence on foreign trade. Thus, domestic prices have been affected by supply and demand conditions prevailing abroad, and by changes in world prices of many basic commodities and manufactured articles. Price increases or decreases originating abroad usually permeate fairly quickly through the Canadian price system.

(60) *Long-term price trends.* The price index implicit in adjusted gross national expenditure has risen at an annual rate of 1.47 per cent. This rate is slightly higher than that in the general wholesale price index, 1.23 per cent, somewhat below that in the price of capital goods, but notably above that in import prices. Between 1870 and 1953 prices of consumer goods and services rose at an annual rate of 1.29 per cent, of government expenditure 1.40 per cent, of exports 1.38 per cent, and of imports 0.69 per cent.

CHANGES IN THE INDUSTRIAL STRUCTURE

(61) *Transformation of Canada into an industrialized society.* Canada is now an industrialized society, its major source of income and its major field of employment being manufacturing operations. This pre-eminence of manufacturing is of recent

origin. If the proportion of national income derived from manufacturing activity is the criterion of industrialization, Canada became more industrial than agricultural during World War I. But if the definition is extended to cover the volume of employment, as well as national income, then Canada's industrial coming of age is of more recent origin, dating back only to the early years of World War II. Whatever definition is used to denote an industrialized society, the fact remains that a number of Canadian industries began to compete with those of other countries in terms of both quality and prices long before World War II, e.g. farm implement and pulp and paper industries. Canada's economic development is reflected also in the growth of service industries, i.e. public utilities, trade, financial, institutional, and personal service, and government service. In fact, there is some evidence that the service sector has grown even more rapidly than manufacturing.

(62) *Resources development a continuing factor in Canadian economic growth.* A nation undergoing rapid expansion of secondary industry and services may frequently devote fewer energies, comparatively speaking, to the expansion of primary industries. This is not quite the Canadian experience over the long run. Although agriculture has declined substantially as a field of employment and income, three other primary industries have been holding their own: mining, forestry operations, and fishing (including trapping). If anything, these three industries have in recent years been a somewhat more important factor in economic development than they were at the time of Confederation. The resource development programme which has manifested itself mainly in the mining field and to some extent in forestry operations is largely responsible. As for fishing, the entry of Newfoundland into the Confederation has added a major staple industry catering to world markets.

(63) *Varying rates of industrial growth.* In the period immediately following Confederation, more than one-half of all workers drew their livelihood from farming, mining, forestry and fishing. Primary industries were responsible for four and a half out of every ten dollars of output. By 1953 only about one out of every five Canadians worked in primary industries and only about \$1½ out of every \$10 earned originated in these industries. As for manufacturing, the proportion of total employment it

provides has risen from one out of every eight persons in the early days to one out of every four in 1953. In the earlier period, manufacturing contributed about $2 of every $10 and in recent years about $3 out of every $10 of Canada's national income. The service industries provided jobs in 1953 for about one-half of the working force and contributed a similar proportion to the national income. Service industries in the 1950's were more than twice as important as in the early period of Canada's nationhood.

(64) *Impact of changes in Canada's industrial structure.* This study examines in some detail the changes in the industrial structure of economic development and activity, particularly the varying contributions made by agriculture and manufacturing. Some of the findings are: (*a*) The transfer of the labour force from low to high productivity industries contributed significantly to the rapid rate of increase in real income. Higher productivity also made a higher standard of living possible as well as greater leisure. (*b*) The manufacturing sector and certain parts of the service sector, particularly utilities, are heavy users of capital equipment. The increasing importance of these industries has had a major effect on the extent and pattern of investment. (*c*) The fact that primary industries, other than agriculture, have maintained their importance indicates the integrated development taking place in this country where resources and industrial development and the growth of the service sector is proceeding apace. (*d*) Since the manufacturing and service sectors cater largely for the domestic market, their growing importance has reduced somewhat Canada's vulnerability to fluctuations in foreign demand and world prices. Further, much of the resource development is in response to long-term foreign demand for those raw materials that can be produced at low cost and sold at competitive prices on world markets.

CHANGES IN PRODUCTIVITY AND CAPITAL REQUIREMENTS

(65) *Output per man-year in aggregate, in manufacturing, and in agriculture.* By 1950 gross national product in constant dollars per man-year had risen to about three times the level of 1870, gross value of manufacturing in constant dollars per man-year almost three, and gross value of agriculture in constant

dollars per man-year a little less than three and a half times. The long-term growth of output per man-year has been slower in manufacturing than in agriculture and in the economy as a whole because (*a*) increases in output of agriculture have been phenomenal, particularly in the recent period with the growing mechanization of the farm and the application of scientific methods to farming, and (*b*) hours worked per week in manufacturing have declined substantially over the period – from about sixty-four in 1870 to forty-three and a half in 1950, or by about twenty hours per week for wage earners. Output in constant dollars per wage earner hour in manufacturing has risen in this period to over five times the 1870 level, indicating that much of the increase in productivity is reflected in increased leisure rather than greater output per year and correspondingly higher real earnings.

(66) *Intermediate-term rate of increase*. Real output per man-year in Canada rose most rapidly in 1930–50 and 1890–1910 with the increase in 1870–90 being only slightly below that in 1890–1910, and the increase in 1910–30 being the lowest by a fair margin. The largest annual rates of increase in real output per worker for both the aggregate (gross national product) and for agriculture are shown for 1930–50, 1.94 and 2.30 per cent per year, respectively. In manufacturing the highest annual rate of increase in terms of real output per man-year is indicated for 1910–30. The increases in real gross national product per man-year lie between those for the manufacturing and agricultural industries for both the entire period and for three of the four sub-periods. The exception is in 1910–30 when the rise in real output per man-year in aggregate and in agriculture are equal and both well below that for manufacturing.

(67) *Growing capital requirement per worker in manufacturing*. One worker in the manufacturing industry in 1950 required a capital investment in fixed assets of some $3,700. This compares with about $270 in 1870, $665 in 1890, $1,300 in 1910, and about $4,000 in 1930. After allowance for changes in prices, capital invested in fixed assets per worker in 1950 was about four and a half times that of 1870. This long-term trend toward greater capital requirements per worker is due to the increasing technical complexity of production and the changing composition of industrial output as new commodities appear and

improvements are made in the quality and performance of old commodities.

(68) *Capital and output.* When economic conditions are depressed, a good deal of the capital stock of a country will be idle or not fully used. Over the long run capital equipment has been used less and less intensively because of the shorter working week, more statutory holidays, the introduction of paid holidays, and longer interruptions due to strikes. The less intensive use of capital equipment, which in the 1950's was considerably more expensive than at the beginning of the century, would reduce the ratio of output to capital invested if it were not offset by another factor working in the opposite direction. This other factor is the increasing productivity of labour and capital, due to better organization of production, more experienced management, greater skills among the working force, and new types of equipment. All these factors have made possibly greater output in relation to a given input in terms of human efforts or materials used.

(69) *Implications of growing capital requirements by industry.* Available evidence suggests that it may not be sufficient to make provisions through depreciation and other allowances for the wear and tear of capital and a possible rise in the price of capital goods. The long-term rise in capital requirements per worker to keep up with technological developments and the growing complexity of the economy must also be considered. This problem of adequate provisions for capital requirements in an expanding economy concerns the whole nation. Unless there is a continuing increase and improvement in tools and equipment per worker the rise in real income is not likely to be as high, nor are working hours likely to be reduced at the past rate. If industry does not adopt technical advances, which frequently involve large and rising investment, it will, in a competitive market, tend to lose ground over the long run, and this in turn will have its repercussions on the number of jobs available. In the predominantly free enterprise type of economy characteristic of Canada, the ability to compete is essential for future economic growth and an increasing standard of living.