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ECONOMIC COUNCIL OF CANADA

Second Annual Review

Towards Sustained and Balanced Economic Growth

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ECONOMIC COUNCIL OF CANADA

Second Annual Review

Towards Sustained and Balanced
Economic Growth



December 1965

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1

Introduction

IN OUR *First Annual Review* we examined the problems of achieving certain basic economic and social goals over the period to 1970. The Review attempted to define these goals more precisely and discussed the tasks and policies involved in the consistent attainment of the proposed objectives.

This *Second Annual Review* endeavours to appraise the performance of the economy during the recent past in relation to the goals we set forth last year. Also, we give the results of studies we have carried out into a number of matters of underlying importance in the operations of the Canadian economy in the longer run future. The First Review was confined largely to broad national considerations and to the presentation of a general framework. During the past year we have examined further a number of the basic factors affecting productivity in the Canadian economy, the possibilities for sustained and stable growth, and the achievement of a more regionally balanced growth among the various regions of Canada.

Chapter 2 is a review of the significant developments in the Canadian economy, with particular emphasis on the economy's performance over the first half of the 1960's. We examine the progress made towards higher standards of economic performance, the extent to which economic potentials are now being realized and the problems of sustaining adequate progress towards the simultaneous achievement of all our goals over the period to 1970. Under the Council's terms of reference, it is not our responsibility to evaluate short-term business prospects. However, we have attempted to assess the significant developments as

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well as special problem areas in the present situation. The purpose of this analysis is to provide a basis for conclusions respecting the appropriate strategy of policy and the particular measures needed to maintain consistently high standards of performance over the medium-term future.

In its terms of reference the Council is asked specifically "to recommend what government policies . . . will best help to realize the potentialities of growth of the economy". The assessment of the potentialities for economic growth in Canada to 1970 was an important feature of the *First Annual Review*. In order to carry out our responsibility in its full sense, it is necessary to attempt to achieve a better understanding of the sources of growth and productivity in the Canadian economy. This is a very large and complex task. Chapter 3 presents the results of our initial excursion into this difficult field. Progress in this area, as in so many others, is hampered by a paucity of research and statistics. In this circumstance it proved fruitful to employ a method of analysis in which the United States, where both information and methodology are more readily available, is used as a basis for comparison. By means of Canada-United States comparisons, which are also used in various other parts of the Review, it is possible to present a general assessment of a number of significant factors in the Canadian performance. It is not intended to suggest, because of the use of such comparisons, that United States standards should automatically be taken as the norms for Canada. Obviously, any such norms must be appropriate to the aims and circumstances of Canada.

The *First Annual Review* placed strong emphasis on the importance of "increased investment in human resources to improve knowledge and skills". The studies which were carried out under the auspices of the Council during the past year have confirmed the crucial importance of education as a factor contributing to economic growth and rising standards of living in Canada. Chapter 4 examines the progress made in raising the average education of the working population over the past half century, the relationships between levels of educational attainments and levels of income for various groups, and the contribution of rising education to the growth of the Canadian economy. Also, the Chapter presents our initial findings and conclusions regarding some of the important and urgent tasks that remain to be accomplished in order to provide adequate educational and training facilities and opportunities to Canadians.

Introduction

In its terms of reference the Council is asked to consider how, among a number of broad goals, "all Canadians may share in rising living standards" and is asked to study "how national economic policies can best foster the balanced economic development of all areas of Canada". Chapter 5 sets forth the results of our preliminary analysis of a number of the underlying factors involved in the complex problem of reducing the wide and persistent disparities in average incomes and rates of economic development between the provinces of Canada. The purpose of these initial studies is to lay a general foundation of basic principles for more effective policies for regional development in the future.

The satisfactory achievement of our goals entails not only an adequate rate of economic growth and regionally balanced growth among the provinces but, also, reasonably stable growth over the longer term. In Chapter 6 we examine the forces, both in the Canadian economy and abroad, which have operated in the past to produce fluctuations and instability in the general level of business activity in Canada. The Chapter discusses the probable sources and the likely nature of possible instabilities in the future. On the basis of a substantial body of analysis of past experience in Canada and elsewhere, we endeavour to indicate the basic strategy in the use of the main instruments of policy which is likely to be most effective to achieve stable long-term growth in our country.

Finally, in Chapter 7 we bring together our views and recommendations on specific and particular matters of policy which arise out of the analysis and conclusions of the preceding chapters.

*The Economy's Performance
in Relation to Goals*

THE COUNCIL'S *First Annual Review* outlined basic social and economic goals for the Canadian economy that were judged to be consistently attainable under certain conditions and with appropriate public and private policies. In the course of the analysis it was emphasized that our calculation of medium-term potentials for the period 1963-70 did not represent forecasts of anticipated trends but reasoned appraisals of consistent possibilities for the future. Similarly, it was emphasized that these medium-term potentials were calculated to apply to this period as a whole; they were not intended to provide a guide to the year-by-year pathway to the 1970 targets. In particular, although changes in attitudes and policies were recommended with a view to maintaining more stable and sustained growth of the economy in the future, it was explicitly recognized that, because of shorter term cyclical and special forces, actual progress towards the indicated potentials is unlikely to be smooth and even.

Last year's analysis of economic goals and potentials covered the period from 1963 to 1970. As of the latter part of 1965, we still believe these targets and potentials to be valid for 1970, having regard to actual economic developments since 1963. Some of the events and developments, both external and domestic, in 1964 and 1965 have perhaps been unusually favourable. In comparing the period 1960-65 as a whole with the record over the previous five years, we are generally encouraged by the evidence of the underlying strengthening of the economy, as reflected in substantially reduced unemployment and

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higher productivity gains. Moreover, this has been achieved with the maintenance of a relatively competitive international economic posture, and the avoidance of sharply higher prices over any broad range of commodities and services.

In 1965 the Canadian economy has attained a higher level of actual output in relation to the Council's calculations of potential output than at any time since 1956. This has taken place against a background of comparably strong economic performance in the United States. It is not, however, a cause for complacency. On the one hand, the economy appears to be still operating somewhat below its current potential, and it must continue to grow rapidly to attain its 1970 potentials. On the other hand, the fact that the gap between actual and potential output has narrowed in both the Canadian and United States economies means that there will now be increased risks of various kinds of distortions and instabilities, which could tend to undermine our ability to maintain sustained progress towards the 1970 potentials. Among such factors could be: inadequate efforts to achieve strong advances in productivity; excessive demand strength in certain sectors, such as investment, resulting in bottlenecks, inefficient use of productive resources, and price and cost distortions; the emergence of trade and payments strains through inadequate emphasis on improved competitiveness and expansion of exports; failure to maintain reasonable over-all price and cost stability; and failure to promote increased flexibility and adaptability throughout the economy as a basis for exploiting new opportunities for growth.

The Act establishing the Economic Council clearly indicates that its work should primarily be concerned with Canada's medium and longer term prospects and problems. We interpret this to mean that the principal focus of our work should be on the potentials for economic development over a period of three to five years or more. Hence, it is not our function to review and assess the economy's short-term business prospects over the next year or so. It is our responsibility, however, to consider underlying economic trends and developments in relation both to the economy's basic goals and to the capability of the economy to achieve sustained progress towards its potentials.

This Chapter therefore focuses attention on the basic economic and social goals of the Canadian economy, and on the progress over the first half of the 1960's towards higher standards of economic performance. These are viewed in the context not only of the developments which occurred over the 1950's, but also of the relevant trends and developments which would be required over the next five years to

The Economy's Performance in Relation to Goals

attain our 1970 potentials.¹ This is followed by a brief discussion of certain current questions relating to the problems of successfully maintaining consistently high standards of performance of the economy over the medium-term future.

THE BASIC GOALS

The Council's *First Annual Review* was primarily concerned with setting forth certain basic economic and social goals and considering how these could be simultaneously and consistently achieved in the medium-term future. These goals are:

Full employment—A realistic objective to be aimed at over the balance of the 1960's, although not an ultimate or ideal goal, was set at an annual rate of 97 per cent employment of the labour force, or no more than 3 per cent unemployment, for the economy as a whole.

A high rate of economic growth—A very rapid rate of expansion of employment at 3 per cent per year to 1970, together with an over-all rate of growth of output per employed person of 2.4 per cent per year, were combined to indicate an average annual rate of potential growth in output of 5.5 per cent.

Reasonable stability of prices—Rates of change in prices and costs to 1970 within our flexible market system should be contained within the limits of the ranges of movements over the decade from 1953 to 1963. Over these years, for example, the average annual increases in consumer prices and in prices of all goods and services produced in Canada were 1.4 per cent and 2.0 per cent, respectively, but there were some moderate year-to-year variations around these rates.

¹ Much of the statistical information and analysis in this Chapter relates to the years 1950-70. As a matter of convenience for analysis of underlying economic trends and developments, this period has frequently been broken down into four 5-year periods ending in 1955, 1960, 1965 and 1970 respectively. In terms of the growth analysis with which this Chapter is primarily concerned, it is relevant to note that each of the terminal years of these periods is one of a relatively high level of economic activity in relation to the short-term business cycle. This is true of 1950, 1955, 1960 and 1965 (1960 was a year in which there was considerable economic slack in the economy, but a business cycle peak is recorded as having occurred in the first quarter of 1960). Regarding 1970, this was explicitly assumed to represent a year of high activity in the short-term business cycle, according to the analysis of potential output in 1970 in the Council's *First Annual Review*.

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A viable balance of payments—This was taken to mean not merely the maintenance of adequate total international receipts to cover our international payments, but also a strengthening of Canada's international economic position. The possible current account payments deficit at potential output in 1970 (which might be of the order of \$1.5 to \$2.0 billion) would be lower in relation to total output (and also the corresponding net capital inflow would be smaller in relation to domestic investment) than has been the case under comparable past conditions of rapidly rising domestic activity. In short, such a performance would in fact call for some improvement in the basic competitive posture of the Canadian economy.

A fifth goal was also set out but not explored in any depth in the *First Annual Review*. This is the goal of helping to assure that all Canadians may share in rising living standards associated with the attainment of a high and consistent rate of economic growth. In Chapter 5 we undertake an initial examination of an important aspect of this goal—that of regionally balanced growth and the reduction of disparities among the regions of Canada.

Two crucially important matters deserve special attention as a background to any appraisal of progress towards the attainment of the basic goals. One is that the 1960-65 period began with a considerable amount of economic slack in the Canadian economy. The second is that the sustained expansion of the United States economy over the past five years, along with sustained or accentuated growth of output and trade in overseas economies, have obviously provided a highly favourable international environment for the Canadian economy over more recent years.

The Emergence of Slack and Its Subsequent Reduction

The *First Annual Review* set forth estimates of the actual volume of output in the Canadian economy in relation to calculated potential output for the post-war years. These estimates are brought up to date in Table 2-1 and Chart 2-1.

The emergence of substantial economic slack in Canada in the late 1950's is clearly indicated by the decline of 11 percentage points in the ratio of actual to potential output—from 102 per cent in 1956 to 91 per cent in 1961 (with a larger decline in the agricultural sector than in the rest of the economy). Subsequently, there has been a reversal of this

The Economy's Performance in Relation to Goals

TABLE 2-1—ACTUAL OUTPUT AS PERCENTAGE OF
POTENTIAL OUTPUT

	Total Economy	Nonagricultural Sector	Agricultural Sector
1946.....	98	97	102
1947.....	100	101	94
1948.....	100	100	96
1949.....	97	98	89
1950.....	99	100	93
1951.....	102	102	105
1952.....	103	101	127
1953.....	102	100	115
1954.....	95	96	86
1955.....	99	98	108
1956.....	102	101	114
1957.....	96	97	93
1958.....	93	92	98
1959.....	94	94	96
1960.....	92	92	97
1961.....	91	91	87
1962.....	93	93	99
1963.....	94	93	107
1964.....	95	95	100
1965.....	97	96	109

NOTE: 1965 actual output estimated for the year as a whole. Data on actual output have been revised on the basis of more recent information available since publication of the *First Annual Review*.

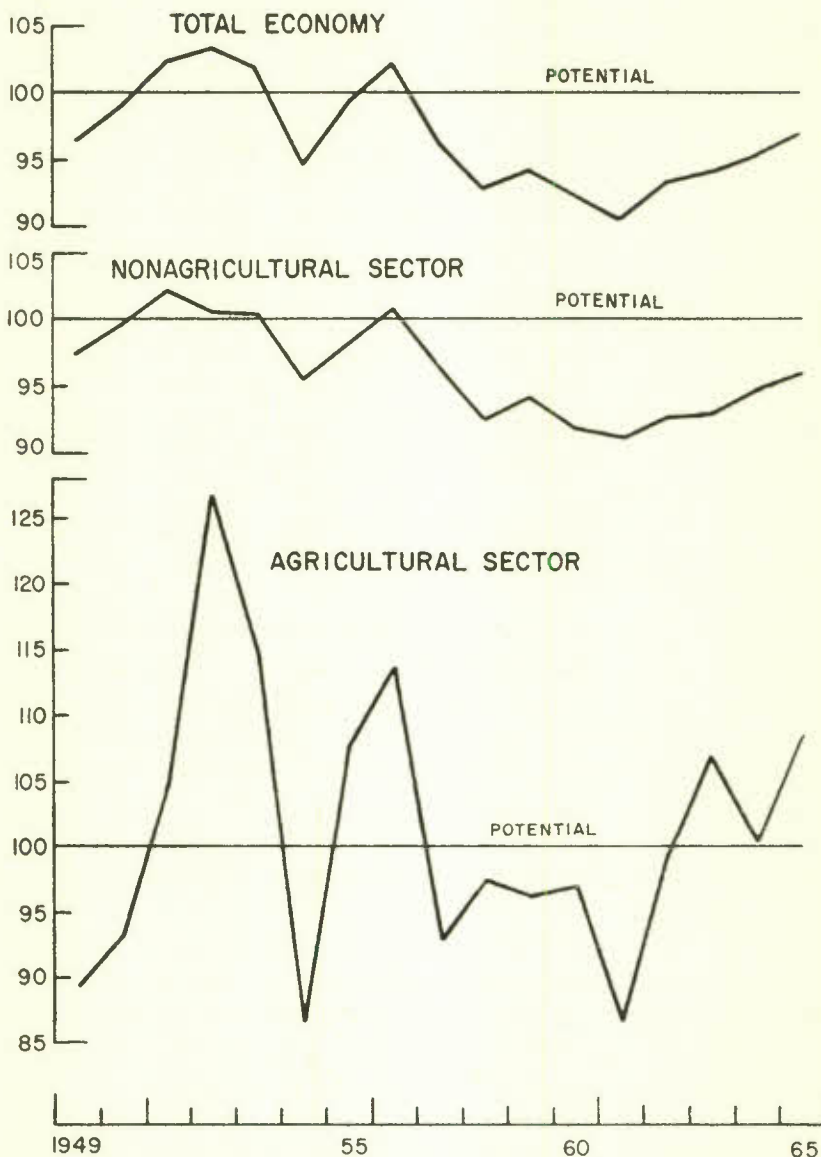
SOURCE: Based on data from Dominion Bureau of Statistics and estimates by Economic Council of Canada.

decline, and following the low point in 1961 there has been a marked rise in this ratio to a level in 1965 that was higher than in any year since 1956.

The existence of economic slack in the economy in the early 1960's was an important factor shaping the analysis of potential output for the 1963-70 period in the *First Annual Review*. In particular, it was estimated that if the economy had been operating at potential output in 1963, rather than at 6 per cent below, the average annual potential

Towards Sustained and Balanced Growth

CHART 2-1
ACTUAL OUTPUT AS PERCENTAGE
OF POTENTIAL OUTPUT



Note: 1965 actual output estimated for the year as a whole. Data on actual output have been revised on the basis of more recent information available since publication of the *First Annual Review*. Source: Based on data from Dominion Bureau of Statistics and estimates by Economic Council of Canada.

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growth in total output to 1970 would have been about $4\frac{1}{2}$ per cent instead of $5\frac{1}{2}$ per cent.

To the extent that the economy has grown at a rate in excess of $5\frac{1}{2}$ per cent in 1964-65, the average annual rates of increase in output now required to attain potential output in 1970 will be reduced. This is, in fact, what has happened, as the volume of total output appears to have increased by about 6 per cent a year in 1964 and 1965. It should be emphasized, however, that this actual performance over the past two years is not so very much in excess of our estimated average annual growth rate of $5\frac{1}{2}$ percent from 1963 to 1970. In fact, the economy over the past two years has drawn in only about half of the slack which existed in 1963, with the result that it is estimated to have operated, in regard to total output, at about 3 per cent below potential in 1965 as a whole. Accordingly, the average 1965-70 rate of growth required in total output to attain potential output in 1970 is roughly $5\frac{1}{4}$ per cent per year. Thus, economic growth, particularly in the non-agricultural sector of the economy, must continue to be both strong and sustained if the economy's growth potentials are to be achieved over the next half decade.

International Economic Trends

The past five years have been marked by a series of external economic events which have had important implications for the Canadian economy. These have included the United States recession of 1960-61, speculation against the Canadian dollar in 1962, the United States Interest Equalization Tax of 1963, the British balance of payments crisis in 1964 with its hangover into 1965, the more recent additional measures to strengthen the United States balance of payments position, and concern about the international monetary and payments system.

Yet, when one comes to appraise the relevance of international economic developments for the Canadian economy over the first half of the 1960's, it is not the international alarms and crises, not the impact of emergency measures or set-backs, which really dominate the picture. It is rather the general pattern of strong expansion in the world economy and even stronger growth of international trade.

Perhaps the single most important factor contributing to the strong performance in the Canadian economy over the first half of the 1960's has been the vigorous, sustained and broadly based growth in the

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United States economy over this period. Like Canada, the United States had experienced the emergence of a large degree of economic slack in the latter part of the 1950's. Like Canada, the United States witnessed a further widening of the gap between actual and potential output in 1960-61, which reached its widest point in the first quarter of 1961. Like Canada, the United States has subsequently experienced a strong and prolonged economic expansion which is still proceeding. Finally, like Canada, the United States economy is currently operating much closer to its potential output than at any time in the past eight years.

In terms of the *volume* of total output, the United States economy has increased by over one fifth in 1960-65, or by close to 4½ per cent per year. This contrasts with the much more sluggish performance over the preceding half decade.

The dimensions of the growth in total output in the United States over the first half of the 1960's are impressive. In current dollars, the United States has grown from a \$500 billion economy in 1960 to a \$670 billion economy in 1965; over the same period Canada has grown from a \$36 billion to over a \$50 billion economy. In other words, the United States economy has added to its output *each year* over this five-year period an amount which, on the average, is not very far below the total output of the Canadian economy in 1960.

Economic growth among the other major trading partners of Canada has also been strong over the first half of the 1960's. The trend of rising real output in the industrially advanced world in 1960-65 was generally at least as strong as in the early 1950's. As a group, the member countries of the Organization for Economic Co-operation and Development (OECD) have attained a slightly higher annual rate of growth than the target rate which they had set for themselves in the 1960-70 period. Even though the combined annual rate of growth of the six countries of the European Economic Community (EEC) was not as high in the first half of the 1960's as in the 1950's, their actual rate of growth over the past five years was still very high.

International trade also grew exceptionally rapidly in 1960-65, reflecting not only the strong and general expansion of demand and production in the world economy, but also improved international trading conditions. Indeed, world trade, which appears to have approximately doubled over the past decade, has grown much more rapidly than world output. Also, trade in processed materials and manufactured products grew more rapidly than trade in primary commodities—

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a fact that reflects, at least in part, increased international industrial specialization and enhanced productive efficiency.

Considerable variation has, of course, occurred in the advances recorded in the economic activity and trade of various countries over the past five years. Also, the over-all advance in world output and trade has clearly been neither smooth nor steady over the first half of the 1960's. The year 1964 was, for example, one of exceptionally strong over-all gains; 1965, on the basis of current indications, will be a year of less rapid over-all advance. Yet, despite various difficulties and elements of unevenness, international economic developments have provided a favourable—perhaps even an unusually favourable—external environment for Canada's economic development over the past five years.

At the same time, devaluation of the Canadian dollar, together with other domestic factors contributing to the improved export performance of Canadian industry, have enabled many producers to take better advantage of the generally strong expansionary conditions in the United States and in the world economy.

This picture of a broadly favourable international setting for recent Canadian economic growth does, however, require one important qualification. This concerns the generally inadequate rate of economic growth among the less developed countries, with a consequent widening of the gap in per capita incomes between these countries and the industrialized world. A higher rate of growth in the developing countries not only is essential from the standpoint of these countries themselves but would also be conducive to the healthy and sustained growth of the world economy as a whole.

PROGRESS TOWARDS HIGHER STANDARDS OF PERFORMANCE

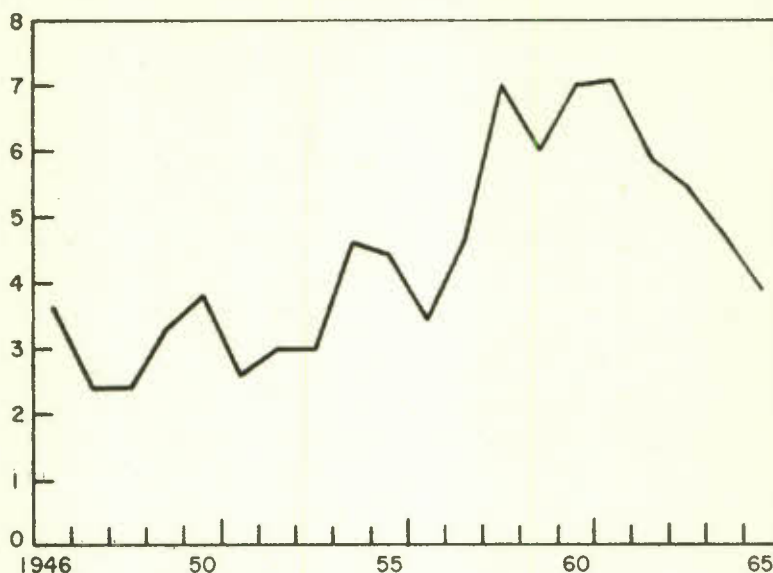
The Goals of High Employment and High Productivity Growth

The goal of high growth in the Canadian economy involves making full and increasingly efficient use of our growing productive resources, both human and material, on a sustained basis. The economy has been moving towards much fuller use of its available manpower resources over the first half of the 1960's, as indicated by the very substantial decline in the rate of unemployment which has occurred in spite of the rising labour force (Chart 2-2). The economy has also moved forward to achieve stronger advances in productivity.

Towards Sustained and Balanced Growth

CHART 2-2

UNEMPLOYMENT AS PERCENTAGE OF LABOUR FORCE



Note: 1965 estimated for the year as a whole.

Source: Based on data from Dominion Bureau of Statistics, and estimates by Economic Council of Canada.

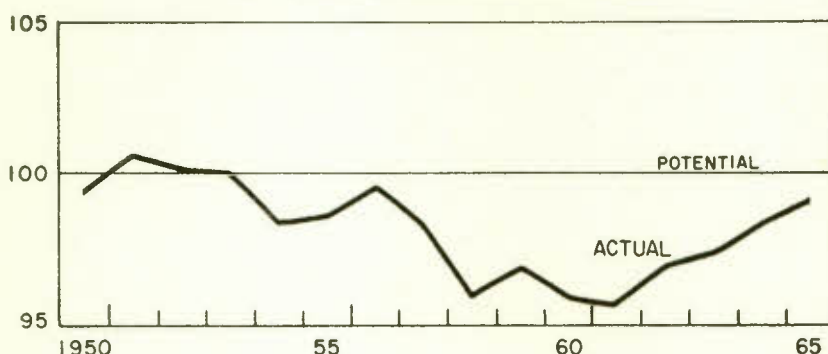
During the 1950's, the labour force increased more rapidly than employment, especially during the latter part of the decade (Table 2-2). The result was a very substantial rise in unemployment. Conversely, during 1960-65, employment increased more rapidly than the labour force, with a substantial decline in unemployment—from about 7 per cent in 1960 to $5\frac{1}{2}$ per cent in 1963 and to about 4 per cent for 1965 as a whole.¹

In 1964 and 1965, the growth of the labour force accelerated sharply to a rate roughly in line with that indicated in the *First Annual Review*. With further significant reductions in unemployment in these two years, employment increased at the exceptionally high rate of over $3\frac{1}{2}$ per cent per year. As a result, employment has moved closer to potential (Chart 2-3). This substantial forward thrust in manpower utilization has occurred while more highly automated processes have been adopted in many lines of business activity.

¹Unemployment declined during 1965 after appropriate allowance for seasonal factors, from over 4 per cent to well under 4 per cent.

The Economy's Performance in Relation to Goals

CHART 2-3
ACTUAL EMPLOYMENT AS PERCENTAGE
OF POTENTIAL EMPLOYMENT



Note: Potential civilian employment defined as 97 per cent of the civilian labour force; 1965 estimated for the year as a whole.

Source: Based on data from Dominion Bureau of Statistics and estimates by Economic Council of Canada.

The Canadian economy has thus come much closer to its employment goal over the past two years. But a further rapid growth of the labour force is anticipated to 1970—over $2\frac{1}{2}$ per cent per year. There is therefore a continued need for sustained and rapid growth in total employment at an average annual rate of close to 3 per cent to 1970 (Table 2-2).

TABLE 2-2—LABOUR FORCE AND EMPLOYMENT
(Average annual percentage increase)

	1950-55	1955-60	1960-65	1963-65	1965-70
Labour force.....	1.7	2.7	2.2	2.8	2.6
Employment.....	1.5	2.1	2.8	3.7	2.8

NOTE: 1965 data for civilian labour force and employment are estimated for the year as a whole; 1970 estimates of potential taken from the analysis in the *First Annual Review*.

SOURCE: Based on data from Dominion Bureau of Statistics and estimates by Economic Council of Canada.

The *First Annual Review* emphasized that productivity gains are the essence of economic growth and the real source of improvements in the

Towards Sustained and Balanced Growth

living standards within any nation. As in the case of employment, the productivity performance of the Canadian economy has shown a marked improvement over the first half of the 1960's. Output per employed person increased more than twice as rapidly in 1960-65 as in 1955-60 (Table 2-3).¹ This is partly because of accelerated growth in agricultural productivity between these two periods, but it is chiefly attributable to the accentuated rate of productivity growth in the nonagricultural sector. The productivity gains in this sector had been distressingly small in the latter part of the 1950's as major weaknesses developed in the growth of demand, and as a substantial amount of slack emerged in the economy.

TABLE 2-3—OUTPUT PER EMPLOYED PERSON
(Average annual percentage increase)

	1950-55	1955-60	1960-65	1965-70
Output per employed person . . .	3.5	0.9	2.1	2.4
Agricultural output per person employed in agriculture	9.1	3.0	6.2	2.2
Nonagricultural output per person in nonagricultural employment	2.3	0.4	1.7	2.4

NOTE: Data are based on the volume of Gross Domestic Product in relation to civilian employment. 1965 data are estimates for the first half of 1965; 1970 estimates of potential taken from the analysis in the *First Annual Review*.

SOURCE: Based on data from Dominion Bureau of Statistics and estimates by Economic Council of Canada.

Yet, the higher average productivity increase over the past five years has still fallen well short of the comparable rate of growth in 1950-55. It has also fallen short not only of the productivity performance of the United States economy in 1960-65, but also of the productivity performance which the Canadian economy might have been expected to achieve under conditions of renewed strong growth in demand. In

¹The measures of productivity growth used in this analysis, as well as in the analysis of potential output in the *First Annual Review*, are not comparable with those published by the Dominion Bureau of Statistics. The DBS estimates are based on a different measure of employment which is not readily adaptable to the Council's analysis of potential.

The Economy's Performance in Relation to Goals

comparable pre-war periods, when the Canadian economy moved out of conditions of substantial slack, the productivity gains typically recorded were much higher than they have been at any time over the past five years.

Thus, on the basis of existing information, a still higher rate of productivity growth would appear to be required over the next five years to attain potential output by 1970 (Table 2-3). This is in contrast to the increase required in employment, which in 1965-70 would need to increase at roughly the same average annual rate as in 1960-65 (Table 2-2).

It should be recalled, however, that in 1964 and 1965 employment has actually risen somewhat more rapidly than its potential average annual rate for 1963-70 indicated in the *First Annual Review*. As a result, the required rate of increase in employment for 1965-70 is somewhat below the actual rate of increase since 1963. In contrast, the increase in productivity in the nonagricultural sector since 1963 appears to have been somewhat less rapid than was originally postulated as an average for the period 1963-70. Consequently, to attain potential output in 1970 the rate of productivity expansion required for 1965-70 will be higher than apparently actually occurred in 1964 and 1965.

The Goal of Reasonable Price Stability

Over the first half of the 1960's, the movement of the economy towards higher standards of performance in employment and growth has also been accompanied by relative success in maintaining reasonable price and cost stability. Illustrative of the broad pattern of moderate changes in prices and costs in 1960-65 are the data shown in Charts 2-4 and 2-5 and in Table 2-4. The indicated average annual rates of change in this period have generally been no higher than in the preceding five years, and not significantly out of line with the rates of change in the decade 1953-63 set out in our *First Annual Review*. They are also considerably below the rates of change in the early post-war period. Moreover, in recent years both Canada and the United States have consistently had smaller increases in consumer prices than have occurred in other industrially advanced nations (Table 2-5).

The relatively moderate over-all extent of price increases in Canada over recent years has been quite remarkable considering not only the widespread strengthening of demand forces—both internal and exter-

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CHART 2-4
RATES OF CHANGE IN CONSUMER PRICES



Note: Based on GNP price deflator for consumer expenditures seasonally adjusted; quarterly changes at annual rates smoothed by a moving average; 1965 data cover first two quarters.
Source: Based on data from Dominion Bureau of Statistics and estimates by Economic Council of Canada.

TABLE 2-4—CHANGES IN SELECTED PRICES AND COSTS
(Average annual percentage change)

	1950-55	1955-60	1960-65
Consumer price index	2.5	1.9	1.6
Wholesale price index	0.7	1.1	1.6
Industrial materials price index	-0.7	0.4	1.5
Canadian farm products prices	-2.1	1.3	0.4
GNP price deflator	3.7	2.6	1.8
Average hourly earnings in manufacturing	6.9	4.2	3.5
Corporate profits per unit of output in manufacturing	-3.1	-2.0	1.7
Labour cost per unit of output in manufacturing	3.4	2.7	0.4

NOTE: 1965 estimates based on latest information available.

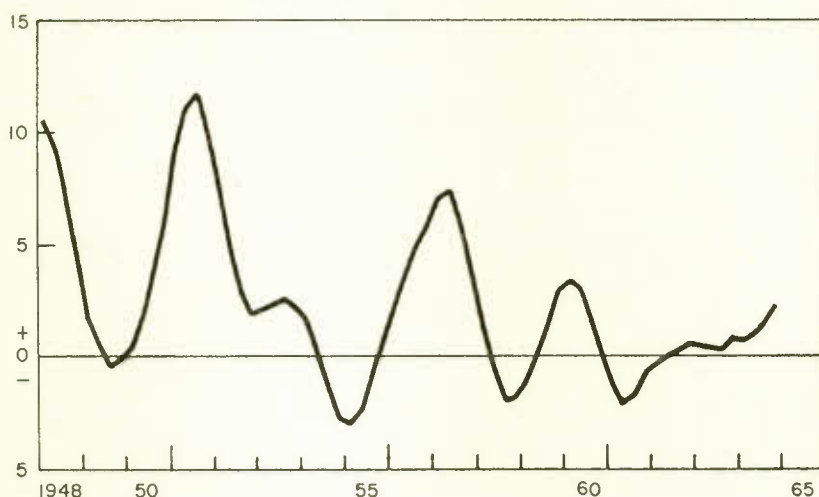
SOURCE: Based on data from Dominion Bureau of Statistics and estimates by Economic Council of Canada.

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nal—but also the upward adjustments in prices and costs which might have been expected to follow the significant decline in the exchange value of the Canadian dollar between 1959 and 1962. Many factors have undoubtedly made an important contribution to this performance—the substantial degree of slack which existed in the economy at the beginning of this decade and which appears to have been only gradually reduced; the relatively high degree of price stability maintained in the United States; the existence of intense domestic and international competition; price consciousness for particular products among consumers and purchasers; and the improvement in productivity.

Within the past year or so, however, there appear to have been more price increases for specific products and services, and some of the general price and cost indexes have moved up somewhat more rapidly than in the early 1960's. These more recent developments are discussed in a later section of this Chapter.

CHART 2-5
RATES OF CHANGE IN UNIT LABOUR COSTS
IN MANUFACTURING



Note: Index of unit labour costs based on wages and salaries in manufacturing divided by the volume of manufacturing production; changes at annual rates derived from seasonally adjusted quarterly data smoothed by moving averages.

Source: Based on data from Dominion Bureau of Statistics and estimates by Economic Council of Canada.

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TABLE 2-5—INTERNATIONAL COMPARISON OF
CONSUMER PRICE CHANGES

(Percentage increase)

	1950-55	1955-60	1960-65
Canada.....	13	10	9
United States.....	12	10	7
United Kingdom.....	34	11	19
France.....	32	33	20
Germany (F.R.).....	11	9	15
Italy.....	22	10	26
Sweden.....	33	19	18
Japan.....	34	11	35

NOTE: Based on prices in national currencies. The 1965 data cover the period for which information is available, in most cases the first eight months.

SOURCE: Based on data from International Monetary Fund.

The Goal of a More Internationally Competitive Economy

The economy has improved its international competitive position since 1960. This has been accompanied by a strengthening of Canada's international payments position. In recent years the over-all balance of payments position on combined current and capital account has remained largely in, or very close to, surplus from year to year. This is quite different from the experience of various other countries since 1960—for example, the United States has tended to have a persistent over-all payments deficit, and certain European countries have tended to have persistent over-all payments surpluses. The over-all Canadian payments stability has occurred in spite of the uncertainties which were associated with the reduction in the exchange value of the Canadian dollar and the return to a fixed exchange rate system, and in spite of other uncertainties, such as those arising in connection with the introduction of the United States Interest Equalization Tax and subsequent further measures by the United States to strengthen its balance of payments position.

The underlying strength in the over-all payments position has been reflected in the behaviour of the official exchange reserves of gold and United States dollars. Between the end of 1960 and early 1963, these showed a large net rise, the losses which occurred at the time of the 1962 exchange crisis being more than made up in subsequent months. Since early 1963, the reserves have been comparatively stable. Over the

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same period, Canada has moved from a net repayment obligation in the International Monetary Fund to an appreciable net creditor position. The combination of official reserves and initial drawing rights on the Fund now constitutes a significant first line of defence against short-term fluctuations in Canada's over-all payments position.

Within the over-all payments accounts, however, there have been large changes in the structure of transactions. In the latter part of the 1950's there was a very large rise in the deficit on transactions in goods and services (reaching a level of \$1.5 billion in 1959) and an accompanying upsurge in the net capital inflow. This was an inappropriate structure in the circumstances of substantial economic slack at the time. Over the following five years, the current account deficit declined substantially, and in 1964 was just over \$400 million. But with a sustained high rate of growth of domestic consumption and investment, which is generating a strong growth in imports, this decline is in the process of being reversed. This process was partly obscured in 1964, as a result of exceptional wheat sales to Russia, but became more apparent in the first half of 1965. The net long-term capital inflow, which had also declined in the early 1960's, has similarly moved up again more recently against the background of strongly rising total investment in Canada. This reversal in both the current and capital account payments was anticipated in the *First Annual Review* as the economy moved closer to potential output, and caused us to place very heavy emphasis on the importance of strong efforts to promote the development of a more internationally competitive economy.

The very substantially higher rate of growth in the volume of exports in the period 1960-65 would appear to reflect, in some measure, the improved competitive capabilities of the Canadian economy in this period (Table 2-6). In this context the most dramatic and encouraging aspect is the increase in exports of highly manufactured products (Table 2-7). These exports, comprising primarily capital and consumer goods, increased at an annual rate of only 2 per cent in 1950-55, and at a rate of 7 per cent in 1955-60. But the annual average increase since 1960 has been more than 25 per cent. Although some special factors have played a part in this upsurge, there has been a remarkably widespread pattern of expansion with respect to both commodities and destinations. In current dollar terms, these exports have risen from \$250 million in 1950 to \$400 million in 1960, and to a level approximating \$1,300 million at an annual rate in the first six months of 1965. After allowance for price changes, the volume of these exports has almost tripled over the first half of the 1960's.

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TABLE 2-6—GROWTH IN THE VOLUME OF EXPORTS

(Average annual percentage increase)

	Agricultural Products	Nonagricultural Products	Total
1950-55.....	2	6	5
1955-60.....	2	4	4
1960-65.....	5	8	8

NOTE: 1965 estimate based on data for eight months.

SOURCE: Based on data from Dominion Bureau of Statistics and estimates by Economic Council of Canada.

Devaluation of the Canadian dollar provided a stimulus to the sale of Canadian manufactured goods in both overseas and domestic markets. The expansion of exports of highly manufactured products, along with a substitution of domestic production for imports of such products, resulted in a substantial decline in net imports of manufactured goods in relation to total demand for these products in the Canadian economy. In the first half of the 1950's, under conditions of strong growth, net imports of manufactured goods rose almost twice as rapidly as GNP. In the first half of the 1960's under roughly comparable growth conditions, such net imports rose only about half as rapidly as GNP (Table 2-7).

TABLE 2-7—GROWTH IN GROSS NATIONAL PRODUCT AND
TRADE IN HIGHLY MANUFACTURED PRODUCTS

(Average annual percentage increase in current dollar values)

	1950-55	1955-60	1960-65
Gross National Product.....	9	6	7
Trade in Highly Manufactured Products			
Exports.....	2	7	26
Imports.....	13	5	9
Net Imports.....	16	4	4

NOTE: "Highly manufactured products" as measured by the DBS trade classification "end products inedible", primarily includes final consumer and investment goods and parts; it does not include manufactured food, beverages and tobacco, and important processed commodities, such as newsprint, primary iron and steel and nonferrous metals, textile yarns and woven fabrics. 1965 estimates based on data for six months.

SOURCE: Based on data from Dominion Bureau of Statistics, and estimates by Economic Council of Canada.

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Looking at our exports as a whole and in longer perspective, the Canadian export performance is not entirely encouraging when compared with the record of other countries. The share of Canadian exports in relation to world trade fell from 4.7 per cent in 1955-59 to 4.3 per cent thus far in this decade, although there was a slight increase in this share in 1964. The performance of Canadian exports, compared with other OECD countries, is illustrated in Table 2-8.

The strength of Canada's competitive position, as reflected in its international trade, is ultimately related, especially under a fixed exchange rate system, to the economy's relative performance in productivity and in prices and costs. In spite of the improvement in Canada's productivity performance since 1960, the gains over the past five years have been well below the rates of advance recorded in virtually all other industrial countries, including the United States, but the disparities in these gains have not been as large as in the 1955-60 period.

TABLE 2-8—INTERNATIONAL COMPARISON OF GROWTH IN
EXPORTS AND IMPORTS

	1950-55 (Annual average percentage increase)	1955-60 percentage increase)	1960-65 percentage increase)	1950-65 (Total percentage increase)
Exports				
Japan.....	20	15	16	925
Germany (F.R.).....	25	13	9	785
Italy.....	9	15	14	487
France.....	10	7	7	214
Canada.....	9	5	7	168
United States.....	7	7	5	155
United Kingdom.....	6	4	5	109
OECD.....	10	8	8	243
EEC.....	15	10	9	402
EFTA.....	8	6	7	162
EFTA ex. U.K.....	10	8	9	255

Continued on page 24

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TABLE 2-8—INTERNATIONAL COMPARISON OF GROWTH IN
EXPORTS AND IMPORTS—Concluded

	1950-55 (Annual average percentage increase)	1955-60	1960-65	1950-65 (Total percentage increase)
Imports				
Japan.....	20	13	13	737
Germany (F.R.).....	17	12	11	526
Italy.....	13	12	8	369
France.....	9	6	10	224
Canada.....	10	4	6	164
United States.....	5	5	7	132
United Kingdom.....	8	3	5	118
OECD.....	9	7	8	223
EEC.....	12	9	10	320
EFTA.....	9	5	7	169
EFTA ex. U.K.....	9	8	9	251

NOTE: Value measured in equivalent current United States dollars. The rates of growth measured in each country's national currency would be altered if the value of the country's currency in U.S. dollars changed during the period; for example, using *Canadian* dollars for exports and imports, the rates of growth shown for Canada would be:

	1950-55	1955-60	1960-65
Exports.....	7	4	9
Imports.....	8	4	8

1965 based on seasonally adjusted data for six months. Estimates include intra-regional trade for OECD, EEC and European Free Trade Area (EFTA). U.S. Department of Defense shipments excluded.

SOURCE: Based on data from Organization for Economic Co-operation and Development, International Monetary Fund, U.S. Department of Commerce, Dominion Bureau of Statistics, and estimates by Economic Council of Canada.

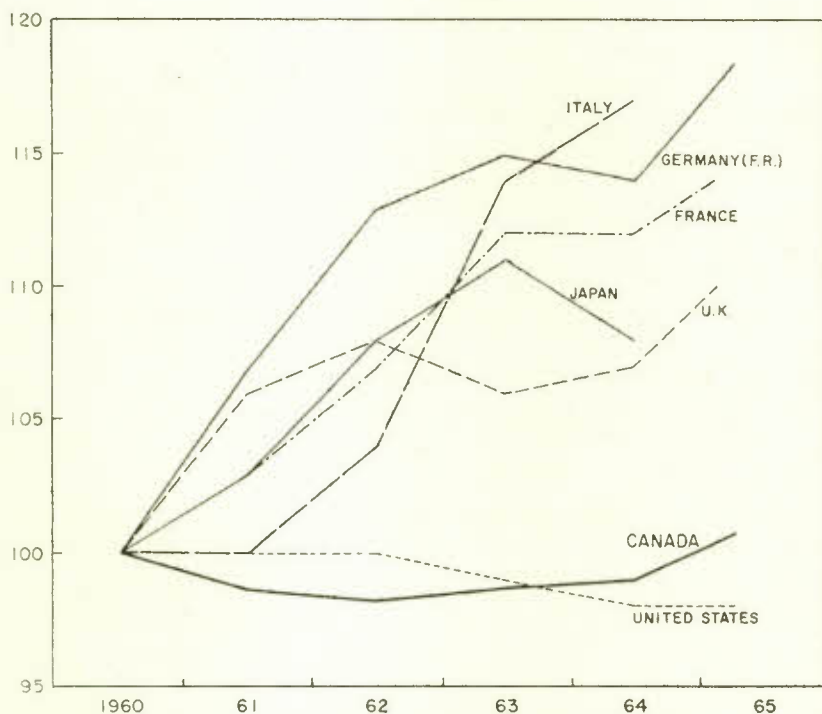
In recent years, prices and costs have advanced much less rapidly in the United States and Canada than in overseas industrial countries. The more rapid increases in consumer prices in these countries have already been illustrated in Table 2-5. However, there appears to have been a generally higher degree of overseas price stability for goods moving in international trade. Yet, the strong Canadian export performance over the period since 1960 suggests that the price increases which have occurred in Canada have not adversely affected Canada's international competitive position. Similarly, as regards costs, Canada

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has experienced smaller increases in labour costs per unit of output than other industrially advanced countries, except the United States whose experience has been somewhat more favourable than ours (Chart 2-6). Devaluation of the Canadian dollar resulted in a significant relative improvement even in relation to the United States as regards both costs and prices. However, some of this improvement appears to have been partly undermined by subsequent cost and price trends.

Competitiveness is, of course, not merely a function of relative prices. The ability to participate fully in an expanding world trade also depends on a whole range of essentially nonprice factors. These include access to markets as a basis for efficient production in terms of

CHART 2-6
INTERNATIONAL COMPARISON OF LABOUR COST
PER UNIT OF OUTPUT IN MANUFACTURING
(1960=100)



Source: Based on data from the National Institute of Economic and Social Research, U.S. Departments of Labor and Commerce, Dominion Bureau of Statistics, and estimates by Economic Council of Canada.

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adequate specialization and scale of output, appropriate product design and adaptation, intelligent exploration and aggressive exploitation of market opportunities, installation services and training facilities, after-sales servicing, prompt and effective distribution and smoothly functioning supply channels, competitive credit arrangements, and so forth. Performance in these indirect but important areas varies widely from country to country and firm to firm. International competition has, since the recovery in Europe and Japan, become increasingly keen. If Canada is fully to exploit growing trading opportunities, it is important that Canadian export endeavour be supported by an exceptional commercial performance, which in turn is shaped by a wide range of interrelated factors affecting economic policies, institutional facilities, and business attitudes and practices.

The success of Canadian producers who are largely oriented to the domestic market, but who must also face competitive pressures from foreign producers, similarly require a comparable responsiveness to competitive pricing, product specialization, and a wide range of other nonprice factors. There is some indication of such a response by Canadian manufacturers, particularly since the 1962 devaluation. If Canada is to maintain, let alone improve, its over-all competitive position, these efforts must be unflagging.

SOME CURRENT PROBLEMS AND QUESTIONS

The main conclusion from the preceding analysis is that the Canadian economy has moved towards consistently higher standards of performance over the first half of the 1960's. There has been a very rapid growth of employment, a substantial reduction in unemployment and significantly more rapid gains in productivity and living standards than in the last half of the 1950's. Moreover, comparing the experience of 1960-65 with 1955-60, these advances have been achieved without an accompanying general acceleration of price and cost increases and with an apparent improvement in the international competitive posture of the economy.

These favourable general conclusions apply, however, to the 1960-65 period as a whole. At the beginning of this period, the economy experienced a recession between the first quarter of 1960 and the first quarter of 1961, resulting in a decline of actual output in relation to potential output, as well as a rise in the already high level of unemployment. Similarly, in 1965 following a strong and sustained

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over-all expansion, some questions have arisen regarding the possible emergence of imbalances, pressures and distortions which might undermine the economy's capacity for maintaining these consistently high standards of performance into the future. It is in this perspective, rather than in the perspective of forecasting the short-term business outlook, that we now turn to an appraisal of seven special areas of concern. These are the areas of investment, labour market conditions, productivity, prices, export and import developments, international liquidity, and the possibility of a slowdown.

We wish to emphasize strongly that extremely important issues are involved in any careful appraisal of these areas. Underestimation of potential dangers may lead to a very unfortunate exposure of the economy to inflationary burdens and dislocations. On the other hand, exaggeration of the significance of particular strains may lead to unnecessary general restraint actions having the effect of stalling economic growth and generating higher unemployment.

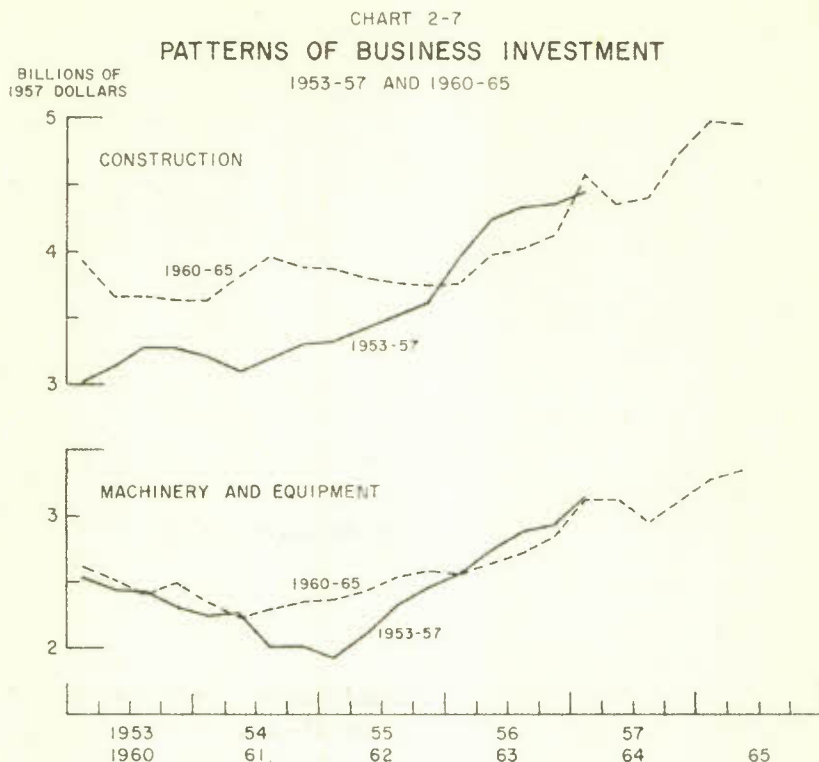
Investment

As was emphasized in the *First Annual Review*, a very high rate of new investment is required to attain potential output in 1970. Although no attempt was made to outline the path along which investment would need to rise in the 1963-70 period, very sharply rising levels of new investment were implied as being required in the early part of this period to achieve the expansion in productive capacity necessary for a high and sustained growth of total output. The special survey of longer range business investment plans which was undertaken by the Council last year indicated that business firms were, in fact, planning to undertake a high rate of expansion in investment¹. The volume of both actual and planned investment, especially in construction, appears to have risen even more rapidly than was anticipated in this survey.

Following 1958, the level of new investment in Canada declined substantially, not only as a proportion of Gross National Product but also in absolute terms. More recently, especially in 1964 and 1965, investment has risen both absolutely and as a percentage of total output. To put this recent increase in proper perspective, however, it is relevant to note that investment

¹ B. A. Keys, *Special Survey of Longer Range Investment Outlook and Planning in Business*, Staff Study No. 6, Economic Council of Canada, Queen's Printer, Ottawa, 1965.

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Note: Construction includes housing and non-residential investment. Data are seasonally adjusted at annual rates and cover the periods first quarter 1953 to first quarter 1957, and first quarter 1960 to second quarter 1965.

Source: Based on data from Dominion Bureau of Statistics.

expenditures are still below the levels of 1956-58 when measured as a proportion of GNP. Furthermore, the expansion in the volume of investment from mid-1963 to mid-1965 has been smaller than that which occurred from early 1955 to early 1957 both in relative and in absolute terms (Chart 2-7). During recent years, output appears to have been rising in relation to productive capacity—in other words, in spite of the rapidly rising levels of new investment, total productive capacity, as reflected in estimates of the stock of business capital, has not risen as rapidly as total output.

Declines and expansions in investment have historically been an important factor contributing to the unstable and uneven growth of the Canadian economy. Under the stronger growth conditions of recent years, the current upswing in investment is a normal sequel to the

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investment declines in the late 1950's and the early 1960's. In contrast with the experience of the investment boom in the mid-1950's, however, various factors may be operating to reduce the risks of excessive and misdirected business investment. These include more careful and consistent longer range business investment planning by many firms on the basis of longer term and more realistic appraisals of market prospects, and a clearer recognition in many parts of the business community that under highly competitive current and prospective market conditions, future profit positions would be endangered by generation of widespread excess capacity.

The recent *rate of expansion* in investment spending is clearly not sustainable on a long-term basis to 1970 and beyond. Two points are particularly relevant in this context. First, it may be recalled that the *First Annual Review* indicated that an average annual rate of increase in the volume of total business fixed investment of about 10 per cent would be required over the period 1963-70 to attain potential output in 1970. The actual rate of growth in the volume of such investment in 1963-65 has been about 15 per cent per year. Accordingly, the average annual rate of increase required over the balance of the period, consistent with the analysis of the *First Annual Review*, is about 8 per cent. Second, the over-all rate of growth in total output and demand has been very strong in 1963-65 and it would be inappropriate for business firms to base their expectations of future market trends, and hence their future investment plans, on the assumption that the over-all growth in the economy could continue unabated at the recent rate of about 6 per cent per year in real terms.

But while the rate of increase in business investment expenditures may be expected to slow down in the period 1965-70, the actual volume of such investment will need to continue to expand considerably from current levels if potential output is to be attained in 1970. Further expansion of the productive capacity of the economy will be needed as a basis for achieving higher levels of output under conditions of adequate growth in total income and demand.

Nevertheless, rapidly rising investment may be a source of concern, in so far as it gives rise to severe pressures on the capital goods industries. During the past year, concern has in fact developed about the possibility of such severe pressures, especially as regards the construction industry.

Over the past fifteen years, there have been three periods of exceptionally rapid expansion in total construction expenditures, in the

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years 1951-52, 1956-57, and 1964-65. After the first of these periods, construction activity levelled off, both in volume terms and as a percentage of total output. But after the second construction boom in 1956-57, the level of construction declined very substantially, both in volume and as a percentage of total output. Indeed, the industry passed through a deep valley, with a major decline in employment, a dramatic fall in profits, a large number of bankruptcies and a substantial reduction in the output capacity of the industry. The most recent expansion of construction lagged well behind the expansion in total demand and output which began early in 1961. Indeed, the construction industry did not regain its 1958 volume until six years later in 1964. As a proportion of total expenditures in the economy, construction expenditures in the first half of 1965 were below the levels of 1956-58. Moreover, employment in the construction industry has risen much less rapidly in 1963-65 than in 1955-57, and in the first half of 1965 was no higher than in 1957.

At the same time, while the present level of construction spending is not excessive in relation to the rate of growth required in the economy, such spending has been rising extremely rapidly during the past two years, and symptoms of some strains have become apparent during 1965. Shortages of skilled (and in a number of centres even unskilled) construction workers have developed. There is also scattered evidence of strains on capacity, particularly in relation to larger construction projects, both residential and non-residential. Some cost and price pressures are also emerging in these circumstances, even after allowance for two factors: the removal of the sales tax exemption for construction materials and equipment in three steps from June 1963 to January 1965, and the return of the industry to higher profit margins after a period of abnormally low profitability. These have had the effect of giving an exaggerated impression of upward pressures on prices and costs in construction activity since 1963. The recognized bias in GNP price indexes pertaining to construction expenditures, which make no allowance for productivity changes in the industry, contributes further to this impression.

Although some of the symptoms of strain appear to be concentrated—for example, in certain regions and metropolitan areas, such as British Columbia and Montreal—the shortage of construction labour is becoming general. A continuation of the rate of expansion of construction demand of the dimensions of the past two years could readily pose the danger of worsening bottlenecks and excessive wage and cost pressures, especially now that total unemployment has been substan-

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tially reduced. There is also a possibility of shortages and accompanying price and cost pressures in the case of certain types of construction materials—although, apart from the effects of sales taxes in 1963-65, the indexes of building materials prices showed a relatively high degree of stability into 1965.

In the present circumstances there would thus appear to be a need for a somewhat slower rate of advance in construction activity, supported by more vigorous and effective efforts to enlarge the manpower resources and capacity of the construction industry. In particular, more manpower resources must flow into the industry through the labour market, with the assistance of more appropriate and effective means for facilitating adequate mobility, training and retraining of manpower for this purpose. This is a conclusion which has, moreover, a much wider application than in the construction industry alone.

Labour Market Conditions

With the substantial decline in unemployment over the past few years, labour market conditions have become more generally taut. There is increasing evidence of shortages of manpower emerging over a widening range of occupations and skills and in a growing number of localities. This has tended to increase manpower shifts and mobility and to enlarge the opportunities and incomes for workers whose skills and talents had been underemployed in the previous conditions of substantial manpower slack. There has also been a very marked increase in interest among producers in encouraging stepped-up immigration of workers having those skills which have come to be in particularly short supply.

The previous excessive levels of unemployment were primarily associated with inadequate levels of total demand. A growing range of particular labour shortages normally emerges as demand-deficient unemployment recedes. Indeed, the existence of a changing pattern of particular labour shortages is likely to be a persistent feature of any market-oriented economy operating at sustained high levels of employment and sustained high rates of productivity growth. The labour market has an important role to play in facilitating shifts of workers between occupations, industries and localities to meet these shortages particularly under conditions of dynamic growth and change. Moreover, it is particularly the case that after an extended period of excessive unemployment, very important elements of mismatching of the demand and supply of labour are likely to be revealed, as thrusts of

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strong growth, for example, in the investment sector and in various other industries, produce unusually rapid increases in the demand for particular skills in particular localities.

One of the dangers in this kind of situation is that exceptionally severe shortages may develop in certain critical parts of the economy before the over-all level of unemployment has been reduced to a satisfactorily low level, and that these severe shortages will spawn cost and price pressures which will be transmitted to other parts of the economy. It was for this reason that we emphasized strongly in the *First Annual Review* the need for improved labour market and manpower policies in Canada. Indeed, we specifically indicated that the development of such policies was an extremely urgent matter if the goal of 3 per cent unemployment was to be attainable simultaneously with other basic goals. The developments of the past year reinforce this view, since the economy appears to have begun to encounter certain elements of severe labour shortages while the over-all rate of unemployment was still around 4 per cent.

Unfortunately, very little information exists to help illuminate the precise nature, location and extent of these shortages. Lack of adequate information—for example, on unfilled job vacancies—all too readily permits the circulation of partial or inaccurate assessments of current labour market conditions. Such assessments do not provide a good basis for appropriate policy decisions in either the public or the private sectors of the economy.

It must be clearly understood that manpower policy is closely interrelated with general employment policy, and that both are essential in achieving and sustaining full employment and a high rate of economic growth under conditions of reasonable price stability. Employment policy relates to fiscal, monetary and other general economic policies which influence the over-all level of employment by their impact on total demand for goods and services. Employment policy thus influences the *demand* side of the labour market. Manpower policy, on the other hand, relates to training, retraining and upgrading, geographic and other mobility measures, placement functions, occupational information, and other labour market services which have a direct influence on the development of manpower resources and on improving the efficiency with which the labour market matches *men* with *jobs*.

The two policies must complement each other. Without adequate general employment policies to stimulate economic growth and job creation, manpower policy cannot by itself ensure maximum use of

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human resources. Conversely, without effective manpower policies to match job opportunities with available unemployed labour, the growth of demand may need to be restrained before a high employment goal can be reached and maintained.

An important part of past increases in the growth of productivity and real income in the Canadian economy has been derived from shifts of labour from low income occupations, industries and localities to higher paying alternatives. The gains in lifetime earnings to the individuals who move to such alternatives can be very substantial. However, various factors can hinder mobility—for example, lack of knowledge of employment alternatives, inability to finance the costs of moving, or the need for prior retraining and the acquisition of new skills. It is the ultimate purpose of manpower and labour market policies not only to remove obstacles hindering necessary shifts, but also to actively promote such shifts. An effective implementation of such policies will result in high returns in the sense that it will facilitate gains in income and output for the economy as a whole, as well as in the income of individuals, that are substantially greater than the costs involved.

Productivity, Costs and Profits

The most important current problem is to achieve and maintain adequate productivity growth. This is the key to economic growth and to rising living standards for Canadians. It is also an important factor in maintaining reasonable price and cost stability and in the longer term preservation of a satisfactory international competitive position. Even the goal of sustained high employment ultimately depends on adequate productivity growth, especially in relation to the United States. Without adequate productivity gains in Canada, imbalances and distortions would sooner or later emerge to undermine employment.

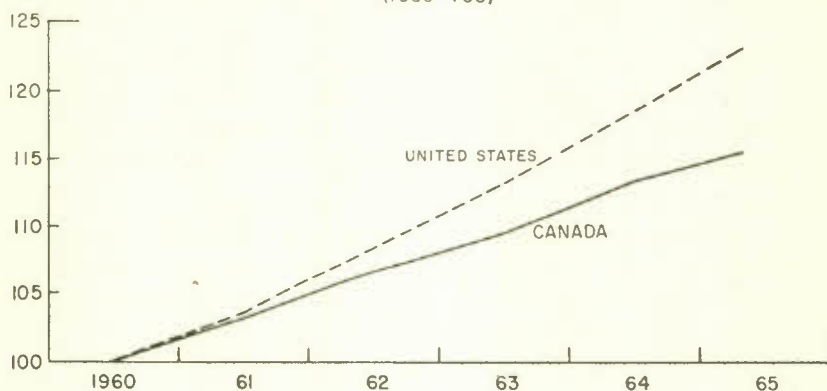
Many complex factors are involved in productivity growth, which is essentially a long-term process. Some of these are discussed in the next two chapters. Although productivity may be significantly affected by shorter term changes in demand forces, it is difficult to measure with precision and to analyze in meaningful terms over short-run periods, especially those of a year or less. Nevertheless, as already noted, it would appear from currently available information that the productivity performance in the nonagricultural sector of the Canadian economy over the past two years has not been as high as might have

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been expected. The reasons for this are not clear, especially in the light of various factors which should have helped to provide a particularly favourable environment for strong productivity growth in 1964 and 1965, including the reduction of slack which existed in 1963.

Over the past few years, productivity in manufacturing has advanced less rapidly in Canada than in the United States (Chart 2-8). At the same time, average hourly earnings in manufacturing have risen slightly faster in Canada than in the United States (Chart 2-9). These two factors together have tended to bring about the moderate divergence in trends in labour costs per unit of output shown earlier in Chart 2-6. Moreover, since 1963, the somewhat less rapid productivity growth in Canada, together with the rise in unit labour costs relative to those in the United States, have tended to reduce gains in profits per unit of output in Canadian manufacturing relative to those in the United States (Chart 2-10).

CHART 2-8
OUTPUT PER EMPLOYED PERSON
IN MANUFACTURING, CANADA AND UNITED STATES
(1960=100)



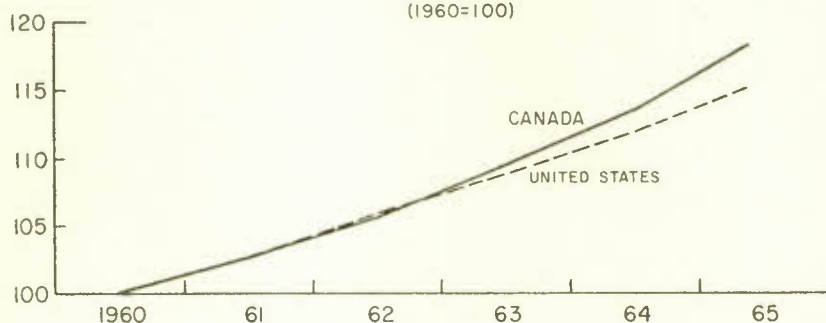
Note: 1965 is average of seasonally adjusted data for eight months.

Source: Based on data from U.S. Department of Commerce, Dominion Bureau of Statistics, and estimates by Economic Council of Canada.

It should be emphasized that the recent divergences between Canada and the United States in these various indicators of productivity, costs and profits are relatively small. The over-all picture is one of remarkably similar patterns of experience, especially in relation to the very

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CHART 2-9
AVERAGE HOURLY EARNINGS
IN MANUFACTURING, CANADA AND UNITED STATES
(1960=100)



Note: 1965 is average of data for nine months.

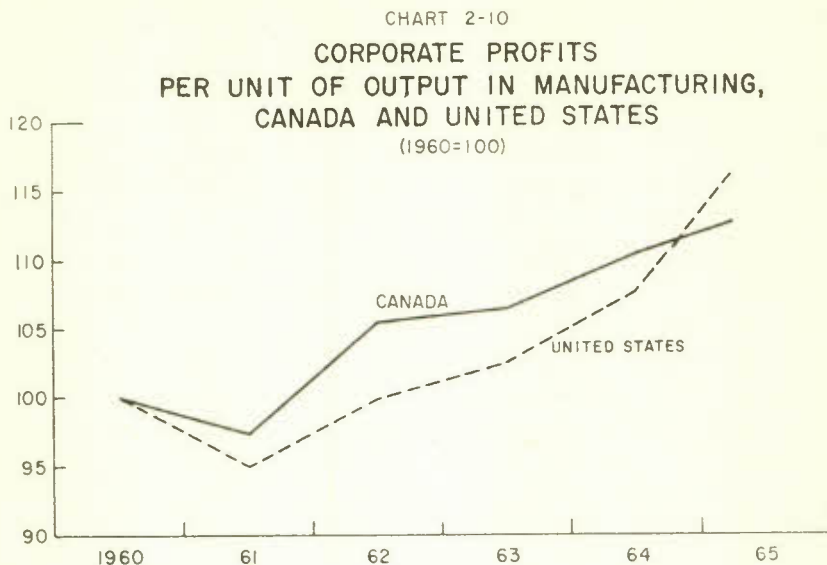
Source: Based on data from U.S. Department of Commerce, Dominion Bureau of Statistics, and estimates by Economic Council of Canada.

much wider divergences in such indicators over recent years between North America and the experience of industrially advanced countries overseas. Nevertheless, delicate and crucially important relationships exist between these indicators. Thus, were divergences between Canada and the United States to continue to grow for any length of time, they could begin to exert a fundamental influence on the international competitive capabilities of Canadian manufacturing, the degree of price pressure in the economy, and the stability and sustainability of economic growth.

The important competitive advantages derived by Canadian manufacturing in relation to the United States from the devaluation of the Canadian dollar would appear to have been at least partially eroded by the relative trends outlined above. A continuing erosion would sooner or later clearly have adverse implications for both export and import-competing industries.

Similarly, a slackening rate of advance in productivity, combined with a continued growth of wage costs per unit of output and falling profits per unit of output, have frequently been prominent symptoms of impending economic instability leading to short-term recessions. Recent patterns of developments in these indicators do not suggest that any impending recession is in prospect. But it is clear that a stronger advance in productivity is now called for if wage and profit conditions favourable to sustained growth are to be maintained.

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Note: Profits are measured before taxes; 1965 is average of data for two quarters seasonally adjusted at annual rates.

Source: Based on data from U.S. Department of Commerce, Dominion Bureau of Statistics, and estimates by Economic Council of Canada.

Prices

Without reasonable price stability, serious inequities may develop in a society, as different prices and incomes adjust at various speeds to new circumstances. Particular hardships may be imposed on those dependent upon fixed incomes who are least able to protect themselves against erosion in the real purchasing power of their incomes. Similarly, excessive upward movements in prices tend to undermine the competitiveness of an economy. This is especially important for the Canadian economy which is heavily internationally oriented.

During the past year, concern has been expressed regarding the possible re-emergence of inflationary pressures which may have adverse implications both for equitable distribution of real income and for the competitive position of the economy. Different aspects and levels of concern are discernible. First, attention has been focused on the fact that various general indexes of prices have risen somewhat more in 1965 than in 1964, and that although prices appear to be rising much less rapidly in Canada than in virtually all overseas industrially advanced countries, they appear to have risen fractionally more than in the United States. Second, concern has developed that price and cost

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advances at particular pressure points—such as in the construction industry—may readily spread to other sectors of the economy which have thus far experienced much greater stability. Third, there is concern that certain general measures of prices, such as the consumer price index, have tended to be “lagging”—that is, that stronger demand trends do not necessarily produce immediate upward movements in price levels, but may very well lead to subsequent increases. In this connection, the consumer price increases during the recession of 1958 are cited as an ultimate sequel to the general demand strength in 1956-57. Fourth, concern has also arisen that accentuated increases in wages and higher unit labour costs are currently (and potentially) exerting a cost-push pressure on prices. Fifth, the persistent and pervasive strength of demand forces over the course of the current unprecedented expansion of general business activity has been alleged to be providing a favourable environment, at least in certain areas of the economy, for business to seek to increase prices as a means of widening profit margins.

The Government of Canada asked the Economic Council, earlier this year, to examine the relationships between prices, costs, productivity and incomes in the context of sustained high standards of performance in the economy. A careful examination of the relevant issues in this field is now under way, and we will be reporting on these issues in 1966. But in the interim, some initial consideration of recent and current developments can be set forth.

An examination of the basic information on price changes in 1965 clearly indicates that most broad indexes of prices have increased somewhat more in 1965 than in 1964. Illustrative of such changes are the following increases for the latest month or quarter in 1965 over the corresponding period in 1964 (with 1963 to 1964 annual increases shown in brackets): consumer price index 2.7 (1.8); general wholesale price index 3.2 (0.3); index of industrial materials prices 0.6 (1.9); index of prices of all goods and services—usually referred to as the GNP price deflator—2.5 (2.3). Generally, the price increases recorded over the past year appear to have been slightly above the average annual rates of increase in 1953-63, which we indicated last year should be the *average* standard of performance within which price increases should be contained over the 1963-70 period as a whole (on the assumption that reasonable price stability is achieved by our major international trading partners).

In view of the fact that Canada has experienced an extended period of relative price stability, can these indications of price increases in

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1965 be interpreted as reflecting the emergence of general or pervasive inflationary pressures? This is not a question which can be answered simply and categorically. But a careful appraisal of the nature and patterns of recent changes would suggest that at the present time there appears to be little evidence to indicate that a broad and widely dispersed acceleration of price increases or accentuation of price pressures is under way.

The higher rate of increase in the consumer price index since 1964, for example, appears to have been very largely attributable to two factors: (1) significant increases in four components of the food price index—beef, pork, fruit and vegetables—apparently largely reflecting conditions of temporarily reduced production of these commodities in the United States, and (2) sharp increases in two components of the index for services, automobile insurance premiums and medical insurance premiums (due largely to increases in the relative numbers and average size of claims, and service provided per claim). After allowance for these special factors, there appears to have been very little acceleration in the generally low rate of increases in consumer prices of recent years (Chart 2-11).

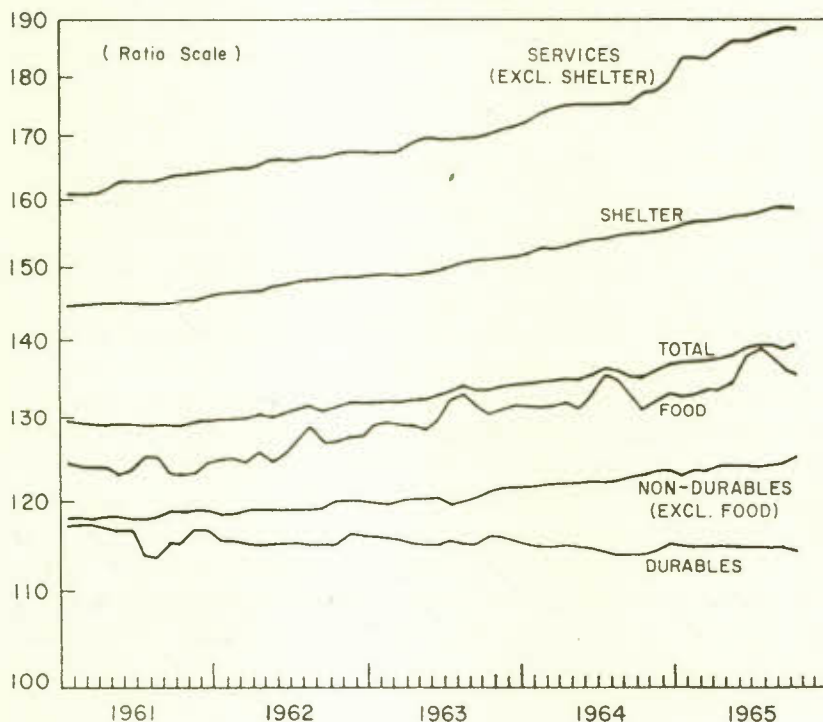
Similarly, the somewhat higher rate of increase in the GNP price deflator during the past year appears to reflect, to a significant degree, not only the special consumer price factors already mentioned, but also the effects of the combination of the federal sales tax on machinery and equipment and construction materials, and the upward shift in the relative importance of construction expenditures (for which the price deflators, as already noted, are biased as measures of price changes).

The increase in industrial materials prices over the past year, especially for nonferrous metals, would appear to have resulted, as usual, not from changes in the Canadian economy, but rather from changes in demand and supply conditions in international markets.

The rate of increase in wage costs, and more particularly in labour costs per unit of output in Canada compared with the United States is perhaps a more worrisome aspect of the changes over the past year. However, it is relevant to note that, on the whole, wage increases do not appear, at least at this stage, to have been substantially outrunning the growth of productivity as they did in the earlier post-war period, or even in the late 1950's when significant wage increases continued at a time of general weakness in demand and of very substantially reduced productivity gains. On the basis of the latest available information and despite some particular exceptions, cost-push forces do not seem to be strong or seriously distorting in any general sense. Nor is there

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CHART 2-11
CONSUMER PRICE INDEX
(1949=100)



Source: Based on data from Dominion Bureau of Statistics and Bank of Canada.

evidence to support the view that, apart from some possible exceptions, there has been any general attempt by business firms to increase profit margins through price increases. Indeed, with marginally rising costs and highly competitive current marketing conditions, profit margins appear, if anything, to be generally coming under some moderate pressure, especially in manufacturing.

Thus, it would appear that a considerable part of the recent upward movements in prices and costs can be accounted for by special factors, some of them of a temporary nature, and that these movements so far have been a good deal less pervasive and dangerous than those which occurred in the early post-war period and the late 1950's.

Moreover, comparing the current situation with these earlier periods, one is able to discern a number of factors tending to exert a moderating influence on the trend in prices and costs. First, as previously noted,

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the economy as a whole is still operating somewhat below its current potential. Second, the potential itself is increasing at a very rapid rate. The labour force is growing unusually fast, providing a large and continuing flow of more highly educated and skilled workers into productive activity. Third, the United States has in recent years maintained a relatively high degree of price and cost stability and is making strong efforts to continue this record. This, together with the generally vigorous state of competition in the world economy as a whole, tends to exert a powerful restraining influence against any marked acceleration of price and cost increases in Canada. Finally, Canadian buyers—both individual consumers and industrial purchasers—have developed a strong degree of price consciousness over an extended period of reasonably well maintained price stability to which they have become accustomed.

Nevertheless during the past year there does appear to have been at least a fractionally more rapid advance in prices and costs generally, relative to the United States. Moreover, while the growth of total demand does not appear to be outpacing the growing productive capabilities of the economy, we are now in a period in which there may be increasing dangers of particular pressures and bottlenecks. Thus, price and cost developments obviously warrant much closer scrutiny and appraisal under conditions in which the economy is operating closer to its current potential than at any time since 1956.

Exports and Imports

High growth and high employment will inevitably mean a high rate of growth of demand for imports. As was emphasized in the *First Annual Review*, under high employment conditions, the growth of imports will reflect the much higher rate of growth of the labour force in Canada than in other countries, which in turn will involve an exceptionally high rate of growth of total income and demand in Canada. This will call for a high rate of growth of exports, together with an improvement of the import-competing capabilities of Canadian industries. There is a danger, however, that strong domestic demand will make Canadian producers, who are largely export-oriented, content to rely on the increasing domestic market and reluctant to accept the harder challenges of developing greater external markets under tough competitive conditions. Similarly, producers who are largely domestically oriented may fail to exploit profitable opportunities for securing a larger share of rapidly rising domestic

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markets. Ultimately, any general failure to compete adequately for expanding sales opportunities both at home and abroad can only be increased difficulty in simultaneously maintaining high growth, high employment and a viable balance of payments, especially under a fixed exchange rate system.

The strong expansion of Canadian income and demand since early in 1961, the favourable international setting for enlarged exports over the past few years, the devaluation of the Canadian dollar and other favourable domestic changes—all these have worked in combination to produce a marked improvement in the performance of both exporting and import-competing industries over the first half of the 1960's. Not only has Canada achieved strong increases in exports, but it is significant that in the earlier stages of the current business expansion Canadian producers also secured an expanding share of the rapidly rising domestic market for a relatively wide range of products.

In 1964 and 1965, many lines of exports, especially highly manufactured products, have continued to advance very strongly, more strongly than the rate of growth of over-all domestic output. The continued growth in nonagricultural exports was approximately offset by the decline in grain exports over the first three quarters in 1965 (Table 2-9). The sale of more wheat to Russia is now providing greater

TABLE 2-9—GROWTH IN THE VOLUME OF EXPORTS

(Average annual percentage change)

	Nonagricultural Products		Agricultural Products	Total Exports
	Highly Manufactured	Total		
1960-63.....	21	6	10	7
1963-64.....	40	15	25	17
1964-65 ¹	14	7	-24	-1

¹Nine months of 1965 over first nine months of 1964.

NOTE: "Highly manufactured products" as measured by the DBS trade classification "end products inedible", primarily includes final consumer and investment goods and parts; it does not include manufactured food, beverages and tobacco, and important processed commodities, such as newsprint, primary iron and steel and nonferrous metals, textile yarns and woven fabrics.

SOURCE: Based on data from Dominion Bureau of Statistics, and estimates by Economic Council of Canada.

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strength to the over-all export performance. Expansion of sales of domestically oriented producers appears generally to have been more in line with the over-all rate of growth of the domestic market. In certain areas, especially in a few lines where current capacity limits are being approached or where bottlenecks have emerged, imports now appear to be rising relative to total domestic demand.

Sustained and effective efforts are required on both export performance and import-competing performance in Canadian industry if potential output is to be attained and maintained. In order to meet these requirements, it should be a matter of high priority in business to continue to exert strong efforts to achieve adequate specialization and improved productivity. It should likewise be a matter of high priority of government to adapt and develop the basic economic policy framework to facilitate success in these efforts by the business community. This should include commercial, industrial development, export-promoting, adjustment assistance and other policies, deliberately aimed at strengthening Canada's international trade performance, particularly in regard to nonagricultural products under highly competitive trading conditions for such products.

The International Monetary System

A continued favourable international environment is a necessary condition for a satisfactory balance of payments performance by the Canadian economy. This requires as a precondition an efficient and smoothly operating international monetary system, and continued close co-operation in financial matters between Canada and the United States.

The international monetary system has worked relatively well during the post-war period as a whole, with the help of new international financial institutions, with a very substantially increased role for the United States dollar as a reserve currency, and with the development of an unprecedented degree of international financial co-operation. Although the world's supply of monetary reserves has not expanded as rapidly as world output, investment or trade, the system has proved to be adequate to support a massive growth in international transaction in goods, services and capital. This has taken place in an environment of increasing currency convertibility, and a pattern of growing international economic interdependence, both of which have been highly favourable to the processes of economic growth and development.

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More recently, however, questions have arisen regarding the longer term capacity of this system to meet the world's future needs for increased international monetary reserves, even under conditions of growing international credit facilities and more efficient use of the existing reserves. Questions have also arisen regarding the appropriateness of the increasingly heavy reserve and transactions role of the United States dollar in the present international monetary system, and about the efficacy of present mechanisms to bring about sufficiently timely and smooth adjustments to persistent over-all payments deficits or surpluses, especially among the major trading nations. Increased concern about these questions has given rise to a wide variety of opinions, proposals and studies regarding methods for improving the existing monetary arrangements. Throughout the post-war period, Canadian officials have played a leading and constructive role in the evolution of international monetary arrangements. This has continued over the more recent period of active study of problems in this field and of appropriate means for averting or resolving them. Few countries could be more adversely affected than Canada in the event of any serious strains in the international monetary system, and it is very important that Canada should be making a maximum contribution to the satisfactory resolution of the issues involved.

The Possibility of Fluctuations in the Rate of Growth

Broadly based expansionary forces now pervade the Canadian economy. Such forces have dominated the Canadian economy for close to five years. They may conceivably continue to dominate the economy over the whole period 1965-70. But this would require at least two fundamental conditions. The first is a continuation of strong and sustained growth in the world economy in general, and in the United States economy in particular. The second is success in avoiding the kinds of domestic pressures and instabilities which could ultimately undermine domestic expansionary forces. In the later stages of past business cycle expansions, such instabilities have traditionally been foreshadowed by slower increases in productivity, accelerating cost advances and narrowing profit margins.

Having regard to the long history of short-term business cycles in North America, it would be imprudent not to recognize the possibility of recession at some time over the next five years. The historical patterns and characteristics of business cycles in North America are discussed in Chapter 6, but at this point it is relevant to note two

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important conclusions. The first is the likelihood that with strong underlying growth forces in Canada and in the world environment, any recession which might occur is likely to be primarily associated with inventory adjustments and should be relatively short and mild. Second, the best defence against recession is to maintain a sustained growth of *final demand*. This requires a strategy in economic policies to avoid excesses and bottlenecks and to provide a favourable environment for stable growth in demand which is consistent with growing output capabilities of the economy.

3

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A HIGH AND CONSISTENT rate of economic growth is a basic economic and social objective of all modern economies. It is one of the goals indicated in the Council's terms of reference. Among the central tasks involved in preparing our *First Annual Review* were those of assessing the potentialities for economic growth in Canada to 1970, and of considering how these potentialities could be achieved consistently with other no less important economic and social goals.

Both the *First Annual Review* and the analysis of the preceding Chapter have stressed that the achievement of high growth in the Canadian economy involves making full and increasingly efficient use of our growing productive resources, both human and material, on a sustained basis. Explicit in this emphasis is the view that the long-term expansion of the potential output or productive capacity of the economy may be traced ultimately to two main sources: first, an increase in the *quantity* of productive resources which can be put to use in the economy; and second, an increase in the *productivity* of these resources stemming from improvements in their *quality* and in the *efficiency* of their use.

The first main source of growth—the increase in the quantity of productive resources—refers simply to changes in the physical volume of inputs into the economy of the two broad categories of resources: *labour resources*, in the sense of increased manpower of all kinds; and *physical resources*, in the form of increased stocks of machinery and

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equipment, buildings and structures, and land and natural resources. Growth in the quantity or input of these productive factors will obviously tend to increase the productive capacity and potential output of the economy.

The second main source of growth embraces a very diverse and complex group of factors which may contribute to increasing the output yielded by each quantitative unit of resources available in the economy—that is, *productivity*.

Increases in productivity are generally traced to two basic kinds of influences—improvements in the productive quality of the factors of production (such as levels of knowledge, education and skill, or attitudes and enterprise on the part of the labour force, more technologically advanced capital equipment, or better quality natural resources); and improvements in the efficiency with which the productive factors are combined (for example, by a more efficient organization of the production process, increased specialization and larger scale of output, and shifts of labour and capital from less to more productive lines of employment).

The relatively great importance of this second set of quality and efficiency factors, giving rise to gains in productivity, has been revealed in many studies which have shown that *only a part* of the total rise in the output of various national economies over different time-periods can be accounted for by the gains attributable to the increase in the quantitative input of labour and physical resources. The remaining portion of the total rise in output—referred to as the “residual” by economists—can only be accounted for by the improved quality and efficiency of inputs. Studies have shown that the “residual” portion of growth in potential output thus attributable to gains in productivity has been remarkably large among industrially advanced countries.

In this Chapter attention is focused mainly on the crucially important question of what basic factors contribute to long-term productivity growth. Productivity is generally statistically measured, for practical purposes, as the level of output in relation to the amount of labour required to produce it—that is, in terms of output per person employed. Obviously this should not be interpreted to mean that all of the improvement in productivity should be attributed to either labour or capital alone, or to any other single factor of production. Indeed, the last Review discussed some of the factors affecting productivity, explicitly listing at least six basic groups of factors which contribute importantly to its improvement:

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- increased investment in human resources to improve knowledge and skills,
- improved mobility of resources so that they can move easily and smoothly towards their most efficient employment,
- greater specialization and better organization of production,
- swifter and more effective technological advances,
- enlarged investment in fixed capital, and
- more initiative and enterprise in exploring new and better ways to use economic resources more productively, under the spur of competition and the lure of higher returns.

It was also emphasized that productivity gains are the essence of economic growth, in the sense that they are the real source of improvements in the average living standards of people. In other words, increases in average output per individual are ultimately the basis for increases in average real income per individual.

Having regard to the diversity and complexity of the foregoing factors which could affect the growth of productivity and real income per person, it is clear that the task of analysis is a formidable one. As was suggested in the *First Annual Review*, the field of productivity analysis still bristles with conceptual and technical difficulties, with respect to both measurement and analysis. Further complications arise from the fact that the factors are frequently interrelated—advancing technology and better management and skills go hand in hand; increased scale and specialization require not only expanding markets, but also flexibility and adjustability of economic resources. And, beyond this, it is abundantly clear that there is still much to learn about how various productivity factors act and interact to bring about results. In other words, it is extremely difficult to isolate the role and importance of any one factor from the complex and changing combinations of factors which are invariably involved in productivity growth.

The following analysis is therefore very much in the nature of an initial excursion into the intricacies involved in the field of the sources of economic growth and productivity. Its aim is to help to illuminate the general dimensions and characteristics of a number of growth factors, and not to attempt to present a definitive or comprehensive assessment of all sources of growth. Many of the estimates are necessarily rough approximations, calculated on the basis of certain assumptions which are believed to be valid. But much further work needs to be done in this field, and the analysis is therefore rather in the nature of a progress report on some of the initial results. To a very

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considerable extent, these explorations have been facilitated by pioneering analysis in the United States which has been developed over the past decade.¹

It is also useful to note at this point that the following Chapter on education and economic growth is essentially an extension of the analysis of this Chapter into what is increasingly recognized as one of the most important sources of growth of income per person. Similarly, Chapter 5 on regional economic growth is concerned primarily with the factors affecting income differences and the productivity performance of different regions of Canada.

This Chapter begins with a brief summary of the relevance of productivity to the analysis of potential output in our *First Annual Review*, and indicates the need for better understanding of the factors affecting productivity levels and growth. Second, since average income levels at any point in time are so closely dependent upon the productivity of resources, an assessment of comparative levels of real income between Canada and the United States provides a basis for exploring some of the differences in the quality and efficiency of use of productive resources in the two countries. Third, some of the changes over time in the quality and efficiency of use of resources in Canada are examined in a preliminary way, again in part by comparison with similar changes in the United States. Finally, the Chapter indicates the relevance of certain recent and prospective developments likely to have a bearing on the pace and pattern of future gains in productivity and real per capita income in Canada.

ECONOMIC GROWTH AND PRODUCTIVITY

To put the question of productivity into perspective, it will be helpful to recall that the analysis of potential output summarized in the *First Annual Review* took three important elements into account in assessing growth potentials for Canada between 1963 and 1970. These included: the prospect of an unprecedented rate of expansion in the labour force; the need to reduce existing slack in the economy as

¹ See especially the work of Edward F. Denison initially set forth in his study *The Sources of Economic Growth in the United States and the Alternatives Before Us*, Supplementary Paper No. 13, Committee for Economic Development, New York, 1962, and subsequently further developed in his forthcoming study on *European Economic Growth*.

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reflected in excessive unemployment and underutilization of productive capacity at the beginning of the period; and a judgment that productivity would increase approximately in line with the underlying trend experienced over the post-war period, but with extra productivity gains to be achieved from the reduction of economic slack under conditions of rapid growth.

These elements of growth were put into quantitative terms as a target average rate of growth in the total volume of output of 5.5 per cent per year, with average annual increases in the quantity of employment of about 3 per cent and in output per employed person of about 2.4 per cent. It was also indicated, however, that a significant portion of the over-all growth rate to 1970—approximately one percentage point—represented the taking up of the slack existing in the economy in 1963, as reflected in excessive unemployment and underutilization of productive capacity. According to the underlying calculations, if the economy had been operating at potential output in 1963, without economic slack, the rate of growth at potential output from 1963 to 1970 would have been 4.6 per cent per year over this seven-year period, reflecting the combined effects of an increase in employment of 2.6 per cent, and in output per employed person (productivity) of 1.9 per cent.

This framework of potential growth serves to underline two important general observations concerning economic growth and productivity. The first is the fact that while the *potential* growth of the Canadian economy is basically determined by the quantity, quality and efficiency of use of productive resources—factors which affect the capacity of the economy to *supply* increased output—actual growth may deviate significantly from potential as a result of changes in *demand*. In fact, major changes in demand—arising from changes in both internal and external conditions—have developed in our economy from time to time, tending either to depress it or to press it hard against its current potential capabilities. During the emergence of substantial and persistent weaknesses in demand (particularly when these have their origin in the United States economy), adverse repercussions are typically experienced in terms of both the fullness and the efficiency of the use of economic resources. Conversely, when pressure of demand is excessive in relation to the economy's current capacity, there may emerge, as noted in the preceding Chapter, distortions and imbalances which may ultimately undermine the sustainability of economic growth. In this context, it is worth noting that the maintenance of strong demand conditions has come to be recognized as a key factor in the impressive

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rates of sustained economic growth recorded by most Western European countries and Japan over the post-war period. Certain aspects of the question of demand are discussed further in Chapter 6.

The second observation stemming from the analysis of potential output is that since no systematic and comprehensive analysis had previously been published regarding the sources of productivity growth in the Canadian economy, last year's calculations of future potentials had to rely essentially on historical experience and performance. It is therefore of crucial importance to develop a better understanding of the factors which may have been involved in Canada's past performance as a guide to the future.

In contrast, no comparable degree of doubt exists regarding the potential future contribution of the increase of the labour force to potential output in 1970. Such an increase will be very largely determined by new entries into the labour force from the rapidly growing domestic supply of younger people whose numbers are known, and it is not likely to be significantly affected within the limits of variation which might reasonably be anticipated regarding net immigration or participation rates of those of working age in the labour force. Although we believe that our estimated productivity potential to 1970 is still valid, there is considerably greater uncertainty regarding this element of growth especially in the light of the variability in its past trends.

There is also the fact that no consensus appears to exist in public discussions in Canada about what are the primary or essential ingredients of productivity growth. There has been a considerable diversity of opinion in different quarters as to which factors, or groups of factors, are most important.

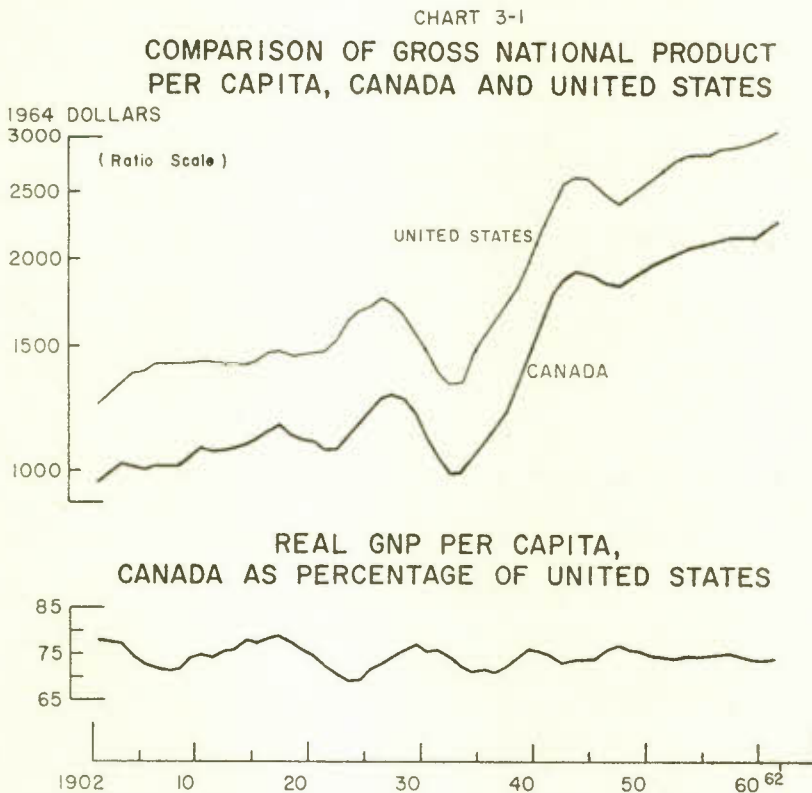
In these circumstances, it would appear to be useful for the Council to attempt to clarify, to the extent that it is possible, the relative importance of some of these basic factors, and to facilitate the evolution of a public consensus about what is important—as well as what is not important—as regards productivity growth.

To the extent that such clarification is possible, and such a consensus can be evolved, this will help to fulfil the Council's central responsibility, under its terms of reference as an advisory body, for indicating the public and private decisions and policies which would contribute most effectively to the maintenance of "a high and consistent rate of economic growth", and to encouraging "advances in efficiency of production in all sectors of the economy".

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INCOMES IN CANADA AND THE UNITED STATES

Average income per person in Canada has increased considerably during this century, but has remained persistently and substantially below the average real income per person in the United States (Chart 3-1). The persistence of this gap is difficult to understand, especially in the light of at least three important developments that should have contributed to a narrowing of the gap. Compared with the United States, Canada over this period has had *relatively* (1) a larger shift of



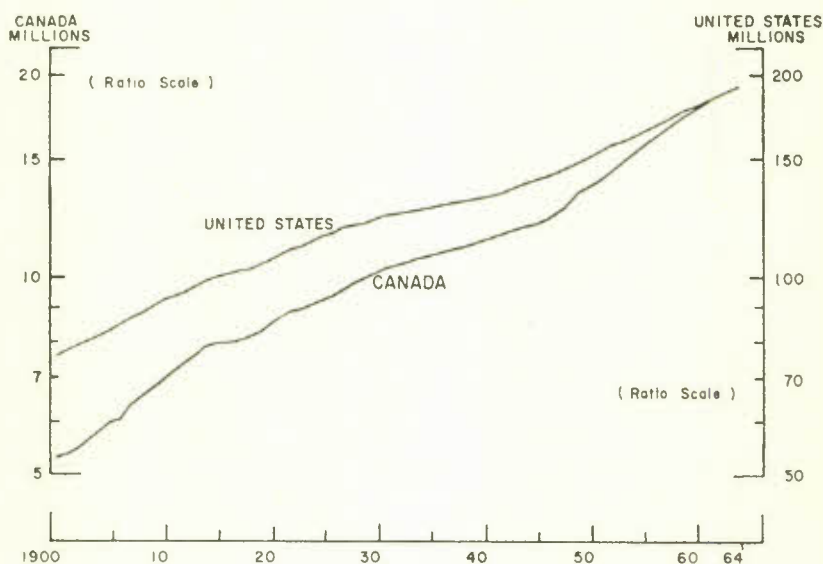
Note: Based on data in constant 1964 Canadian and United States dollars smoothed by five-year moving averages.

Source: Based on data from: *Historical Statistics of Canada*, M. C. Urquhart, ed., The Macmillan Company, Toronto, 1965. Dominion Bureau of Statistics, *National Accounts*, 1926-56, and various subsequent annuals. K. A. H. Buckley, unpublished estimates of real GNP, 1900-1925. U.S. Bureau of the Census, *Historical Statistics of the United States*, Washington, 1960. Department of Commerce, *Survey of Current Business*, August 1965. Department of Commerce, *U.S. Income and Output*, 1958. N. Potter and F. T. Christy, *Trends in Natural Resource Commodities*, John Hopkins, 1962.

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manpower from low earnings levels in agriculture to higher earnings levels in other sectors of the economy; (2) higher levels of capital investment—especially in the post-war period—and more rapid growth in capital stock¹ per employed worker; and (3) a more rapid rate of increase in total population (Chart 3-2), and even more especially in the growth of urban population. Population expansion appears to have been a positive factor encouraging long-run growth of real income per person in both countries. The more rapid rate of population growth in Canada has resulted in a relatively more rapid increase in this country than in the United States in the total size of the domestic market and in the density of many local market areas. These population developments, along with improved access to foreign markets, should have encouraged at least some relative improvement in productive efficiency from increased scale and specialization in various lines of production (although in some lines of production, dynamic processes of change

CHART 3-2
POPULATION GROWTH, CANADA AND UNITED STATES



Source: Based on data from: *Historical Statistics of Canada*, M. C. Urquhart, ed., The Macmillan Company, Toronto, 1965. Dominion Bureau of Statistics, *Canadian Statistical Review*. U.S. Bureau of the Census, *Historical Statistics of the United States*, Washington, 1960. U.S. Department of Commerce, *Survey of Current Business*.

¹ "Capital stock" as used here means a country's total inventory of business structures, machinery and equipment available for current production.

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have undoubtedly tended to enlarge the scale of production at which a high degree of productive efficiency can be achieved).

The fact is, however, that the real income gap between the two countries has not narrowed over the past two decades. The following analysis is intended to suggest some of the factors accounting for the present gap. This will help to provide a basis for subsequent appraisal of some of the possible reasons for the remarkable persistence of the differences in real income per capita over recent decades. It will also help to illuminate some of the considerations which should be taken prominently into account in economic policies designed to increase the productivity and standard of living of Canadians.

Current Difference in Income per Person between Canada and the United States

Various measures of the current difference in output and in income per person between Canada and the United States are indicated in Table 3-1. They suggest that, in 1964, the average income in Canada was at least 25 per cent below the United States level.

TABLE 3-1—SELECTED MEASURES OF INCOME PER PERSON,
CANADA AND THE UNITED STATES, 1964

	Income Per Person		Canada as a Percentage of United States
	Canada	United States	
	(Canadian dollars)	(U.S. dollars)	
Gross National Product.....	\$2,444	\$3,272	74.7
Net National Income.....	1,825	2,677	68.2
Personal Disposable Income.....	1,643	2,248	73.1

SOURCE: Based on data from Dominion Bureau of Statistics, U.S. Office of Business Economics and U.S. Bureau of Labor Statistics.

Do these figures represent a measure of the difference in real income—that is, in the average standard of living between Canada and the United States? In order to consider this question it is necessary to take into account any difference in average price levels which may exist between Canada and the United States. On the basis of earlier

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studies of such price comparisons, as well as on the basis of a current study under way by the Dominion Bureau of Statistics, it would appear that the over-all difference in average price levels—at least in the area of consumer prices—is not very large. The current study of the Dominion Bureau of Statistics suggests that there are widespread differences between the two countries in the average levels of prices of various groups of products and services. For example, average prices of clothing are somewhat lower and average prices of automobiles appear to be significantly lower in the United States. On the other hand, the average prices of services used by consumers are considerably lower in Canada. On balance, food prices appear to be somewhat higher in the United States, although this is not true of every group of food items. Moreover, both services and food, which tend to cost less in Canada, account for a substantial share of the total spending of a typical family. Although the DBS study is not yet complete, the initial results indicate that the over-all averages of current price levels in the two countries appear to be fairly close together. Average prices in Canada, in fact, appear to be about two or three per cent lower than in the United States for the approximately two thirds of the “consumer expenditure basket” for which preliminary comparisons have now been made. It is therefore reasonable to assume that differences in average levels of money income between the two countries can be taken as an approximate measure of the differences in the average levels of real income. It should be pointed out that in this comparison, no adjustment is made for the exchange rate; the differences in the levels of prices are taken already to reflect any effects of the exchange rate on the domestic price levels, and hence on real incomes, within the two countries in 1964.

The relatively higher level of average real income in the United States is a broad and pervasive phenomenon. It is generally reflected in all industrial sectors of the United States economy, including agriculture, and in virtually all occupational groups, as well as in the broad regional pattern of incomes. A comparison of the 1960-61 distribution of nonfarm income recipients in the two countries by income groups, is set forth in Table 3-2. There is a marked difference between the two countries in the proportion of income recipients receiving over \$6,000 a year—almost 20 per cent in the United States compared with only a little over 10 per cent in Canada. On the other hand, the proportion of income recipients in the \$2,000 to \$5,000 range is substantially larger in Canada than in the United States—somewhat over 40 per cent in Canada compared with somewhat over 30 per cent in the United

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States. Both countries have a substantial proportion of income recipients with incomes of less than \$2,000 a year. This group includes many part-time workers, whose numbers are relatively much larger in the United States, especially in the case of part-time women workers.

TABLE 3-2—DISTRIBUTION OF NONFARM-INCOME RECIPIENTS,
BY INCOME CLASS, CANADA, 1961 AND UNITED STATES, 1960

Income Class (Dollars)	Percentage of Income Recipients	
	Canada, 15 years or older 1961 Census	U.S., 14 years or older 1960 Census
1—1,999.....	41.1	40.0
2,000—3,999.....	29.9	21.7
4,000—4,999.....	11.5	9.8
5,000—5,999.....	7.1	9.0
6,000—9,999.....	7.6	14.6
10,000 and over.....	2.6	4.8
Total.....	100.0	100.0

NOTE: Canadian figures relate to Canadian dollars and United States figures to U.S. dollars.

SOURCE: 1961 Census of Canada, and U.S. Census of Population 1960.

Major Factors in Canada-United States Income Differences

It is not possible to provide a precise measure of the relative importance of the many factors involved in the differences in real income per capita between Canada and the United States. However, it is possible to suggest, at least in terms of general orders of magnitude, the role and contribution of some of these factors, including not merely some which appear to be important, but also some which do not appear to be very important.

As already indicated, the growth of the *total* output or income of an economy over time is determined both by changes in the quantity of the productive resources employed, labour, capital and natural resources, as well as by changes in the quality of such factors and in the efficiency with which they are combined. When we come to assess real income differences between Canada and the United States, it is important to consider, in comparative terms, a similar range of

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factors—for example, differences in the quantity of labour input, as influenced by differences in population structure and labour force characteristics; differences in the stock of capital and natural resources; differences in the quality of labour in terms of differences in average levels of education; and the effects on the efficiency of resource utilization of such matters as shifts in the structure of economic activity, mobility of resources, or changes in the scale and specialization of production.

The most important productive resource of any nation is its people. Even among the highly industrialized countries, in which there has been substantially greater use of increasingly large scale and technologically advanced capital facilities, labour is the predominant factor of production. This is indicated in the case of Canada and the United States, for example, by the data in Table 3-3, which show that in each country over three quarters of total national income accrues to labour and less than one quarter to property—a pattern of distribution of national income which has persisted for many decades. The proportion of labour income is slightly higher in the United States than in Canada. On the other hand, the proportion of income accruing to business capital is somewhat higher in Canada than in the United States. This relatively higher property income in Canada reflects the

TABLE 3-3—PERCENTAGE DISTRIBUTION OF NATIONAL INCOME,
BY TYPE OF INCOME, CANADA AND UNITED STATES,
AVERAGE FOR 1960-62

	Canada	United States
Labour income ⁽¹⁾	76.2	78.2
Income from housing.....	4.1	4.0
Net property income from abroad.....	-1.9	+0.6
Other property income.....	21.6	17.2
Total Net National Income ⁽²⁾	100.0	100.0

⁽¹⁾This includes an allowance for the net income of unincorporated business and net farm income that could be regarded as attributable to the labour of the owners. The share of the income in these sectors included in labour income has been estimated as being close to two thirds of the total income for these groups. Any plausible alternative allowance would not affect the over-all results to any significant extent.

⁽²⁾Net National Income is the sum of all payments made to productive resources in the economy. It includes wages and salaries, profits, interest, dividends, rents, etc., but excludes capital consumption allowances and indirect taxes less subsidies.

SOURCE: Based on data from Dominion Bureau of Statistics and U.S. Office of Business Economics.

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generally greater degree of capital intensity in the Canadian economy, which is discussed later in this Chapter, as well as higher long-term interest rates.

Labour Input

In view of the large relative dimensions of labour income, it is clearly of major importance to consider carefully the extent to which the income difference between Canada and the United States may be affected by differences in labour input—that is, the availability and use of manpower of all kinds as a productive resource. There would appear to be two main factors relating to labour input which have a major bearing on the substantial per capita income difference. The first of these factors relates to major differences in the population structure and labour force characteristics of the two countries. The key differences are summarized in Table 3-4. In general—the higher the proportion of a country's population in the labour force—or more precisely, the higher the proportion of income earners in the total population—the higher will be the average real income of its people.

TABLE 3-4—POPULATION, EMPLOYMENT, AND SELECTED
LABOUR FORCE RATIOS, CANADA AND UNITED STATES, 1960

	Population (Thous- ands)	Total Labour Force as % of Population	Total Labour Force as % of Population Ages 15 to 64			Employ- ment as % of Population
			Total	Male	Female	
Canada.....	17,870	36.6	62.3	91.8	32.0	34.1
United States.....	180,676	40.5	67.8	92.9	43.2	38.3
Canada as Percent- age of the United States.....	9.9	90.4	91.9	98.8	74.1	89.0

NOTE: Labour force data include both military personnel and civilians.

SOURCE: Based on data from Organization for Economic Cooperation and Development, and Dominion Bureau of Statistics.

This Table indicates that Canada has recently had a much lower percentage of its population in the labour force, and an even lower percentage of employment in relation to total population. One reason for this is the relatively lower proportion of people of working force age

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in Canada, especially as a result of the exceptionally high post-war birth rates in Canada. Another reason is the lower participation rate among those of working population age, especially as a consequence of the very much lower participation of women in the Canadian labour force—only 32 per cent in Canada in 1960 as compared to over 43 per cent in the United States. *Although the difference in real income per capita between Canada and the United States is in excess of 25 per cent, the real income difference per person in the labour force or per employed person between the two countries is less than 20 per cent.* In other words, while per capita income, and hence the average standard of living, in Canada is more than one quarter below the United States, average productivity in Canada is less than one fifth lower. As will be indicated at the end of this Chapter, the over-all real income difference per capita between the two countries will tend to narrow in the future as a result of (1) the changing age distribution in the population which will lead to a more rapid rise in the ratio of the working age population to total population in Canada than in the United States over the medium-term future, and (2) the changing participation of women in the labour force which is expected to come closer to the rates in the United States.

The other major factor regarding labour input arises from the higher quality of labour in the United States in terms of the relatively much higher level of educational attainment in the United States than in the Canadian labour force. This factor has been calculated in very rough terms to account for well over a third of the productivity difference between the two countries¹. Two elements are involved in the income difference associated with differences in education—the relatively much larger share of the labour force in the United States which has completed high school or acquired a university degree, and the significantly higher average incomes accruing to those with higher education.

There are, of course, some minor factors relating to labour input which would appear to work in the direction of partially narrowing the differences in income between the two countries. For example, the average number of hours worked per week tends to be somewhat higher in Canada than in the United States. But it is apparent that the differences in real per capita income between the two countries are affected to a very substantial extent by differences in the availability, utilization and educational levels of manpower resources.

¹ Gordon W. Bertram, *The Contribution of Education to Economic Growth*, Staff Study No. 12, Economic Council of Canada, Ottawa: Queen's Printer, 1965.

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Capital Input and Natural Resources

The United States is widely regarded as the nation having the highest amount of capital per worker in the world. However, although many people, both in Canada and abroad, are aware of the heavy volume of post-war investment in Canada, it is not widely recognized that capital per worker is generally higher in Canada than in the United States, at least in the nonfarm sectors of the economy (Table 3-5). This is especially true of the stock of structures. The stock of machinery and equipment per worker is about the same as in the United States in the case of manufacturing, but for other nonfarm sectors it is appreciably above the level in the United States. Taking machinery, equipment and structures together, the data in Table 3-5 indicate that in 1961 capital per employed person in Canada was about one eighth higher in manufacturing and over two fifths higher in other nonfarm sectors than in the United States. In the farm sector, however, it appears that capital per employed person is very substantially below the United States level.¹ These figures relate to the *quantity* of capital stock only and do not reflect differences which may exist in quality as affected, for example, by the average age of capital or by differences in technology.

Canada is thus a capital-intensive country, even in relation to the United States. Yet, contrary to many prevailing views, very high capital employment ratios in an economy apparently do not automatically guarantee very high real per capita income. A high stock of capital per worker may be a necessary condition for a high standard of living for a nation, but it is not sufficient by itself to assure this. Other factors are also highly relevant.

A number of factors contribute to the relatively heavy use of capital per employed person in Canada. In manufacturing, relatively short production runs in many product lines tend to lead to more capital overhead in relation to output and less intensive use of the facilities available. In many fields, production is subject to wider seasonal swings in Canada, with the result that more capital facilities may be needed to meet seasonal production peaks, but with lower production rates over a full year. Climate is also a factor necessitating a generally higher capital stock, especially in the case of structures. In addition, the wide geographic extent of this country, and the sparseness of population settlement outside the major urban concentrations of popu-

¹ The data for both countries exclude land and livestock which together account for a large part of total investment in the farm sector.

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TABLE 3-5—GROSS BUSINESS CAPITAL STOCK PER EMPLOYED
PERSON, CANADA AND THE UNITED STATES, 1961

(In 1949 dollars)

	Canada	United States	Canada as a Percentage of United States
Manufacturing			
Machinery and equipment....	5,187	5,436	96
Structures.....	4,525	3,137	144
Total.....	9,712	8,573	113
Other Nonfarm			
Machinery and equipment....	6,212	5,118	121
Structures.....	11,820	7,360	161
Total.....	18,032	12,478	145
Farming			
Machinery and equipment....	4,931	6,848	72
Structures.....	3,615	6,350	57
Total.....	8,547	13,198	65
Total Gross Business Capital Stock			
Machinery and equipment....	5,870	5,414	108
Structures.....	8,097	5,906	137
Total.....	13,967	11,319	123

NOTE: Canadian figures are in Canadian dollars and United States figures in U.S. dollars. No comparisons of Canadian and U.S. prices for comparable items of machinery and equipment and costs of comparable structures for 1949 are available, but it would appear that some isolated items were more expensive in Canada at that time. Comparisons of capital stock data involve difficult problems of comparability in coverage assumptions and methodology. The figures in this Table are believed to be as comparable as possible on the basis of available data. Although some limitations exist with regard to these comparisons, they do not invalidate the broad general conclusions drawn from these data in the accompanying text.

SOURCE: Based on data from Dominion Bureau of Statistics, U.S. Office of Business Economics and estimates by Economic Council of Canada.

lation, clearly contribute to relatively heavier capital investment in transportation and communication facilities, as well as in various forms of social capital. Still another factor is the excess capacity which is a frequent feature of the build-up of large natural resource production capabilities in Canada, in anticipation of long-run future demand increases. Furthermore, the capital stock per employee varies considerably between industries, and Canada has a somewhat higher proportion of its labour force engaged in such highly capital-intensive industries as electric power, mining and newsprint.

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With respect to the endowment of land and natural resources per employed person, it is also apparent that Canada is in a favourable position in comparison with the United States, although no measure has yet been calculated about the extent of such differences. It is widely recognized that Canada has important natural resources in the form of minerals, petroleum, forests, fresh water and agricultural land. Historically, natural resources and their development and export have played an important role in the development of particular regions of Canada and the timing and industrial composition of growth in the country as a whole.

The above considerations indicate that both the extent of capital facilities and the use of land and natural resources per person tend to operate in the direction of a higher level of productivity in Canada than in the United States. In combination with other factors, a large volume in capital, land and other natural resources may be very important elements in high levels of productivity, but they are not sufficient in themselves to assure the attainment of high productivity and high standards of living. Thus, the main explanation for the lower levels of Canadian incomes per employed person must lie in the differences in the quality of Canada's productive resources, and in the efficiency with which these productive resources are combined in the production process—that is, the scales of output, degrees of specialization, the attitudes and effectiveness of management and labour, and so forth.

Other Factors

Regarding the difference in income per capita between Canada and the United States, the effect of the relatively higher inputs of capital and natural resources per person employed appears to have been more than offset by the lower average level of education in the Canadian labour force and other factors. Among such other factors are some of those which are enumerated at the end of the following section. But much further exploration is required before the relative importance of various other factors can be placed in over-all perspective. Nevertheless, four factors would appear to justify special comment at this stage—the effects of scale and length of run in manufacturing, the skills and effectiveness of management, certain indications of the efficiency with which labour resources are employed, and differences in attitudes, efforts and enterprise.

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Many Canadians familiar with various aspects of manufacturing in North America emphasize the adverse implications for productivity in many Canadian business units from short production runs, frequent changeovers of assembly lines and inability to spread design and engineering costs.¹ There is considerable evidence that Canadian plants produce a very wide range of individual commodity items, a wider range than is typically produced by plants in the same industry in the United States. To some extent this may be associated with the size of their respective markets and the effects of trade barriers on the structure of Canadian production. In any event, it would appear probable that the same number of employees and an equivalent stock of machinery can achieve higher productivity with a limited number of products than with a more diversified range. In the United States many small plants prosper and grow in direct competition with the giants of industry, with a size very similar to the typical Canadian plant but with much larger output per worker.

Senior management has a very important role in making a company and its employees and capital facilities productive, efficient and profitable. There is evidence from the 1961 Census of Canada and the 1960 Census of the United States to suggest that the educational attainment of the owner and management group is very significantly lower in Canada than in the United States. The average differences between the two countries in this regard appear to be wider than in almost all other major categories by the labour force. Furthermore, interviews undertaken by members of our staff indicate that there is increasing recognition and concern about the need for higher educational levels for future management in Canadian business firms, as a basis for more aggressive and imaginative approaches to risk-taking, innovation, new product development, and marketing.

There is evidence indicating that the disparities in the income and earnings of individuals employed in the various regions, industries and occupations are greater in Canada than in the United States. This is suggested by the differences in the levels of income per capita between regions, which will be explored more fully in Chapter 5. Moreover, average hourly earnings differ more between industries and occupations in Canada than in the United States. Assuming that the level of income or earnings of individuals reflect their productivity, then large

¹ See for example, H. E. English, *Industrial Structure in Canada's Internal Competitive Position: A Study of the Factors Affecting Economies of Scale and Specialization in Canadian Manufacturing*, Private Planning Association of Canada, Montreal, 1964, p. 2.

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and persistent differences in labour earnings per hour by industry, occupation and region suggest that labour is not adapting adequately to opportunities for more productive employment. The implication of the broad pattern of wider income disparities in Canada is that such adaptation has not gone as far as in the United States. This is a further indication of the need for, and the potential benefits from, improved manpower and labour market policies in Canada.

Attitudes, efforts and enterprise of both management and labour can have very important effects on the productive efficiency of an economy. These are shaped not only by economic forces and conditions but also by sociological, psychological and other noneconomic factors. No strong or clear-cut evidence is available to indicate whether or not there are general and significant differences between Canada and the United States in attitudes to work, risk-taking, innovation, expansion, and the pursuit of efficiency. Yet, there does exist some uneasiness in Canada that such differences may be a factor contributing to relatively lower productivity in this country.

MAJOR FACTORS CONTRIBUTING TO PAST GROWTH

The previous section of this Chapter has explored some of the factors contributing to the current difference in per capita real income between Canada and the United States. This section considers briefly some of the sources of growth in per capita real income and output in Canada *over time*, as well as some of the elements of differences in these factors in relation to those operating in the United States. It also seeks to identify certain factors involved in the persistence of the gap in per capita real income between these two countries noted in Chart 3-1.

Over the three decades from the mid-1920's to the mid-1950's, real income per capita in Canada increased about 70 per cent, or by 1.9 per cent per year. Both the beginning and the end of this period represent years of relatively low unemployment and relatively full utilization of production capacity, and are not distorted by depression or war as were many of the intervening years.

Among the factors contributing substantially to the rate of growth of real income per capita over this period have been:

—*Labour Input*—There has been a substantial improvement in the quality of labour associated with a rising level of formal education, together with increased participation rates of women in the labour force. However, these factors were at least partially

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offset by two other factors: a decline in labour input in terms of a marked reduction in average weekly hours of work; and a more rapid increase in total population than in the labour force (primarily as a result of the high post-war birth rates and the substantial rise in the number of children of pre-working force ages).

—*Capital Input*—There has also been a substantial growth in the stock of capital per worker. During the Depression of the 1930's, new investment dropped sharply, and only moderate changes in capital stock occurred during the Second World War. But in the post-war period, the capital stock increased very sharply.

—*Scale and Specialization*—Through larger scales of production and greater specialization in many lines of production, there has been a substantial increase in the efficiency of use of productive resources. This has been encouraged by expanding markets resulting from strong population growth in Canada, especially in urban areas. It has also been encouraged by expanding international trade opportunities, partly facilitated by improved access for Canadian producers to foreign markets.

—*Industry Shifts*—Table 3-6 shows the important shifts which took place in the distribution of employment among different industrial categories between 1946 and 1964. These shifts appear to have been particularly important in the 1946-56 period. The very wide disparities in average income per person employed in various industries in 1956 are also shown in the Table. We have estimated that interindustry employment shifts over the 1946-64 period as a whole—taking account of the relative shifts out of such a low income sector as agriculture and into some of the higher income sectors—have been responsible for about a fifth of the annual average increase of 2.4 per cent in the real income per employed person during this period.

Regarding the contribution of the above factors to increased real income per capita in Canada *in relation to the United States*, five conclusions would appear to be relevant to the post-war period:

- the increase in the quality of the labour force, as measured in terms of the advance of its average level of education, has been more rapid in the United States than in Canada (see Chapter 4);
- the higher birth rates in Canada than in the United States in the post-war period have worked in the direction of widening the

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TABLE 3-6—EFFECTS OF EMPLOYMENT SHIFTS BY INDUSTRY,
1946 to 1964

	Index of Labour Income per Person Employed ⁽¹⁾ (all industries = 100)	Percentage Distribution of Employment	Extent of Shift in Employment
	1956	1946	1964
Agriculture.....	45.0	25.3	9.6
Fishing and Trapping.....	78.0	0.6	0.4
Trade.....	92.7	12.5	16.5
Construction.....	105.3	5.1	7.1
Public Administration, Defence, Service.....	106.4	18.5	28.8
Transportation, Storage, Com- munication.....	111.4	7.8	7.5
Forestry.....	113.2	2.9	1.2
Manufacturing.....	115.4	22.4	22.4
Finance, Insurance, Real Estate.....	122.3	2.3	3.7 ✓
Electric Power, Gas.....	138.1	0.7	1.0
Mining.....	144.8	1.8	1.7
All Industries.....	100.0	100.0	100.0

⁽¹⁾This includes an allowance for the income of unincorporated business and net farm income attributable to the labour of the owner.

Source: Based on data from Dominion Bureau of Statistics and estimates by Economic Council of Canada.

- difference in real average income per person between Canada and the United States;
- interindustry shifts have been a relatively more important factor in Canada than in the United States in contributing to real per capita income changes;
- the relatively more rapid growth in total and in urban population in Canada than in the United States, and improved access to foreign markets, have tended to enlarge the scope for increased efficiency in many Canadian industries, relative to the United States industry, as regards the scale and specialization of production; and
- the growth of capital per employed person in the nonfarm sectors of industry has been much more marked in Canada than in the United States over the post-war period (Table 3-7), but there has been relatively more emphasis in the United States on new technology.

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TABLE 3-7—INDEXES OF GROSS BUSINESS CAPITAL STOCK PER
EMPLOYED PERSON, CANADA AND THE UNITED STATES,
1949, 1957 and 1961
(1949 = 100)

	Manufacturing			Other Nonfarm		
	Structures	Equipment	Total	Structures	Equipment	Total
<i>Canada</i>						
1949	100	100	100	100	100	100
1957	108	173	135	118	153	128
1961	131	214	165	150	202	165
<i>United States</i>						
1949	100	100	100	100	100	100
1957	97	140	119	105	140	117
1961	105	170	139	109	138	119

SOURCE: Based on data from Dominion Bureau of Statistics, U.S. Office of Business Economics and estimates by Economic Council of Canada.

Finally, there is the important question regarding what other sources of economic growth have contributed to Canada's long-term development. To raise this question is to invite the laying out of a tempting but still largely unexplored smorgasbord of possibly relevant factors:

- other possible aspects of quality change in labour inputs (such as health, attitudes to work, experience, effort and enterprise, and other aspects of rising educational attainments discussed in Chapter 4);
- the quality of capital input, especially the effect of the development and application of new technology;
- the effectiveness of management in devising increasingly efficient combinations of productive resources in production processes;
- the mobility and adaptability of labour and other productive resources under changing economic conditions;
- a host of environmental and institutional factors affecting many different facets of economic activity.

Merely to enumerate such factors is to indicate how little is yet known about the many complex sources of economic growth, and how much still remains to be explored. But at least three basic elements might be indicated as facilitating the operation of forces which will contribute to growth. The first is competition, which tends to act as a

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major spur to effort and enterprise, and to mobility and flexibility in an economic system, all of which are necessary ingredients for the kind of dynamic change which is the hallmark of economic growth. The second element is a strong advance in education and knowledge which, quite apart from its direct contribution to growth, tends to have powerful and pervasive effects in strengthening the potential role of other sources of growth. There is, for instance, a close relationship between levels of education and industrial, occupational and regional mobility of manpower. Third, success in achieving sustained and balanced economic growth appears to breed further success—for example, by facilitating more confident and forward-looking decision-making, by encouraging awareness of both the need for, and benefits of, adapting to change, and by stimulating efforts to overcome rigidities and other impediments to more efficient combinations of persistently scarce productive resources.

IMPLICATIONS FOR THE FUTURE

From this review of some of the factors which have contributed to economic growth in Canada and to differences in real income between Canada and the United States, it is possible to suggest certain considerations which will be relevant to the medium-term future growth of Canadian productivity and living standards.

With the changing age structure of the population in the latter part of the 1960's and in the 1970's, and with an accompanying marked rise in the participation of women in the labour force, the labour force will grow more rapidly than the population in the years ahead. This is reflected in the estimates in the *First Annual Review* anticipating an increase in population of 2.0 per cent per year from 1963 to 1970, compared with an increase in the labour force of 2.7 per cent per year, a very significant difference. This will work in the direction of increasing the potential for growth of real income per capita in the years ahead.

One of the important implications of our analysis is the important contrast between Canada and the United States as regards the broad patterns of past investment. In Canada relatively more resources have been put into capital facilities, while in the United States relatively more resources have been put into the development of a more highly educated labour force and into the development and application of new technology.

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Although the main discussion of education is in the next Chapter, a number of points may be noted here that have important implications for the future. Over the past half century, the level of education in the Canadian labour force has fallen gradually further behind the United States, especially as regards the proportion of persons completing high school and university. By 1961 this gap was substantial. However, there has been a large increase in the proportion of Canadian teenagers attending school during the 1950's and the first half of the 1960's, and the average level of their education is well above the older members of the labour force. Over the next decade the number of younger persons entering the labour force will be much higher than the number of older workers leaving. The contrast between the number and average education of those entering and leaving the labour force in Canada over the next decade or so thus clearly indicates that an acceleration in the rising educational level of the labour force is in prospect. A rising level of educational attainment is, therefore, likely to be a much more important factor in economic growth in Canada over the next two decades than over the past two decades. Moreover, there may well be some narrowing of the gap in educational levels between Canada and the United States during the coming decade. This is particularly significant in the context of the preceding analysis which has suggested that the difference in educational levels has been an important factor contributing to the gap in the real income per worker between the two countries.

The increase in capital stock per worker has been very large in Canada over the last 15 or 20 years. The potential investment analysis in the *First Annual Review* provided for an average increase of about 5.8 per cent per year in the gross stock of capital, or about 2.5 per cent per year for each worker, over the period 1963 to 1970. Despite the high rate of increase in new investment required to attain potential output in 1970, these estimates imply that there would be a relatively much smaller rate of increase in gross capital stock per worker than took place between the end of the Second World War and the early 1960's. It is therefore unlikely that the increase in capital stock per worker will be as significant in the growth of real income over the next decade as it has been in the last decade and a half.

Although there have already been significant shifts in the use of productive resources between Canadian industries, especially during the post-war period, further important changes are likely. Indeed, the *First Annual Review* stressed that it should be an important objective

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of economic policy in Canada to facilitate adjustment from lower to higher income and productivity opportunities for Canadian manpower and other resources. The position of agriculture is particularly important in this respect. Average incomes in this sector are significantly lower than incomes elsewhere, particularly when allowance is made for the equity of the farmer in land, livestock, buildings and machinery. There are marked differences in the average level of farm and nonfarm incomes in the individual regions, with farm incomes being particularly low in the Atlantic Provinces and Quebec. A large proportion of farmers in these regions have cash income under \$1,500 per year. Furthermore, the average age of farmers is very high and many farmers will be reaching retirement age over the next decade. Many low income farms will be either abandoned or consolidated into larger ones. There is still considerable scope for higher incomes from shifting out of agriculture, but it is unlikely that the extent of this shift will approach the rapid adjustments between 1946 and 1956.

In summary, it seems likely that more rapid increases in labour force than in population, the effects of the increasing level of education in the labour force, and the scope for further shifts in labour out of low income industries and areas in Canada will work in the direction of strengthening the future growth of the Canadian economy.

4

Education and Economic Growth

EDUCATION is a crucially important factor contributing to economic growth and to rising living standards. This has been the conclusion of a growing body of economic analysis in a number of countries. This is the conclusion also reached in our exploratory analysis of the contribution of education to the growth of the Canadian economy and to the welfare of its people.

It has long been recognized that education possesses intrinsic value as a factor enhancing the quality and enjoyment of life of individuals, as well as the quality and energy of a whole society. We fully appreciate this fundamental value of education and we would not wish to detract in any way from the basic view that education is a means of enlarging man's understanding, stimulating his creative talents, ennobling his aspirations, and enriching human experience. But education also has economic aspects whose character and dimensions have only more recently become a matter of interest and careful study, and it is primarily certain *economic* aspects of education which are the special focus of attention in this Chapter.

We are, of course, fully aware of the constitutional responsibilities of the provinces in the field of education. Our concern relates to the role of education in the growth of the national economy. The economic importance of education has already been stressed in our *First Annual Review*, especially in our discussion of the vital need for creating and maintaining an adequate supply of professional, technical, managerial and other highly skilled manpower as a basis for future growth of the Canadian economy. We also placed "increased

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investment in human resources to improve knowledge and skills" at the head of our list of essential ingredients for attaining the goal of faster and better sustained productivity growth. In addition, the role and relevance of education as a factor in Canadian economic growth has been anticipated in the discussion of sources of economic growth in the preceding Chapter of this Review; it will also constitute an important theme in the next Chapter in our discussion of regional income disparities in the Canadian economy.

Three central questions are examined in this Chapter:

- To what extent did the average education of the working population increase over the half century from 1911 to 1961, and how does this compare with the increases which took place in the United States over the same period?
- What relationships are there between levels of educational attainments and levels of income for various groups in the Canadian economy?
- What contribution has rising education made to the over all growth of the Canadian economy?

The Chapter concludes with a more general discussion of the medium- and longer-term tasks to be faced in providing for an adequate expansion of educated and skilled manpower, together with an adequate expansion of appropriate educational facilities.

At the outset it should be emphasized that our work in examining the significance of education for Canadian economic growth is very much in the nature of a pioneering venture. Many practical difficulties beset explorations in this area—conceptual problems in defining education in measurable terms, inadequacies of information, the complexities of many of the techniques of analysis and the imprecision of many of the particular statistical estimates and results. But we consider it to be useful to make some initial findings and conclusions generally available in this Review, even though these must be considered approximate and incomplete.¹

Illustrative of the difficulties encountered are the problems arising in the key estimates of the "stock" of education in the labour force—that is, the average level of education of the entire working population:

¹The principal findings and conclusions in this Chapter are largely based on two analytical studies which have examined in considerable detail various economic aspects of increased education in Canada: Gordon W. Bertram, *The Contribution of Education to Economic Growth*, Staff Study No. 12, Economic Council of Canada, Ottawa: Queen's Printer, 1965; and J. R. Podoluk, *Earnings and Education*, Dominion Bureau of Statistics, 1965.

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employees, farmers, managers, professional workers and all others. The educational attainment of the labour force, according to these estimates, is calculated from the average years of formal schooling, subsequently adjusted for changes in the average numbers of days of attendance per school year. However, the basic data exclude certain minor parts of the formal education system. Also, the available data do not take account of various forms of training after formal education—for example, vocational, technical and apprenticeship training as well as worker and management training received on the job, and other training. Although such types of education are of growing importance, especially with a view to keeping worker and management training up to date in the context of rapid scientific and technological change, the changes which have occurred in these categories over the past three or four decades have not greatly affected the total stock of education in the labour force. Particular difficulties also arise in connection with the development of estimates for gains and losses in the educational attainments of the labour force in respect of immigration and emigration.

A further major question concerns the subject of differences in the quality of education. Even the most casual survey of educational institutions and facilities, curricula, qualifications of teachers and other aspects of the highly decentralized educational systems in North America readily suggests that there are major differences in the quality of education—not only over time, but also at any given point of time between different regions and localities within Canada, within the United States, and between these two countries. Such differences are, of course, virtually impossible to quantify in any meaningful over-all terms. Even among those who are most competent to judge various elements of such quality factors, there does not appear to be a consensus as to whether the over-all quality of education in Canada is higher or lower than in the United States. The picture is so obviously a mixed one. Outstanding examples of high quality educational standards at all levels of education can be found within each country which compare in highly favourable terms with lower quality standards in various parts of the other country. After careful consideration of these matters it has been concluded, as a working assumption for our analysis, that the *average* quality of education is roughly similar in the two countries—in short, that these differences largely cancel out, and that one year of education in Canada is, on the whole, roughly the equivalent of one year of education in the United States.

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Another working assumption underlying the following analysis is that the quality of an average day's education around 1960 can be roughly equated with the quality of an average day's education fifty years earlier. A considerable improvement in the quality of Canadian education has undoubtedly taken place during this period, but no satisfactory basis appears to exist for estimating such a quality improvement in quantitative terms. The implication is, as is emphasized in the latter part of the analysis, that this and other factors have made education an even more important factor contributing to the nation's economic growth than is suggested by available statistics.

Many questions in this large and important field require further examination and analysis, including particularly some of the reasons for the marked differences in Canadian and United States education performances and trends over recent decades. We intend to develop our work further in this field.

Despite the many difficulties underlying any appraisal of education as a factor in economic growth, we believe that the estimates shown in this Chapter are valid as general orders of magnitude, and provide an adequate basis for six basic conclusions:

- (1) There has been a substantial long-term rise in the educational attainments of the Canadian labour force. But the average level of such attainments has been considerably below that of the United States, and has increased more slowly than in the United States. There has thus been a widening "educational gap" between the two countries.
- (2) This gap appears to have widened particularly at the secondary school level in the inter-war years, and particularly at the university level in the post-war period.
- (3) The income of individuals is generally closely related to the extent of formal schooling. In fact, available data show that differences in lifetime earnings of individuals classified by occupational groups appear to be directly associated with differences in levels of schooling. Moreover, the additional income benefits derived from obtaining a high school or university education, in relation to the costs of such education, appear to be somewhat higher in Canada than in the United States, and the rates of return from increased investment in education would appear to compare very favourably with the returns available from other types of investment.
- (4) The benefits of increased education, according to certain calculations and assumptions, are estimated to have accounted for a

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share in the general order of one quarter of the *increase* both in the average standard of living and in the productivity of Canadians from 1911 to 1961. Although this is a large contribution, it is apparently substantially lower than that indicated in comparable estimates for the United States.

- (5) Differences in the average educational attainments appear to be an important element in the difference in living standards between Canada and the United States.
- (6) The potential future economic benefits to Canadians and to the Canadian economy generally from increased educational attainments are very large, but they can only be fully realized over extended periods of time.

EDUCATION OF THE LABOUR FORCE

The Canadian economy has benefited greatly during this century from the improved quality of its labour force as reflected in enhanced educational attainments. But this improvement has been uneven, and has fallen well short of what could have been achieved.

A careful historical appraisal of the development of education in Canada suggests that spectacular advances were made in education from the latter part of the nineteenth century to the early 1920's. In this period, literacy and elementary education for all citizens were strongly promoted. Particularly noteworthy was the record of educational achievement in Ontario in the later decades of the last century, under the spur of a vigorous, dedicated and well-informed Department of Education. But Canadian educational advances appear to have tapered off by 1920; the earlier momentum at the primary school was not maintained and there were only limited advances at the secondary school level.

Renewed dynamism has clearly characterized major segments of Canadian education in the post-war years. This is perhaps especially true of the years since the 1961 census date which, for practical reasons, has had to be the terminal point in our initial analysis in this field. Yet, having regard to the very large numbers of people already in the labour force who received only limited formal education in earlier years, it will take many, many years to bring about a substantial rise in the average level of education—even up to the level, say, which has already been achieved in the United States. And it would clearly take large and sustained efforts over a period of many decades to close the gap with the United States.

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TABLE 4-1—EDUCATIONAL ATTAINMENT OF THE MALE LABOUR
FORCE BY AGE GROUPS, 1911 AND 1961
(Percentage distribution)

Age Group	Total	0-4 Years Elemen- tary School		5-7 Years Elemen- tary School		8 Years Elemen- tary School		1-3 Years High School		4 Years High School		Some Univer- sity Educa- tion		Complete Univer- sity Educa- tion	
		1911	1961	1911	1961	1911	1961	1911	1961	1911	1961	1911	1961 ⁽¹⁾	1911	1961
Total.....	100.0	24.2	7.5	34.5	20.8	16.1	17.6	18.1	29.7	3.2	8.7	1.5	10.1	2.4	5.6
25-34.....	100.0	18.4	3.9	33.2	14.6	18.3	19.5	21.3	33.8	4.3	8.7	1.8	13.5	2.7	6.0
35-44.....	100.0	23.4	6.1	34.9	21.4	16.1	15.0	18.2	31.6	3.2	9.5	1.6	10.1	2.5	6.3
45-54.....	100.0	28.7	9.5	35.8	23.4	14.2	17.8	15.7	27.3	2.3	8.5	1.3	8.4	2.0	5.0
55-64.....	100.0	34.6	15.3	35.7	29.1	12.4	18.3	12.7	20.3	1.7	7.4	1.1	5.3	1.7	4.2

⁽¹⁾Includes Grade 13 for provinces in which Grade 13 is given.

SOURCE: Gordon W. Bertram, *The Contribution of Education to Economic Growth*, Staff Study No. 12, Economic Council of Canada, Ottawa: Queen's Printer, 1965.

The general pattern of increases in the educational attainments of the Canadian labour force from 1911 to 1961 is indicated in Table 4-1. Over this period, the proportion of persons with *only* elementary education in the male labour force has declined from 75 to 46 per cent while, at the other end of the educational scale, the share of those with university degrees has risen from 2.4 to 5.6 per cent. Moreover, the proportion of those completing four years' high school has moved up to 8.7 per cent in 1961 from 3.2 per cent in 1911. In addition, it is important to note that the younger age groups generally have more formal education than the older groups, especially in 1961.

Between 1911 and 1961, the average number of years of formal schooling of the male labour force increased by close to two fifths (Table 4-2).

TABLE 4-2—PERCENTAGE INCREASES IN AVERAGE YEARS
OF SCHOOLING OF MALE LABOUR FORCE AGED 25-64, 1911-61

1911-21.....	7.0
1921-31.....	5.2
1931-41.....	7.9
1941-51.....	7.5
1951-61.....	6.1
1911-61.....	38.6

SOURCE: Gordon W. Bertram, *op. cit.*

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Education Stocks and Flows

Changes in the average number of years of schooling, or in the *stock* of education in the labour force, are very largely determined by the combined effects of three *flows*—the inflows of younger people into the labour force after leaving school, the outflows resulting from retirements and mortality, and the net flows associated with immigration and emigration. The inflows of younger people tend to increase the average stock of education, since they generally have more schooling than their parents. Similarly the outflows, especially those arising from retirement of older persons, also generally tend to raise the average level of schooling of the remaining labour force, since the older age groups typically have relatively less schooling than the over-all average. Net migration, which may obviously add to or detract from the stock of education, is discussed below.

Over any one year, the net flow of people into or out of the labour force is generally very small in relation to the over-all size of the labour force. Even over a decade, the new entrants or the departures do not constitute a dominant proportion of the labour force. Consequently, the net change in the average educational level in the labour force is not greatly affected in any one year or decade. This will be true even during the coming ten years when there will be an extraordinarily large influx of younger people with educational attainments far above those who will be departing. Thus, the average educational level in the labour force tends to change relatively slowly over short or even medium-term periods. In fact, the historical record shows only a rather gradual trend of improvement in this average over a period of many decades. For example, the average numbers of years of schooling among the Canadian male labour force, which had been slightly less than seven years in 1911, had risen to slightly over nine years by 1961—an increase of only about two and a half years over half a century, or less than 7 per cent per decade and about one half of one per cent per year (Table 4-2).

Many factors may, of course, tend to accelerate or retard the long-term rising trend in educational levels of the labour force—changing age distribution patterns in the total population resulting in temporary bulges or dips in the numbers of new entrants to the labour force; stepped-up or lagging efforts to promote higher educational attainments; changes in legal school-leaving ages, legislation limiting the employment of children and other such institutional factors; marked changes in the availability of new job opportunities; the

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movement of population from rural to urban areas (children of urban families generally spend more years in school than children of farm families); and a host of additional influences.

The dominating fact about changes in the education stock is that an extremely powerful combination of factors is probably required to bring about any substantial short-term or medium-term change in this stock. At the same time, basic factors may have prolonged and cumulative effects stretching over many decades. For example, the above-mentioned vigour and dynamism in Canadian education in the early part of this century, even though it was not maintained after the early 1920's, appears to have had important effects stretching at least through to the Second World War. Conversely, the lagging educational efforts after the early 1920's appear to have been a factor in the slow advances in the educational stock through the 1940's and 1950's. The rate of improvement was also restricted by the relatively low number of new entrants to the labour force coming from the domestic educational system. Further, the higher school retention rates and the increased enrolment ratios in the 1950's did not have much effect in that decade, but will tend to have longer term effects on the rising stock of education in the 1960's and 1970's and beyond.

The Effects of Immigration and Emigration on the Stock of Education

Canada has experienced substantial flows of immigration and emigration in the course of its history. In particular, immigration has at times been an important factor contributing new vigour and new cultural dimensions in the Canadian society. In the context of this Chapter, the question naturally arises as to what effects such flows—both of immigrants and emigrants—may have had on the stock of education in the labour force.

Information about the educational attainments of immigrants, and even more especially of emigrants, entering or leaving the Canadian labour force, is unfortunately very limited. On the basis of available knowledge, however, it would appear that these flows have not produced any major or decisive shifts in the stock of education in Canada over the past half century. This would appear to be so partly because net migration even when large in relation to the current growth of the labour force, has never been large in relation to the existing total labour force. But it would also appear to be so because the average

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level of education of migrating labour has probably not been dramatically different from the average level of education of the labour force.

This has been true, for example, even in the decade of the 1950's when migration flows were relatively large. The median years of schooling of both male immigrants coming into the labour force and male emigrants leaving the labour force in 1951-61 was about 9.6 years. This compares with the median years of schooling of the total Canadian labour force of 8.7 years in 1951 and 9.4 years in 1961.

At the higher levels of educational attainment, the net movement showed some gain for the Canadian education stock in the 1950's. As already noted in Table 4-1, 5.6 per cent of the Canadian male labour force had university degrees in 1961. But it is estimated that 6.3 per cent of male immigrants coming into the labour force in 1951-61 had university degrees, while only 5.8 per cent of male emigrants had university degrees. Moreover, the number of male labour force immigrants with university degrees was over four times larger than the number of male emigrants with degrees. Even this immigrant flow was, however, not a dominating factor in relation to the total stock of the male labour force with university degrees in Canada. But the over-all effect of this migration was to bring about some increase in the average educational level of the male labour force in Canada.

School Attendance

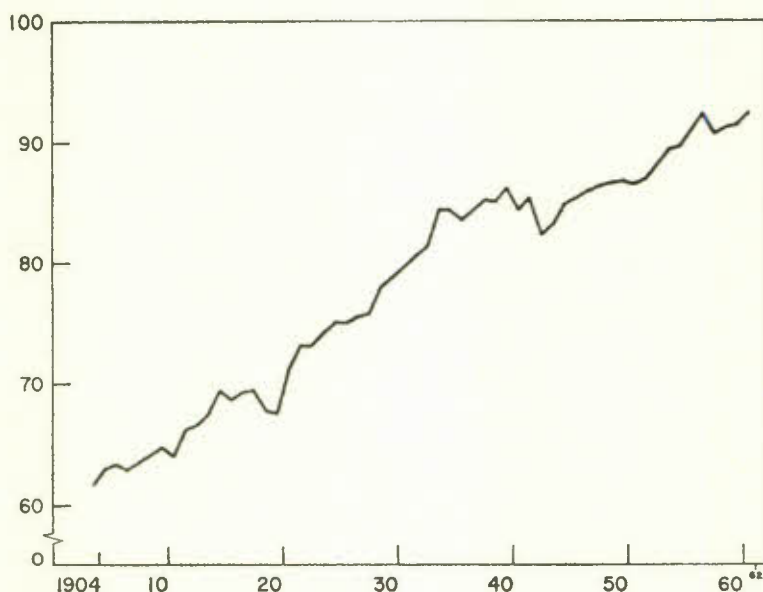
Another important characteristic of Canada's increased educational attainments over this century has been that the increase in average years of schooling per person has also been accompanied by an increase in the average daily attendance per school year. That such attendance has risen substantially since the turn of the century, is shown in Chart 4-1. Many factors have contributed to this. Two deserve special emphasis. One is the large-scale shift of population from rural to urban areas. Especially in earlier decades, the employment of children—particularly boys—in farm work was a powerful factor tending to reduce school attendance. The other factor was legislation affecting compulsory school attendance, school-leaving ages, and the employment of children. The influence of such legislation, together with its stricter enforcement, appears to have had an important bearing on this matter. Regulations governing family allowances have also been a factor contributing to increased school attendance over the past two decades.

The increase in average daily attendance has a significant bearing on the quality of an average year's education, and consequently on the

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real educational stock of the labour force. Moreover, as in the case of years of schooling, a significant rise in attendance, even if it were only maintained at the new level and not further increased, produces a prolonged and cumulative effect over several decades, as younger people with higher average attendance come into the labour force and older people with lower attendance withdraw. Thus, the rising attendance shown in Chart 4-1 will still be producing some cumulative effects over the 1960's, 1970's and beyond.

CHART 4-1
AVERAGE DAILY ATTENDANCE AS A PERCENTAGE OF ENROLMENT,
CANADIAN PUBLIC SCHOOLS



Source: Gordon W. Bertram, *op. cit.*

Canadian-United States Comparisons

Average years of education per person in the male labour force rose rapidly and fairly steadily from 1910 to 1960 in the United States, with gains of approximately 9 to 10 per cent in each decade over this half century. The Canadian increases were somewhat more uneven (Table 4-2) and also were consistently below those in the United States. As a consequence, it is estimated that while average years of schooling increased by less than two fifths in Canada, the comparable increase in

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the United States was about three fifths. Thus, a widening education gap has developed between the two countries over these fifty years.

An indication of the recent gap is provided in Table 4-3, showing median years of schooling. The United States medians by age groups are approximately in the range of one fifth to one quarter higher than the Canadian medians for the 25-54 age groups in 1961-62.

TABLE 4-3—MEDIAN YEARS OF SCHOOLING OF MALE LABOUR FORCE, BY AGE GROUPS, CANADA 1961 AND UNITED STATES 1962

	Canada (1961)	United States (1962)
25-34.....	10.0	12.4
35-44.....	9.6	12.2
45-54.....	9.0	11.1
55-64.....	8.3	9.0

SOURCE: Gordon W. Bertram, *op. cit.*

This gap between the two countries is further indicated in Table 4-4. Perhaps the most notable figures in this Table are the substantially higher proportions of the male labour force at the university degree level and at the 4-year high school level in the United States.

TABLE 4-4—EDUCATIONAL ATTAINMENT OF THE MALE LABOUR FORCE BY AGE GROUPS, CANADA 1961 AND UNITED STATES 1960
(Percentage distribution)

Age Group	Total	0-4 Years Elemen- tary School		5-7 Years Elemen- tary School		8 Years Elemen- tary School		1-3 Years High School		4 Years High School		Some Univer- sity Educa- tion		Complete Univer- sity Educa- tion	
		Can.	U.S.	Can.	U.S.	Can.	U.S.	Can.	U.S.	Can.	U.S.	Can. ⁽¹⁾	U.S.	Can.	U.S.
Total, 25-64	100.0	7.5	5.8	20.8	12.4	17.6	16.0	29.7	20.5	8.7	24.6	10.1	9.5	5.6	11.1
25-34.....	100.0	3.9	3.2	14.6	7.9	19.5	9.8	33.8	21.9	8.7	30.8	13.5	11.7	6.0	14.7
35-44.....	100.0	6.1	4.5	21.4	9.9	15.0	12.9	31.6	21.4	9.5	29.5	10.1	9.9	6.3	11.9
45-54.....	100.0	9.5	6.9	23.4	15.3	17.8	20.1	27.3	20.7	8.5	20.0	8.4	8.3	5.0	8.8
55-64.....	100.0	15.3	11.1	29.1	20.1	18.3	26.1	20.3	16.6	7.4	12.2	5.3	6.9	4.2	7.0

⁽¹⁾Includes Grade 13 for provinces in which Grade 13 is given.

SOURCE: Canada—Gordon W. Bertram, *op. cit.*; United States—United States Census of Population 1960.

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Moreover, the gaps between the two countries at these higher levels of education are particularly pronounced for the younger age groups, again indicating the relatively more rapid pace of educational attainments in the United States during the post-war period. For example, in 1960 about 45 per cent of the United States male labour force had four years of high school or more education, compared with 24 per cent in Canada in 1961. It might also be noted that in the 35-44 age group in Canada there is a slightly higher proportion of persons with university degrees than in the younger 25-34 age group. This reflects the post-war upsurge of war veterans who completed university degrees. But in the United States, where there was a similar post-war upsurge of university enrolment of war veterans, enrolments were maintained at high levels resulting in a further expansion in the proportion of the younger age groups obtaining university degrees.

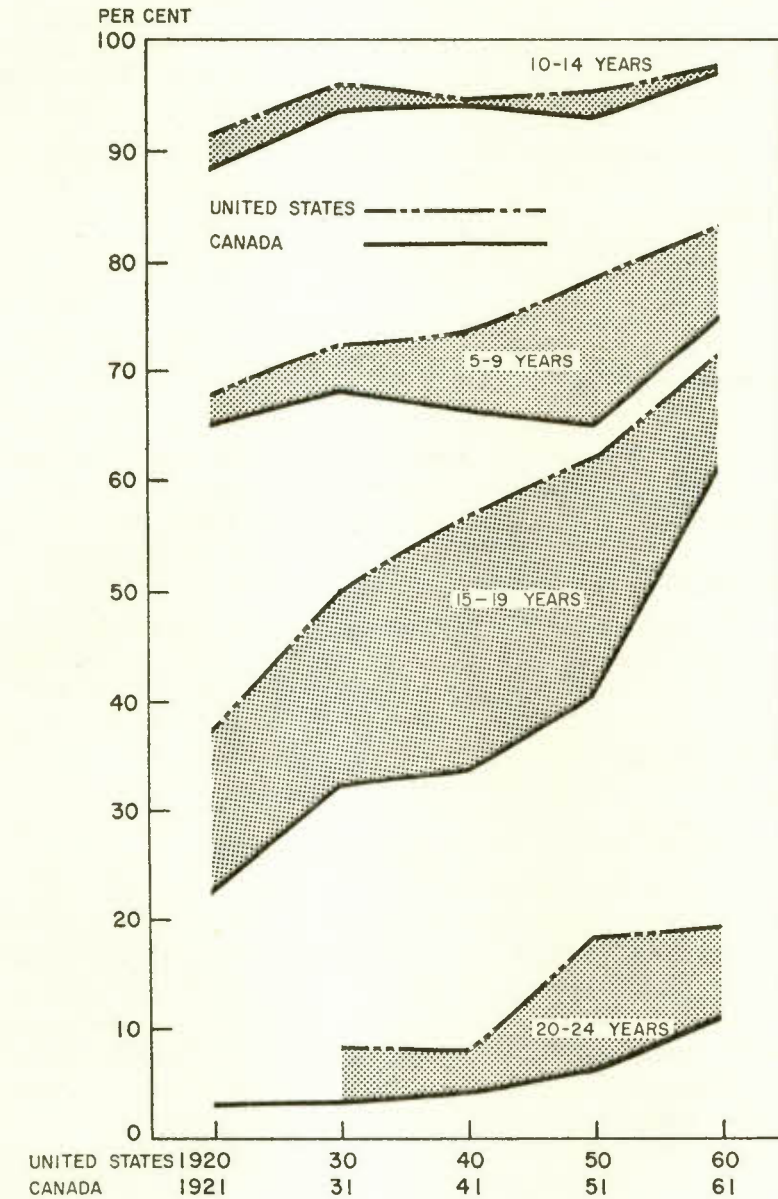
Another important indicator of educational developments and differences in Canada and United States can be derived from the records of enrolment in each country. The proportion of males attending school is shown by various age groups in Chart 4-2 covering a period of four decades. The United States percentages are above the Canadian percentages for all years and for all age groups. Although there has been considerable variation in these differences over time, the relative size of differences is consistently and for some periods dramatically larger for persons at the high school and university levels. For example, while the Canadian record is very close to that of the United States for the 10-14 age group (mainly in elementary school), the 15-19 age group showed substantially lower enrolment ratios in Canada than in the United States—32 versus 50 per cent in 1931, and 41 versus 62 per cent in 1951. Even after a very sharp rise in this ratio in Canada between 1951 and 1961, the 1961 Canadian ratio was still about 10 percentage points lower than the comparable United States ratio.

These enrolment comparisons indicate that student retention in Canadian schools has been much lower than in the United States over the past few decades, especially at the high school and university levels. This is also indicated in Table 4-5 which shows the percentage of the Canadian and United States male labour force in the 25-34 and 55-64 age groups by various levels of minimum educational attainment. These data indicate not only that the United States has consistently achieved higher retention rates for students, but also that there was a wider gap in retention rates between the two countries in the early post-war period than four decades earlier, at least at the high school and university levels. In the 55-64 age group, for example

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CHART 4-2

MALE ENROLMENT IN SCHOOL AS A PERCENTAGE OF TOTAL MALE POPULATION IN AGE GROUP, CANADA AND UNITED STATES



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TABLE 4-5—MINIMUM YEARS OF EDUCATIONAL ATTAINMENT OF
MALE LABOUR FORCE, AGED 25-34 AND 55-64, CANADA 1961
AND UNITED STATES 1960

Minimum Educational Attainment	Age Group	Per Cent of Male Labour Force		Percentage by which U.S. Exceeds Canada
		Canada	United States	
8 years elementary school	25-34	81.5	88.9	9
	55-64	55.5	68.8	24
4 years high school	25-34	28.2	57.2	103
	55-64	16.9	26.1	54
University degree	25-34	6.0	14.7	145
	55-64	4.2	7.0	67

SOURCE: Canada—Gordon W. Bertram, *op. cit.*; United States—*United States Census of Population 1960*.

—the group which would have largely completed elementary education prior to 1920—the percentage of those completing elementary school, 4 years high school and a university degree in the United States were, respectively, 24, 54 and 67 per cent higher than the percentage of those reaching similar education levels in Canada. In the 25-34 age group—the group which would have largely completed elementary education in the earlier part of the post-war period—the comparable percentage margins of United States attainments over Canadian attainments were 9, 103 and 145 per cent. It is clear, however, that after 1951, Canada's retention performance improved very dramatically, not only absolutely but also in relation to the United States. This has been especially the case at the high school level as suggested by the change in the enrolment ratio in the 1951-61 period for the 15-19 age group (Chart 4-2).

In terms of the average number of days of attendance per year of school, there also appears to have been a somewhat greater rise in the United States than in Canada over the past half century—an increase of about 50 per cent in Canada, compared with over 55 per cent in the United States per person in the male labour force (Table 4-6). When this is combined with the relatively greater rise in the average number of years of school attended, it is estimated that the total number of days of school attended per person in the male labour force has risen by 147 per cent in the United States over the period 1910-60, compared with 107 per cent in Canada in 1911-61. In other words, the total stock

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of education in the male labour force, taking account of changes both in years of schooling and in average daily attendance, has risen by well over one third more in the United States than in Canada over this fifty-year period.

TABLE 4-6—PERCENTAGE INCREASE IN AVERAGE YEARS AND DAYS OF SCHOOL ATTENDED PER PERSON IN THE MALE LABOUR FORCE, CANADA 1911-61, UNITED STATES, 1910-60

	Average years of school attended	Average days attended per year	Average total days attended
Canada.....	39	50	107
United States.....	59	56	147

NOTE: Canadian data refers to 25-64 age group, U.S. data to 25 years and over.

SOURCE: Gordon W. Bertram, *op. cit.*, and Edward F. Denison, *The Sources of Economic Growth in the United States and the Alternatives Before Us*, Supplementary Paper No. 13, Committee for Economic Development, January 1962.

EDUCATION AND INCOME

Many factors besides education may play an important role in differences in earnings between individuals—for example, differences in ability, intelligence, family background, experience, physical energy, health, personality, and even chance. But accumulating evidence and analysis point more and more to education as a pervasive and basic element contributing to the income potential of people, and therefore also of a whole economy or society, or of particular regions or localities. Interregional education differences and their effects on regional income disparities in Canada are discussed in Chapter 5.

The average level of annual income from employment, by levels of education for the male nonfarm labour force, is shown in Table 4-7.¹ A very strong relationship is indicated between income levels and educational attainments. For example, the average income of those who have completed four to five years of high school is more than one and a half times the average of those who have only elementary school education; and those who have university degrees have an average

¹This section of the Chapter is based on data relating to all male income earners, except farm operators. This data covers only the income received from employment. The 1961 Census did not collect information on farm income. Also excluded in the basic statistics in this section are nonfarm individuals in the labour force who reported no income in the 1961 Census; these individuals consisted mainly of unpaid family workers.

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TABLE 4-7—AVERAGE ANNUAL INCOME FROM EMPLOYMENT
BY LEVELS OF EDUCATION, MALE NONFARM
LABOUR FORCE, 1960

	Dollars	Index (0-8 years = 100)
0-8 years elementary.....	3,526	100
1-3 years high school.....	4,478	127
4-5 years high school.....	5,493	156
Some university.....	6,130	174
University degree.....	9,188	261
Total.....	4,602	

SOURCE: Based on data from 1961 Census of Canada.

income which is not only more than two and a half times the average of those with only elementary school education but also more than twice the average of those who have only one to three years of high school.

In addition, the higher the level of education, the greater are the earnings differences between younger and older age groups. The earnings curves shown in Chart 4-3 indicate that for those with relatively little education, earnings tend to be rather flat for all age groups, while for those with the highest educational attainments, earnings are substantially greater at higher age levels.

Chart 4-3 suggests that higher education not only helps to account for higher initial earnings, but also that subsequent experience and performance is also influenced by the degree of initial formal training. In other words, advances in an individual's earnings potential are more pronounced and prolonged in professional, managerial and other occupations requiring relatively high degrees of education, skill and flexibility. They are less pronounced and declines set in earlier for those in unskilled or semi-skilled occupations requiring relatively lower educational attainments.

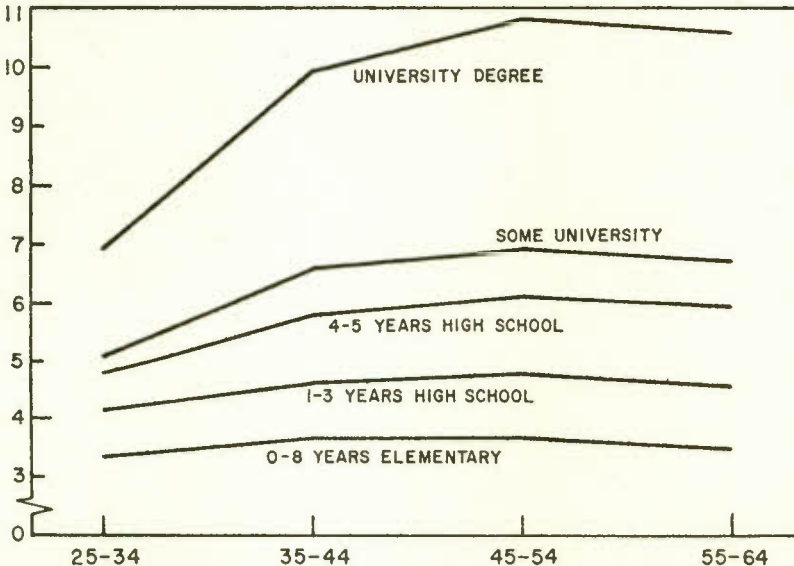
A closer look at average lifetime earnings by occupational groups and by levels of schooling reveals that there is an almost universal pattern for such earnings *within* each occupational group to be higher, the higher the levels of educational attainment. Illustrating this relationship between earnings and education, Table 4-8 indicates that extremely wide income disparities exist within most occupational

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CHART 4-3

INCOMES BY AGE GROUP AND EDUCATION LEVEL MALE NONFARM LABOUR FORCE, 1961

THOUSANDS
OF DOLLARS



Source: Based on data from 1961 Census of Canada.

categories as between those with high levels of education and those with relatively little. For example, in managerial occupations and in the professional and technical occupations, those with university degrees have lifetime earnings more than twice as large as those with only elementary education. Table 4-8 is based on the income, occupational, educational distribution at the time of the 1961 Census. Over time, there tends to be a general upward shift in lifetime earnings, and the figures shown in Table 4-8 thus tend generally to understate the lifetime earnings which may be expected for the future.

One other important factor regarding the occupational patterns of incomes is that, at least under post-war conditions of general scarcity of many of the more highly educated occupational groups, the average incomes for individuals in these groups have been rising more rapidly than the average of all incomes, and much more rapidly than the average incomes of the groups of individuals with generally lower educational attainments. This is indicated, for example, in Chart 4-4 which draws information from Canadian taxation statistics.

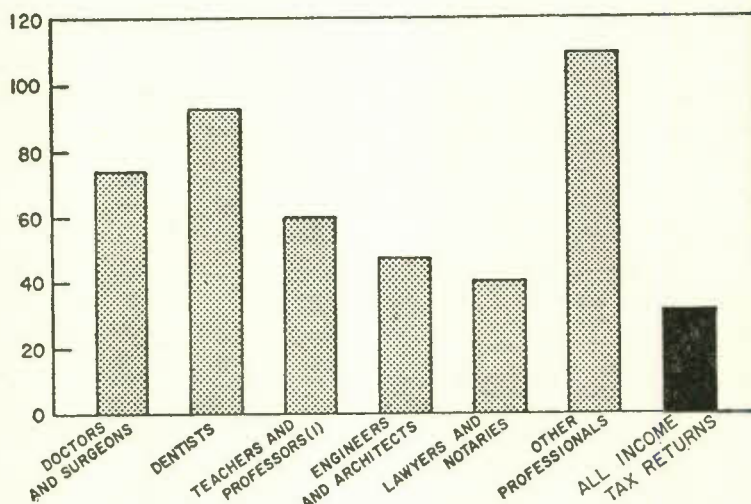
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TABLE 4-8—AVERAGE LIFETIME EARNINGS BY OCCUPATIONAL GROUP AND LEVEL OF EDUCATION, MALE NONFARM LABOUR FORCE, AGED 25-64, 1961
(Thousands of dollars)

	0-8 Years Elemen- tary	1-3 Years High School	4-5 Years High School	Some Univer- sity	Univer- sity Degree
Labourers.....	114	112	118	—	—
Craftsmen.....	135	157	171	170	194
Miners and quarrymen.....	150	172	185	—	—
Transportation and communication occupations.....	136	161	183	196	—
Service and recreation.....	112	142	164	191	245
Sales.....	142	175	210	217	256
Clerical.....	135	150	161	160	173
Professional occupations.....	171	196	224	225	354
Managerial occupations.....	201	233	284	316	423
All occupations.....	131	168	209	234	354

SOURCE: J. R. Podoluk, *op. cit.*

CHART 4-4
**PERCENTAGE INCREASES
IN AVERAGE INCOME DECLARED FOR TAX PURPOSES, 1948-62**
(INCOME ADJUSTED TO A CONSTANT (1949) DOLLAR BASIS)



(1) Professional categories relate to individuals in independent practice, except for teachers and professors. This latter category covers all employees of educational institutions in 1948 but teachers and professors only in 1962. The average increase in income actually obtained by this group in 1948-62 is thus probably somewhat less than indicated in this Chart.

Note: Based on income adjusted to a constant (1949) dollar basis.

Source: Based on Taxation Statistics, Department of National Revenue.

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Canada-United States Comparisons

The United States Census of 1960, like the Canadian Census of 1961, bears out the well-known fact that levels of education and levels of income are closely correlated (Table 4-9). In addition, as in Canada, the average incomes of the more highly educated occupational groups have been increasing more rapidly in recent years than the average incomes of the less-educated groups.

One of the most interesting features shown in Table 4-9 is that the median income of Canadians with university degrees is somewhat higher than the comparable median in the United States. Two factors help to explain this rather surprising fact. First, the United States has a relatively much larger proportion of university graduates in its labour force—for example, the proportion of the male nonfarm labour force having university degrees in 1960 was very substantially higher in the United States than in Canada (Table 4-4). There is consequently a much greater relative scarcity of such highly educated individuals in Canada. One of the results has been that there is proportionately heavier concentration of university graduates in the higher-income managerial, professional and technical occupational groups in Canada than in the United States—87 per cent versus 76 per cent, according to their respective censuses—and, conversely, a relatively considerably smaller proportion in some of the lower income occupations, such as the clerical and sales groups.

Second, the strong United States educational efforts at the university level in recent decades has produced a very sharply accentuated flow of

TABLE 4-9—MEDIAN INCOMES OF MALE NONFARM
LABOUR FORCE AGED 25 AND OVER, BY LEVEL OF
EDUCATION, CANADA, 1960 AND UNITED STATES, 1959

	Canada 1960 (Canadian dollars)	United States 1959 (U.S. dollars)	United States as a Percentage of Canada
0-8 years elementary.....	3,074	3,262	106
1-3 years high school.....	4,233	4,936	117
4-5 years high school.....	4,941	5,520	112
Some university.....	5,368	6,045	113
University degree.....	7,956	7,693	97

SOURCE: Based on data from *1961 Census of Canada* and *United States Census of Population 1960*.

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university graduates. Consequently there is a relatively much heavier concentration of university graduates among the younger groups in the United States than in Canada, especially in the 25-34 age category. At the same time, the pattern of income growth among university graduates in the United States is very similar to that in Canada (Chart 4-3), with very large increases in income between the ages of 25 and 65. Thus, the relatively very much larger recent influx into the United States labour force of young university graduates, whose incomes are still low in relation to older university graduates, has undoubtedly been an important factor depressing the statistical measurement of the median income of this group in the United States as compared with Canada.

THE ECONOMIC VALUE OF EDUCATION

The preceding discussion of income-education relationships leads to the question of the economic value of expenditures on education as an investment which yields increased future income benefits. A rough estimate of the "profitability" of higher education for individuals, in terms of the estimated rate of return upon increased investment in education, can be calculated by measuring the extra income which, on the average, is associated with a higher level of education, against the extra outlays and costs involved in obtaining such education. In other words, for some particular level of schooling—for example, the completion of a university degree—the benefits from extra education can be calculated as the difference between the average lifetime earnings per person with a university degree less the average lifetime earnings, say, of persons who have only completed high school, after a deduction for the extra costs involved. The extra costs for higher education should, of course, take account not only of money expenses for such items as books, tuition, transportation—but also of income foregone—that is, the average income which could have been earned during the years while a person was gaining more education. On the basis of such calculations which have recently been made, it has been estimated that the returns on the "human investment" in high school and university education in Canada are in the range of 15 to 20 per cent per year, with slightly higher rates for an investment in a university education than in a high school education.¹ Moreover, it might be noted that the above calculations treat all costs of education

¹See J. R. Podoluk, *op. cit.*

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as investment; if some part of these costs were to be treated as consumption rather than investment, the rates of return would be higher.

Such calculations suggest that there appear to be somewhat higher returns to education for individuals in Canada than in the United States.¹ This difference is partly a reflection of the relatively greater scarcity of more highly educated persons in Canada. In any event, it suggests that there is somewhat greater scope in Canada than in the United States for future gains from increased investment in our human resources.

These rates of return, it has been noted, are rates of return to individuals. The calculations have not taken public costs of education into account—either capital or operating costs. These costs, however, are probably small in relation to the private costs to individuals, including foregone income. This would imply that even the over-all rates of return to the economy for total investment in education would be relatively high—perhaps in the range of 10 to 15 per cent. Indeed, such rates would appear to compare favourably with the rates of return (even on a pre-tax basis) which typically accrue to total capital investment in physical and financial assets. This would have an important implication for Canadian economic policy—suggesting that relatively greater emphasis should be placed on facilitating expanding investment in education in relation to expanding investment in other assets. In fact, this conclusion would appear to be in general accordance with the growing concern in many parts of the Canadian economy that the shortage of skilled and trained technical, professional and managerial manpower is even more critical than the problem of enlarging the physical facilities required for increasing output.

THE CONTRIBUTION OF EDUCATION TO ECONOMIC GROWTH

A combination of many factors is required for the long-term growth of real income and productivity. As suggested in the preceding Chapter, education is one of the most important of these factors, especially

¹See Gary Becker, *Human Capital*, National Bureau of Economic Research, Columbia University Press, New York and London, 1964; and W Lee Hansen, "Total and Private Rates of Return to Investment in Schooling", *Journal of Political Economy*, April 1963.

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when viewed as a form of investment which enhances the quality and productive capabilities of any nation's most important resource—its people.

An attempt to make an approximate calculation of the contribution which increased education has made to the growth of the real income of Canadians, and a comparison with similar calculations for the United States, has been undertaken in a special study.¹ The essence of this approach is to determine, on the basis of available information and of certain assumptions, what the real income per person would have been in 1961 if the quality of the labour force, as measured by its educational attainment, had not changed since 1911. A key assumption in this calculation is that three fifths of the differences in incomes of individuals is attributable to differences in educational attainments, with the other two fifths being attributable to differences in ability, intelligence, effort, family background, chance, and various other factors. The conclusion of this calculation is that the average real income per person in the male labour force is estimated to have been roughly one quarter higher in 1961 than it would have been if the average educational attainment had remained at the 1911 level. In other words, these calculations suggest that in the neighbourhood of one quarter of the increase in real per capita income over this period is attributable to the increased educational stock in the labour force. Moreover, this should be regarded as a minimum estimate. It is based only on the preceding estimates of increased average years of formal schooling, together with increased average daily school attendance. It takes no account, for example, of increased education and training outside the elementary and secondary schools and universities, or of the increased quality of education over time. Nor does it, of course, reflect the indirect impact of higher education on such factors as the development of improved research and technology, better organization for production, and the general advance of knowledge.

A comparable calculation for the United States suggests that increased educational attainment was a relatively much more important factor, accounting for more than two fifths of the growth of real per capita income of the male labour force in the United States over the same period.² This contribution of education to economic

¹Gordon W. Bertram, *op. cit.*

²Ibid. The calculations are similar to those undertaken by Edward F. Denison in *The Sources of Economic Growth in the United States and the Alternatives Before Us*, Supplementary Paper No. 13, Committee for Economic Development, January 1962.

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growth has been recognized at the highest levels in the United States. In his message to Congress on Education on January 29, 1963, President Kennedy stated:

"This nation is committed to greater investment in economic growth; and recent research has shown that one of the most beneficial of all such investments is education, accounting for some 40 per cent of the nation's growth in productivity in recent years. It is an investment which yields a substantial return in the higher wages and purchasing power of trained workers, in the new products and techniques which come from skilled minds, and in the constant expansion of this nation's storehouse of useful knowledge."

Thus, while education has made an important contribution to the growth of real income and productivity in Canada over the past half century, the even greater contribution of education to growth in the United States indicates that education has apparently been a factor tending to widen rather than narrow differences in income and productivity between the two countries over this period.¹

Very considerable scope would appear to exist in Canada to promote the growth of average per capita income by improving the educational stock of the labour force. The accumulating evidence and analysis suggest that the benefits from such improvements can be substantial for both the individuals and the economy as a whole. The revitalization of education in Canada in the 1950's and 1960's is laying the basis for enlarging the contribution of education to Canada's future growth. This will be accentuated by a very much larger number of better educated young people who will enter the labour force in the remainder of this decade and in the 1970's. As already emphasized, these developments will not bring about a quick and substantial rise in the educational stock of the labour force. Much of the benefit will be experienced in a prolonged and cumulative way over a period of several decades. But the benefits ultimately will be large. This reinforces the need for sustained and unflagging efforts to strengthen and extend the educational base for long-term future growth of the economy and the living standards of Canadians.

TASKS FOR THE FUTURE

The principal short- and medium-term tasks for the future in raising the average educational attainment in the Canadian labour force are

¹That these differences have not in fact widened is, according to the analysis in Chapter 3, attributable to the existence of other growth factors working to Canada's relative advantage.

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now very different than those which our society faced three or four decades ago. A high rate of enrolment throughout the elementary school level, and even through the earlier years of high school, has been achieved along with a high level of average daily attendance. At the same time, following the very high birth rates during the latter part of the 1940's, there has been an enormous expansion of both elementary and secondary school facilities to accommodate a vastly increased flow of children through the lower levels of the educational system.

To advance educational levels through the formal education system, attention currently needs to be focused on five particular areas:

- (1) The closing of the remaining gaps in secondary school facilities. Although these facilities are now widely available, there are still some parts of Canada and some parts of the population for which secondary school facilities and opportunities are seriously inadequate. There is an urgent need to remedy these deficiencies so that education at the secondary level is a real and practical possibility for all Canadian children.
- (2) The reduction of drop-outs in high school and the increase of retention rates to achieve a much higher rate of high school completions.
- (3) The tremendous expansion required especially at the university and post-secondary technical school level in terms of higher enrolment ratios and retention rates for those of post-secondary school age, in the circumstances of an unprecedented upsurge in the numbers of young people who will be moving out of the 15-19 (mainly high school) age group into the 20-24 (post-secondary) age group over the coming decade.
- (4) The more rapid development of facilities for a sharply accelerating flow of professional and other highly skilled manpower at the post-graduate university level—the level at which we have made least progress to date in the Canadian educational system.
- (5) Vigorous efforts to improve the quality and methods of education.

Intensified efforts in these critical areas of education will require a great enlargement of resources for education. But as already emphasized, the rate of economic return to education is very high. The fact that intensified efforts can only yield substantial returns over the long run makes it all the more necessary to start immediately.

In addition, there is a general need to upgrade and bring up to date the education and skill qualifications of the existing labour force,

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including management and professional workers. There is also, with respect to the existing labour force, a more *urgent* need for immediate action to help to deal with manpower shortages and deficiencies in particular skills and occupations which constitute an existing or impending obstacle to the maintenance of economic growth. This implies a need for retraining and for continuing education outside the formal education system. Moreover, retraining can not only raise the income level of individuals, but also provide a high rate of return in relation to the costs involved. It will also tend to promote greater flexibility and mobility of manpower in the economy. Along with this there is an equally urgent need for intensified efforts to make the most effective use possible of the existing stock of skilled and educated manpower. Similarly, there is a need for more vigorous and well-informed manpower policies in Canadian industry, together with greater manpower mobility and flexibility, as a basis for the more effective matching of demand and supply of scarce skill capabilities and professional and managerial talents.

The urgency of such matters is reinforced, as was emphasized in our *First Annual Review*, by the fact that Canada can no longer rely to the same extent as in the first dozen years after the Second World War on improvements in the quality of our labour force in many critically important areas through substantial net immigration of highly trained manpower. Of course, we should continue to try to encourage the inflow of skilled manpower from abroad. However, in a world of great and apparently growing shortages of more highly skilled and educated manpower, we must move energetically towards a more self-reliant development of our domestic manpower resources to meet our pressing needs.

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THE LEGISLATION establishing the Council refers to the broad goals of a high and consistent rate of economic growth and a sharing by all Canadians in rising living standards. Regional participation in rising living standards is obviously an important aspect of this latter goal, and our terms of reference specifically direct us "to study how national economic policies can best foster the balanced economic development of all areas of Canada".

This concern for regionally balanced economic development, consistent with rapid growth for the country as a whole, is easily understood. Even fairly small industrial countries, possessing only limited land area and closely integrated national economies have experienced significant interregional disparities in growth and levels of income. In Canada, the physical immensity of the country, the presence of distinct geographic barriers, a narrow, uneven chain of settlement, and a striking diversity of resources and economic structure among our major regions all make for a particularly high degree of regional differentiation. It is not surprising, therefore, that the problem of integration and balance, in the sense of assuring an appropriate participation on the part of each region in the over-all process of national economic development, has long been an elusive goal and a continuing concern of the people of Canada.

At the outset, it will be helpful for an understanding of the analytical purposes of this Chapter to make clear how we have construed the term "region", and to set out briefly our approach to the objective of regionally balanced development.

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An economic region is a geographic area that is essentially homogeneous in respect of one or more important attributes. Among these may be included physical features and resources, structure of economic activity, market size, economic performance, administrative jurisdiction and social and cultural features. Many studies devoted to the question of defining economic regions conclude that there is no *unique* definition that satisfies all requirements; instead the appropriate definition will depend upon the purpose of the analysis or the objectives of policy. Freedom of choice in defining economic regions for policy purposes is, in fact, severely limited by the political and administrative structure of the country on the one hand, and the geographical unit employed in statistical compilations, on the other.

We have, therefore, accepted the boundaries of the ten provinces as defining the regions with which we should be concerned, despite the fact that they are not always compatible with strict geographic or economic criteria. Moreover, it will also be necessary or desirable for certain analytical purposes to group some of the provinces so as to form five major regions. These are the Atlantic (the three Maritime Provinces plus Newfoundland), Quebec, Ontario, the three Prairie Provinces and British Columbia.¹

At another level, subregions can of course be clearly distinguished within the provinces. This is particularly true of the larger ones, which have substantial populations and marked internal economic and geographic differences. Although appropriate balance among these subprovincial regions and the related problems of decentralization are primarily the concern of the provincial authorities, the implications and interactions of broad national policies and programmes may also prove to be of great importance. Our studies in the field of regional development, however, have not been specifically extended to these issues. It is also recognized that for certain programmes and research purposes, subregions which cut across provincial boundaries can be usefully considered. The statistical information for this kind of analysis, unfortunately, is seriously deficient.

Given this definition of regions in Canada, our concept of regionally balanced economic development can now be outlined. There are, we suggest, two main, interrelated considerations involved in moving towards a better regional balance. The first is the importance of

¹ Because of certain statistical deficiencies the Yukon and Northwest Territories are omitted from the discussion, although they are combined with British Columbia in some of the statistical series. The North embraces a vast, sparsely settled area, and presents special economic and physical characteristics, all of which suggest that a separate study of the area is required.

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reducing the relative disparities in average levels of income as they presently exist among the regions. Although these disparities have shown a slight narrowing in recent years, our subsequent analysis will show that they remain large and substantially persistent. The second consideration is the need to assure that each region contributes to total national output, and to the sustained, long-run growth of that output, on the basis of the fullest and most efficient use of the human and material resources available to the region. Here again the evidence suggests significant deficiencies in past regional development in Canada.

These considerations focus attention upon the fundamental importance of improving the utilization of human and material resources in all regions. This involves their fullest possible use, combining them in the most efficient ways possible, and continually upgrading their productive capabilities. Moreover, the narrowing of interregional income differences depends upon a particularly rapid advance in productivity and income per employed person in the relatively lagging areas, and indeed at rates appreciably faster than the average for the economy as a whole.

It might well be suggested that the concept of balanced development among the separate regions comprising the national economy implies taking adequate account of such factors as their location, physical area and dimensions of space, and other broad geographic characteristics. Elements of this kind necessarily figure much more prominently in the analysis of regional growth than in the consideration of growth for the economy as a whole. In order to provide a basic perspective for interregional comparison and assessment, however, the present analysis focuses mainly upon the aspect of regional income flows and their change over time. It begins with an examination and measurement of interregional differences in income per person and notes the long-run persistence of disparity among the ten provinces. In this context, the importance of population shifts clearly emerges. A number of factors which appear to contribute in greater or less degree to interregional variation in income and earnings per person are then explored. Among these are the comparative levels of manpower utilization, the educational attainment of the labour force, indicators of use of physical capital, and more elusive influences such as industrial structure, natural resources, and population concentration. Finally we summarize our findings by a brief evaluation of the regions in terms of the foregoing characteristics, and outline certain considerations bearing upon regional development policy.

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INTERREGIONAL INCOME DISPARITIES

The best available statistical measure of interregional income disparities in Canada is the flow of personal income within each of the ten provinces. Personal income is the flow of income to individuals, and since by far the greater part is earned by the productive factors of labour and capital, it also provides an approximate indication of the level of economic output produced in each region.¹ Per capita personal income is also a measure of comparative productivity and economic welfare per person among the separate regions. Thus the more closely bunched are the regional averages around the national average, the smaller is the degree of income disparity among the regions and, in our terms, the more balanced is the participation of the various regions in national economic development.

The regional levels of personal income per capita are shown for three groups of years in Table 5-1. The most striking feature of the comparisons is the substantial percentage difference in income levels between the highest and lowest province. For the recent period 1963² personal income per capita in Ontario was about four fifths larger than in Prince Edward Island and twice that of Newfoundland. As for the other provinces, income levels in British Columbia and the Prairies are considerably above the average for all provinces; Quebec's per capita income is fairly close to the average. All the Atlantic Provinces range well below personal income per capita in the country as a whole.

A second feature of the comparisons is that the rankings of provinces in terms of income levels have hardly changed over a period of almost forty years. Ontario has changed places with British Columbia as the highest and second highest income provinces. Manitoba and Saskatchewan have also traded positions in the centre of the rankings and Quebec has maintained a consistent mid-position. The Atlantic Provinces have been at the bottom of the range throughout. The broad geographical distribution over time is also noteworthy. Income levels in the five western-most province have been generally higher than the provincial average since 1927 while those in eastern Canada have been

¹ Personal income is obtained from the National Accounts, published by the Dominion Bureau of Statistics. Its major components are: wages, salaries and supplementary labour income; military pay and allowances; net income of farm operators from farm production; net income of nonfarm unincorporated business; interest, dividends and net rental income of persons; and transfer payments. Thus, certain major income flows associated with corporate enterprise and government are excluded.

² In this Chapter, three-year averages are indicated by a bar over the centre year. For example, 1963 is the average of 1962, 1963 and 1964.

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TABLE 5-1—LEVEL OF PERSONAL INCOME
PER CAPITA BY PROVINCE

(In current dollars)

	1927	1947	1963
Ontario.....	509	981	2,025
British Columbia.....	535	980	1,966
Alberta.....	509	923	1,750
Saskatchewan.....	449	818	1,749
Manitoba.....	455	875	1,721
Quebec.....	378	709	1,521
Nova Scotia.....	299	676	1,302
New Brunswick.....	277	609	1,167
Prince Edward Island.....	248	477	1,115
Newfoundland.....	1,009
Average for Provinces.....	407	783	1,532

NOTE: Provinces are ranked in order of level of personal income per capita in 1963, and the data are for three-year averages centred on the year shown. Data for British Columbia include the Yukon and Northwest Territories.

SOURCE: Based on data from Dominion Bureau of Statistics.

lower. Moreover, while there has been some reduction in the *percentage* range of income differences, particularly with reference to peaks in disparity experienced during the early 1930's and early 1950's, the degree of disparity remains obviously large.

Since regional incomes are measured in current dollars, the effects of changing price levels and possible differences in prices among the regions have not been reflected in the above income comparisons. To test whether such price differences might be significant, the basic data on prices for particular cities in different regions from the Dominion Bureau of Statistics regular survey of consumer prices were examined. Although there were indications of variation in price levels from region to region, differences in movements of prices over the last twenty five years were relatively small. Thus, when the price data were used to estimate regional incomes in real terms, the picture of interregional disparity already outlined was not substantially altered.

In view of the discussion in Chapter 3 regarding differences in average incomes between the United States and Canada, comparisons on a regional basis for both countries are also of interest. As will be seen in Table 5-2, only the Ontario and British Columbia regions have

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achieved levels of personal income per capita higher than the lowest regional grouping in the United States, the seven states comprising the Southeast.

TABLE 5-2—CANADA AND UNITED STATES REGIONAL PER
CAPITA INCOMES AS PERCENTAGE OF UNITED STATES
AVERAGE, 1963

(Average for U.S. Regions = 100)

Canada		United States	
Ontario.....	83	Far West.....	118
British Columbia.....	80	Mid-East.....	116
Prairies.....	71	New England.....	112
Quebec.....	62	Great Lakes.....	107
Atlantic.....	47	Great Plains.....	95
		Rocky Mountains.....	94
		Southwest.....	85
		Southeast.....	74

NOTE: Calculated from data expressed in current Canadian and United States dollars.

SOURCE: Based on data from Dominion Bureau of Statistics, and U.S. Department of Commerce.

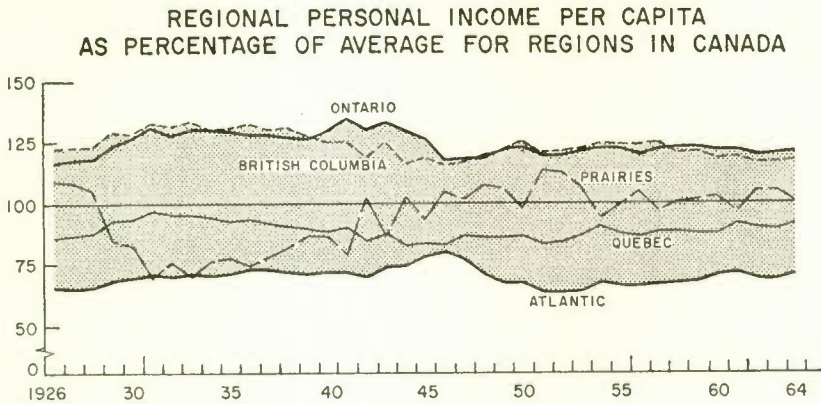
Aspects of Interregional Disparity

Despite variations in personal income per capita from region to region, the feature which emerges most strikingly from the record of the past four decades is the essential persistence of income disparity among the regions of Canada. In Chart 5-1, the width of the shaded area, representing the spread in average per capita incomes among the major regions, is fairly constant throughout; and the position of each region relative to the average (represented by the horizontal line) was virtually the same in 1926 as in 1964. Furthermore, there is some evidence to suggest that the persistence in interregional income disparity revealed in Chart 5-1 can be traced back even further in Canadian history.

The Chart shows that per capita income levels in the Atlantic Region have ranged below 75 per cent of the average for Canadian regions throughout the period, except for the years towards the end of World War II. After 1946, income levels in the region fell away from the average, and the inclusion of Newfoundland in the data for the

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CHART 5-1



Source: Based on data from Dominion Bureau of Statistics.

Atlantic Region since 1949 has somewhat lowered the average level of income shown for that region. At the other extreme, Ontario and British Columbia have recorded income levels roughly 25 per cent above the regional average for most of the period. Per capita income in the Prairies shows an extremely wide swing away from the average during the early 1930's, reflecting the particularly adverse impact of the depression upon incomes in this region. Throughout the period, personal income per capita in Quebec has been below the regional average but, since the end of the war, the gap has been steadily narrowed.

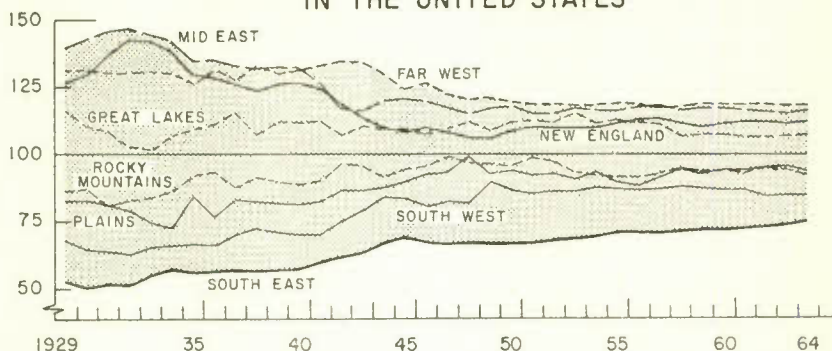
The experience of the United States is in sharp contrast to that of Canada. Chart 5-2 illustrates the variations in personal income per capita around the average for eight regions in the United States. Most striking is the steady and significant convergence in the interregional spread of incomes since the early 1930's. Data going back well into the 19th century suggest that the narrowing process experienced in the United States is a long-standing feature of regional economic development in that country. It has been associated with the regional dispersal of growth capacity so as to embrace southern areas which traditionally had been outside the mainstream of economic advance.

By way of enlarging the international comparisons, the experience of Australia over the post-war period was also examined. This country is a federal state, comparable in area to Canada and the United States. Our analysis shows that the extent of interregional income disparity in Australia is considerably less than in either of the North American

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CHART 5-2

REGIONAL PERSONAL INCOME PER CAPITA AS PERCENTAGE OF AVERAGE FOR REGIONS IN THE UNITED STATES



Source: Based on data from U.S. Department of Commerce.

countries and moreover has not altered significantly over the past 15 years. The high degree of interregional balance that characterizes the Australian economy reflects the pattern of settlement, extensive urbanization and nation-wide uniformities respecting public investment and wage determination in that country. From the perspective of these international comparisons, therefore, it can be seen that over the post-war period the degree of interregional income disparity in Canada has continued to be large and substantially persistent.

Although Charts 5-1 and 5-2 provide an impressionistic picture of interregional income disparity, its real extent can be more accurately evaluated by means of a single index. Such an index takes account of the position of each and every region in relation to the national average and not simply the difference between the highest and lowest regions.¹ A wide scatter of regional per capita incomes around the average, such as occurred in the early 1930's, in both Canada and the United States, is reflected in a high value for the index. On the other hand, a concentration of regional per capita incomes around the average, as was recorded in Canada at the end of World War II, is indicated by a low value for the index. Consequently, the higher is the value of the index, the greater is the degree of imbalance in regional participation in national economic activity.

This index of income disparity among the ten provinces of Canada (including Newfoundland as of 1949) is shown in the upper curve in

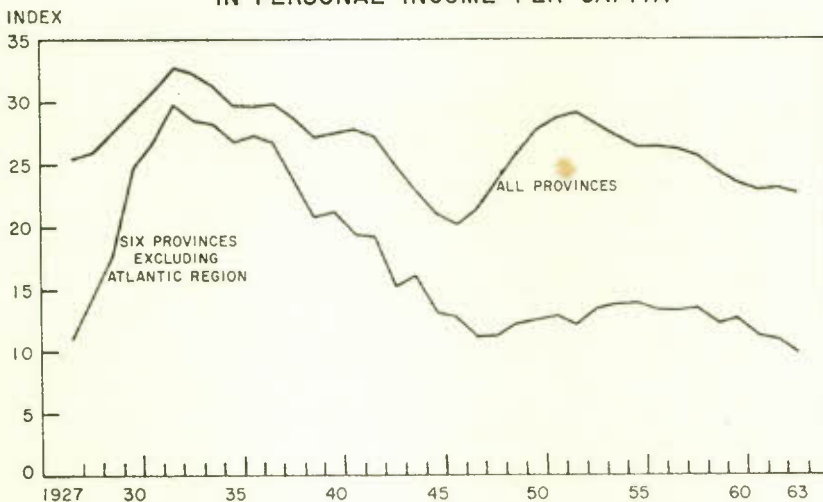
¹In statistical terms it is an index of relative dispersion and is obtained by dividing the standard deviation of the distribution by the unweighted mean.

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Chart 5-3. Despite short-period irregularities, the broad movements in the index over the whole period clearly emerge. Beginning in 1926, the movement in the index shows that the interregional spread of incomes widened to a maximum during the depression of the 1930's and then narrowed fairly steadily until the end of the War. In the early part of the post-war period, the degree of spread again widened until 1951, and, thereafter, drifted downward. On the historical record prior to 1946, one could say that depressed economic conditions have been accompanied by an increased interregional disparity in incomes, while high levels of economic activity saw a narrowing in the degree of income spread. After 1946, however, it is not possible to discern a clear relationship between interregional income disparity and the level of economic activity. In view of this, it would be hazardous to assume that rapid economic advance at the national level, although providing a favourable environment, would be sufficient in itself to reduce interregional income disparity significantly.

CHART 5-3

INDEX OF INTERPROVINCIAL DISPARITY IN PERSONAL INCOME PER CAPITA



Note: The indexes of disparity are smoothed by three-year moving averages.
Source: Based on data from Dominion Bureau of Statistics.

Taking the forty-year period as a whole, the extent of relative disparity as measured by the index has shown only a slight tendency to decline, thus confirming the conclusion drawn from Chart 5-1.

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Between 1927 and 1963, the index fell by about one tenth. It is true that from 1949 onwards the inclusion of Newfoundland, the province with the lowest per capita income of all, is responsible for a higher level in the index than would otherwise be the case. Nevertheless, calculations which exclude this province also show the same persistence of interregional income disparity, even though at somewhat lower levels, over the past fifteen years.

Chart 5-3 also traces the movement of the index of income disparity as calculated for only six provinces, exclusive of the Atlantic Region. The contrast between the two curves establishes that a large part of the interregional spread in incomes, and of the substantial persistence of that spread over long periods, is attributable to the relatively low income position of the entire Atlantic Region.

The foregoing analysis treats each province as a unit equal to any other province, regardless of its area or population. In technical terms, our index of disparity is not "weighted" by size of population. This procedure is appropriate for our particular purpose since, as indicated at the outset, this analysis of regionally balanced development is concerned with the reduction of interregional income disparity, comparing the average level of income in each region with all the others. Each region is therefore regarded as one economic or geographic unit.

For certain purposes, however, it is desirable to calculate a weighted index of income disparity which takes account of differences in population among the various regions.¹ On this basis the extent of interregional income disparity is less because the four lowest income provinces (the Atlantic Region) also have the four smallest populations and thus carry less weight in the total index. The implication of this fact is important for policy purposes, in the sense that the task of improving the quality and productivity of the resources of the lowest income provinces would involve a relatively small proportion of the total national income.

Subregional Income Disparities

We have already indicated that while this analysis is focused primarily upon regionally balanced economic development among the ten provincial regions, the issue of balance among subprovincial

¹ This consideration is particularly relevant in international comparisons. The conclusion that interregional income disparity has narrowed much more substantially in the United States than in Canada is not significantly altered when the comparison is made in terms of a "weighted" index of income disparity. This question will be explored in detail in a forthcoming staff study.

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regions within each province is also important. We have taken brief note of two aspects of this question on the basis of a special set of data relating to income flows among these smaller subprovincial areas.¹ Unfortunately, the information is limited to the census year 1961, and applies to a somewhat different measure of income—that received by the adult nonfarm population only. The lack of information on farm income leaves an important gap. Despite these limitations, the conclusions regarding the extent of income disparity within the provinces and between urban and rural dwellers are of considerable interest.

First, the evidence suggests that the higher a province's average level of income, the more closely subregional incomes are bunched around the average for that province and hence the less is the degree of income disparity among the subregions. Broadly interpreted, this means that high provincial income levels not only reflect a relatively high degree of participation in national economic activity, but also a high degree of balance among the subregional areas as well. The opposite is true of the lower average income provinces.

Second, in every province average rural nonfarm incomes are lower than incomes in urban areas, and their range of variation among the ten provinces is also much greater. The spread of rural nonfarm incomes around their national average is 60 per cent greater than the comparable spread of urban incomes. Further, average provincial incomes tend to be higher where the proportion of urban residents is relatively high. The wider differences in rural nonfarm incomes, region by region, constitute a large element in the general picture of interregional income disparity.

Growth of Personal Income by Region

In terms of personal income *per person*, all ten provinces of Canada have shared in national economic growth over a period of almost forty years. Moreover, the rates of increase in income per head have been closely comparable for all the provinces. As the data in Table 5-3 indicate, over this long period annual growth rates of this measure of income varied among the regions only from 3.5 per cent in Alberta to 4.3 per cent for Prince Edward Island. Generally, the lower income areas experienced rates of increase slightly greater than the higher income regions, resulting in the modest narrowing of interregional disparity already noted.

¹ 1961 Census of Canada, Vol. IV, Population Sample.

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In contrast to income per person, however, *total* personal income for each region has grown at much more variable rates. This reflects the marked differences among the regions in population growth and migration over both the longer run and the post-war period. From 1927 to 1963, the annual rates of increase in total income by region varied from a high of 6.6 per cent for British Columbia to a low of 4.2 per cent for Saskatchewan. In the post-war period, the high-low spread between British Columbia and Nova Scotia was almost as large (Table 5-3).

The differential rates of population increase, also shown in Table 5-3, were the key variables in these divergent patterns of per person and total income growth in various regions. In the post-war period, for example, the three provinces of Ontario, Alberta and British Columbia recorded the highest rates of growth in total personal income. But they also experienced the most rapid population growth, and income per capita rose at only average or below average rates. Saskatchewan, on the other hand, experienced one of the lowest rates of expansion in total income; but with a very low rate of population increase conse-

TABLE 5-3—GROWTH OF PROVINCIAL PERSONAL INCOME
AND POPULATION

(Average annual percentage change in current dollars)

Province	1927-63			1947-63		
	Personal Income Per Capita	Total Personal Income	Population	Personal Income Per Capita	Total Personal Income	Population
Ont.....	3.9	5.9	2.0	4.6	7.5	2.8
B.C.....	3.7	6.6	2.8	4.4	7.7	3.1
Alta.....	3.5	5.8	2.2	4.1	7.6	3.4
Sask.....	3.8	4.2	0.3	4.9	5.6	0.7
Man.....	3.8	4.9	1.0	4.3	6.0	1.6
Que.....	3.9	6.0	2.0	4.9	7.5	2.5
N.S.....	4.2	5.3	1.1	4.2	5.5	1.3
N.B.....	4.1	5.3	1.2	4.1	5.6	1.4
P.E.I.....	4.3	4.8	0.6	5.4	6.3	0.8
Average for Provinces.....	3.9	5.4	1.5	4.5	6.6	2.0
(Nfld.).....				(5.3)	(7.8)	(2.4)

NOTE: Provinces are ranked in respect of level of personal income per capita in 1963, and the period for Newfoundland is 1950-63.

SOURCE: Based on data from Dominion Bureau of Statistics.

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quent upon the rapid mechanization of agriculture and large-scale migration from the farms both to cities within the province and out of the province, its per capita income growth was one of the highest. In Nova Scotia and New Brunswick, population growth was double that of Saskatchewan, but with a lagging rate of increase in total income, the gain in per capita income in both provinces was at the bottom of the range.

It will be obvious from this that when regional economic growth is measured in terms of per capita income, it conceals a complex interaction between gains in output and population change. The latter is a highly dynamic factor in regional income growth and exerts a particularly important influence upon the degree of interregional income disparity.

REGIONAL GROWTH AND POPULATION REDISTRIBUTION

Perhaps the most striking impression of a half-century of population history in Canada is one of volatility and dynamic change. Since the turn of the century total population has tended to grow much faster in Canada than in the United States. The rate of growth of urban population has also been substantially higher in Canada. Within our country, however, the rates of change in population by region, and between urban and rural areas, have been far more dramatic than the over-all rates of growth. Internal migration, moreover, has far overshadowed immigration from abroad in its impact upon evolving patterns of settlement. Over the forty-year period from 1921 to 1961 movement out of farm areas was twice as great, and movement into nonfarm areas three times as great, as total net immigration into Canada.

The contrasting trends are summarized briefly in Tables 5-4 and 5-5. Over the forty-year period, 1921-61, population growth among the provinces ranged from only 18 per cent in Prince Edward Island to 211 per cent in British Columbia. Even though every province experienced some growth, the increase was entirely concentrated in the nonfarm population, which almost tripled for the country as a whole. In contrast, the farm population declined absolutely in every province, with a 30 per cent decrease in the country as a whole, and the farm population fell from 37 per cent to only 12 per cent of the national total.

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TABLE 5-4—TOTAL, FARM AND NONFARM POPULATION, BY PROVINCE, 1961 AND PERCENTAGE CHANGE, 1921-61

	Total Population		Farm Population		Nonfarm Population	
	1961 ('000)	% Change 1921-61	1961 ('000)	% Change 1921-61	1961 ('000)	% Change 1921-61
Newfoundland.....	458	—	17	—	440	—
Prince Edward Island.....	105	18	38	-38	67	139
Nova Scotia.....	737	41	83	-62	654	117
New Brunswick.....	598	54	100	-48	498	157
Quebec.....	5,259	123	651	-17	4,608	192
Ontario.....	6,236	112	534	-38	5,702	175
Manitoba.....	922	51	173	-33	749	113
Saskatchewan.....	925	22	307	-36	619	121
Alberta.....	1,332	126	290	-8	1,042	284
British Columbia.....	1,629	210	93	-5	1,536	261
Canada.....	18,201	107	2,285	-30	15,916	189

NOTE: Figures may not add to totals for Canada due to rounding.

SOURCE: Based on data from Dominion Bureau of Statistics.

Migration between provinces, even on a net basis, has also been a prominent feature of Canada's recent development. As shown in Table 5-5, between 1941 and 1950 seven provinces experienced net outflows. Only Ontario and British Columbia gained from net inflows. In the 1951-60 period, net outflows took place from six out of ten provinces, with Quebec and Alberta joining the ranks of recipient provinces. Over the twenty years, 1941-61, it is estimated that among the provinces which experienced net out-migration, this out-movement of people amounted to a total of almost 600,000 men, women and children.

The patterns of rural-urban migration and their significant variations among the provinces are also set out in Table 5-5. They confirm the drastic shift out of the farm areas of the Prairie Region, and especially for Saskatchewan. The movement from the rural areas of both Quebec and all four Atlantic Provinces is no less apparent. Although some rural migrants simply moved to rural areas of other provinces, the high rates of urban growth indicate that a significant portion of the migration took place not merely from rural to urban areas within regional boundaries, particularly within Quebec and the Prairies, but also from rural areas in one province to urban centres in another. A somewhat different picture emerges for both Ontario and

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TABLE 5-5—RATES (PER 1,000 OF POPULATION) OF
INTERPROVINCIAL AND RURAL-URBAN MIGRATION FOR
INTERCENSAL INTERVALS, BY PROVINCE, 1941-50 AND 1951-60

	Interprovincial Migration		Rural Migration		Urban Migration	
	1941-50	1951-60	1941-50	1951-60	1941-50	1951-60
Canada	8	68	-81	-55	88	163
Newfoundland.....	—	- 32	—	-166	—	253
Prince Edward Island.....	-142	-105	-179	-208	-20	148
Nova Scotia.....	- 61	- 52	- 60	- 54	-62	-49
New Brunswick.....	- 83	- 71	-113	-172	-19	114
Atlantic.....	- 76	- 56	- 96	-133	-45	65
Quebec.....	- 5	43	-170	-232	96	169
Ontario.....	65	131	94	131	45	130
Manitoba.....	- 87	- 7	-207	-244	67	215
Saskatchewan.....	-234	- 95	-354	-291	115	242
Alberta.....	- 18	112	-255	-228	350	386
Prairies.....	-114	13	-282	-256	187	298
British Columbia.....	229	176	253	239	206	109

NOTE: The figures shown are decennial crude rates, defined as the number per 1,000 of the population. The population base is the average of the populations at the beginning and the end of the interval.

SOURCE: Based on data from Dominion Bureau of Statistics.

British Columbia. In both provinces, however, the apparent growth of rural population is attributable in large part to the settlement of urban workers in neighbouring rural areas, since the farm population in these provinces shared in the general nation-wide decline of farm population (Table 5-4).

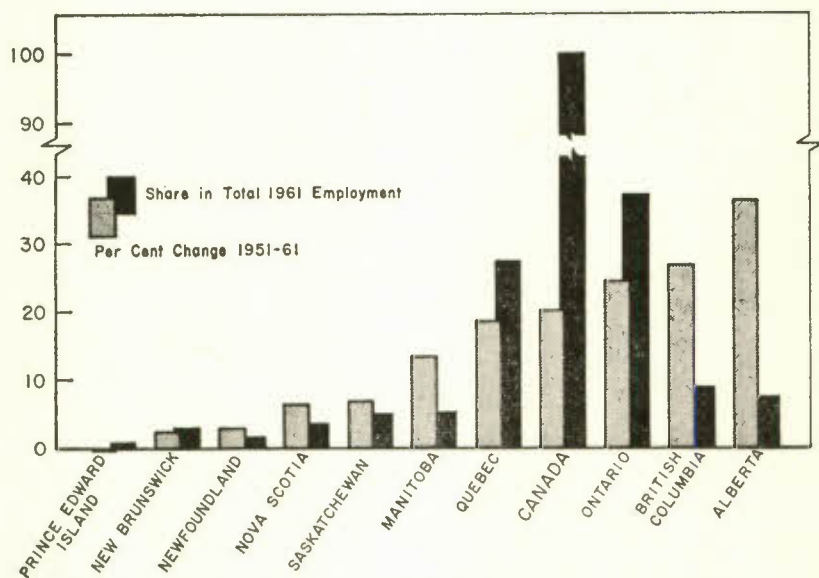
It is also apparent that both interregional and rural-urban population movements have been reflected in widely different rates of growth in employment among the provinces. These differences are indicated in Chart 5-4, showing the rapid increase between 1951 and 1961 in Alberta, British Columbia and Ontario at one extreme and the slower-growing provinces at the other. The importance of these variable rates of employment growth for the national economy is indicated by the regional distribution of total employment.

The broad trend of population redistribution in Canada over several past decades can be summarized as a pattern of two essentially similar movements. One has been the migration from regions of lower average income to those of higher income. The other has been movement from

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rural areas and primary industries (characterized, with some notable exceptions, by relatively lower productivity and income per worker) to urban centres and opportunities frequently offering generally higher monetary rewards. Whether or not these population movements were induced by income disparities, they have clearly contributed significantly to the process of interregional income adjustment in Canada.

CHART 5-4
GROWTH IN EMPLOYMENT BY PROVINCE,
1951-61



Source: Based on data from Dominion Bureau of Statistics.

REGIONAL DIFFERENCES IN LABOUR INPUT

Our analysis has established the main characteristics of interregional income disparity in Canada and has traced the influence of population growth and redistribution over several past decades. We come now to the essential task of attempting to explain why per capita incomes differ as widely as they do among the various regions—and particularly why incomes in the Atlantic Provinces are so far below the average for the country as a whole.

In carrying out this task, it is useful to examine both the underlying factors which contribute to the flow of production and income within

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each region at any point in time, and the changes in the productivity of these factors over time. Obviously this involves questions at the regional level in many respects essentially similar to those discussed in Chapter 3. There, it will be recalled, the evaluation of sources of national economic growth was aided by reference to the causes of income disparity between Canada and the United States. As in that Chapter, it should be made clear here that our inquiry into the causes of regional income differentiation is still highly preliminary and our understanding is still far from complete. Nevertheless we feel our work to date sheds some useful light upon the nature of the problems and provides a basis for approaches to appropriate policies for dealing with these problems.

It has already been observed that on the basis of the shares in the national income received by the various factors of production, labour is by far the largest input into productive activity in the economy. It therefore merits first consideration, and we proceed to note the most important differences among the regions in the extent of manpower availability and utilization.

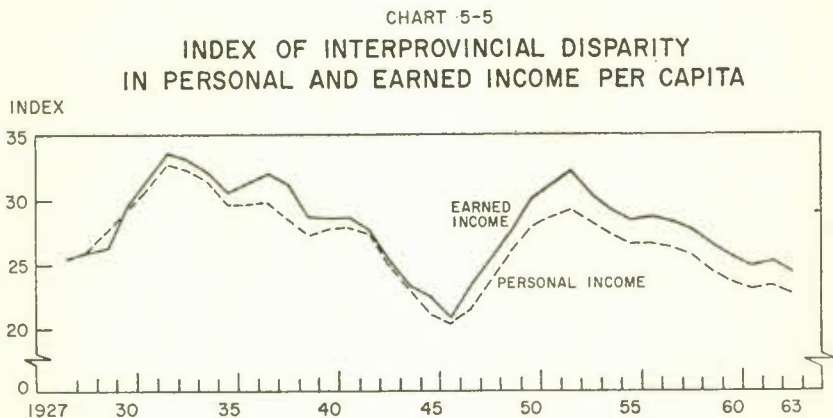
Since we are dealing with manpower, it is necessary to consider variations in the income actually *earned* by labour, rather than the broader and more inclusive concept of personal income already discussed. The patterns of interregional disparities and growth in earned income¹ per capita closely parallel those in personal income per capita, although the net effect of transfer payments is clearly to reduce the degree of interregional disparity. This effect, as well as the essentially parallel movement of disparity in respect of both measures of per capita income, is traced in Chart 5-5.

The level of earned income per capita in each region obviously varies with the size of the employment base. Other things being equal, the larger the number of persons at work in relation to the total population, the larger will be the average level of income per person or per family. As Table 5-6 reveals, the employment base is substantially lower in the Atlantic Region than in any of the other regions. In the period 1960-64, only 27 per cent of the population of the Atlantic Region was employed, on average, compared with 34 per cent for the country as a whole and 37 per cent in Ontario. The smaller size of the employment base accounts for roughly half of the difference in per

¹ Earned income is a term used to cover all types of income from employment: wages, salaries, and supplementary labour income; military pay and allowances; and the net income of unincorporated business proprietors, including farmers. It excludes government transfer payments (such as family allowances and old age pensions), interest, dividends and net rental income.

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capita earned income between the Atlantic Region and Canada as a whole. It is also an important consideration in explaining the lower average income level in Quebec.



Note: The indexes of disparity are smoothed by three-year moving averages.
Source: Based on data from Dominion Bureau of Statistics.

TABLE 5-6—TOTAL POPULATION AND NUMBER OF PERSONS
EMPLOYED
(1960-64 averages)

	Total Population (thousands)	Persons employed (thousands)	Persons Employed as Per Cent of Total Population	Index of Employment Percentage (Canada = 100)
Atlantic Region.....	1,925	516	27	80
Quebec.....	5,359	1,719	32	95
Ontario.....	6,345	2,338	37	109
Manitoba.....	934	327	35	104
Saskatchewan.....	929	313	34	100
Alberta.....	1,366	479	35	104
British Columbia.....	1,703	554	32	97
Canada.....	18,561	6,246	34	100

NOTE: Indexes are calculated on the basis of unrounded figures.
SOURCE: Based on data from Dominion Bureau of Statistics.

Several factors determine the size of the employment base. The first is the age composition of the population. Table 5-7 reveals that the Atlantic Provinces have an appreciably lower proportion of population

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in the working ages than any of the other regions. Ontario, on the other hand, has the highest proportion.

TABLE 5-7—AGE DISTRIBUTION OF THE POPULATION,
BY PROVINCE, 1961

	Per Cent under 15	Per Cent 15-64	Per Cent 65 and over
Newfoundland.....	42	52	6
Prince Edward Island.....	36	54	10
Nova Scotia.....	35	57	8
New Brunswick.....	38	54	8
Quebec.....	35	59	6
Ontario.....	32	60	8
Manitoba.....	33	58	9
Saskatchewan.....	34	57	9
Alberta.....	35	58	7
British Columbia.....	31	59	10
Canada.....	34	58	8

SOURCE: Based on data from 1961 Census of Canada.

TABLE 5-8—CIVILIAN LABOUR FORCE PARTICIPATION RATES
(1960-64 averages)

	Men	Women	Both Sexes	Index of Partici- pation Rates (Canada = 100)
Atlantic Region.....	73	24	47	87
Quebec.....	80	27	53	98
Ontario.....	82	33	57	106
Manitoba.....	{ 80	30 }	55	102
Saskatchewan.....			53	98
Alberta.....			57	106
British Columbia.....	77	29	52	96
Canada.....	78	29	54	100

NOTE: The participation rate is the civilian labour force as a per cent of the civilian population 14 years of age and over excluding inmates of institutions, Indians on reserves and residents of the Yukon and Northwest Territories.

SOURCE: Based on data from Dominion Bureau of Statistics.

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A second factor is the labour force participation rate, i.e., the percentage of the adult population in the labour force, whether employed or unemployed. Table 5-8 indicates that this factor also contributes to the low level of employment in the Atlantic Region. Only about 47 per cent of the adult civilian population was in the labour force in this region in the period 1960-64, whereas in Ontario the proportion was 57 per cent.

A third factor is the unemployment rate, the percentage of the labour force out of work. The variation in these rates among the regions is relatively marked. A calculation of the average of annual rates of unemployment actually experienced in Canada and in each region over the entire post-war period shows the following:

Canada	4.4
Atlantic Provinces	7.6
Quebec	5.6
Ontario	3.2
Prairies	2.7
British Columbia	5.1

We have already noted that the labour force participation rate is lowest in the Atlantic Region where the unemployment rate is highest. Exact relationships are not easy to establish but it is probable that the low participation rate reflects a lack of employment opportunities. It seems likely that if more jobs were available, more people would be drawn into the labour force in the Atlantic Region. Both the high unemployment rate and the low participation rate are symptoms of a substantial underutilization of manpower resources in this part of Canada.

Seasonal influences also exert disparate effects upon the level of employment among the various regions. It is estimated that in the period 1960-63 adverse seasonal effects upon employment in the Atlantic Region were about twice as great as in the country as a whole. They were also relatively severe in the Prairie Region, although to a lesser extent than in the Atlantic area. In Ontario, on the other hand, because of its greater concentration of activity in manufacturing and other industries which are less vulnerable to the impact of weather, the adverse seasonal impact upon employment was only half as great as the average for the whole country. Thus, seasonal influences reduce employment much more in some regions than in others and thereby contribute to the differences in the average size of the employment base.

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Another factor of possible importance in explaining per capita income differences is the number of hours worked per week. However, among most of the regions, the average work week does not vary greatly. The one significant exception is British Columbia, where average weekly hours worked are some 8 per cent lower than the national average. The higher per capita earned income in British Columbia is thus achieved in spite of a substantially shorter work week.

Differences in the utilization of available manpower are clearly a substantial factor in explaining differences in per capita earned income. Indeed, roughly *half* of the gap between the Atlantic Region and the national average can be explained in this way. But there are also substantial differences in the basic rates of earnings among the regions and we turn now to a consideration of these.

REGIONAL DIFFERENCES IN EARNINGS

Average earned income per employed person provides us with a rough measure of productivity per worker. An explanation of differences in this measure among the regions and in its growth over time is crucial to an understanding of regional disparities. We must therefore give consideration to many contributing factors of varying and often indefinable weight.

Interregional differences in this measure are indicated in Table 5-9. It will be seen that in the period 1960-64, earnings per employed person in the Atlantic Region were about 18 per cent less than the average for all regions. At the other extreme was British Columbia which, in spite of its shorter work week, was about 19 per cent above the average. Ontario was about 10 per cent above the average and Quebec about 7 per cent below. The Prairie Region as a whole was slightly below the regional average in the five-year period, although income per employed person in this region is subject to considerable variation from year to year because of the fluctuations in agriculture.

Differences in Educational Attainment

We have noted in the analysis of Canada-United States income differences in Chapter 3 that an important explanatory factor is the level of education and skill attained by the labour force in each country. A lower average educational attainment for the labour force

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goes hand in hand with lower levels of earnings and per capita income. A similar comparison may be applied at the regional level within Canada.

TABLE 5-9—AVERAGE EARNED INCOME PER EMPLOYED PERSON
(1960-64 averages)

	Average Earned Income per Employed Person	Index of Average Earned Income (Average for Regions = 100)
	\$	
Atlantic Region	3,080	82
Quebec	3,480	93
Ontario	4,120	110
Manitoba	3,620	97
Saskatchewan	3,660	98
Alberta	3,770	101
British Columbia	4,470	119
Average for Regions	3,740	100

SOURCE: Based on data from Dominion Bureau of Statistics.

TABLE 5-10—HIGHEST LEVEL OF FORMAL SCHOOLING
ATTAINED BY THE LABOUR FORCE, 1961
(Cumulative percentages)

	University Degree	Some University	4-5 Years Secondary and up	1-3 Years Secondary and up	5-8 Years Elemen- tary and up
Newfoundland	1.7	6.2	12.8	52.1	83.7
Prince Edward Island	2.3	6.5	16.9	53.9	94.5
Nova Scotia	3.7	8.0	19.2	63.0	94.7
New Brunswick	2.9	7.1	18.5	49.5	90.3
Quebec	4.5	8.6	24.7	51.6	90.8
Ontario	4.7	8.5	29.2	61.8	95.9
Manitoba	3.7	9.0	23.8	63.0	93.4
Saskatchewan	3.0	7.7	23.2	55.8	93.3
Alberta	4.3	9.8	28.8	65.4	95.5
British Columbia	4.7	11.7	37.3	72.8	96.8
Canada	4.3	8.8	27.1	59.5	93.8

NOTE: The labour force includes those 15 years of age and over.

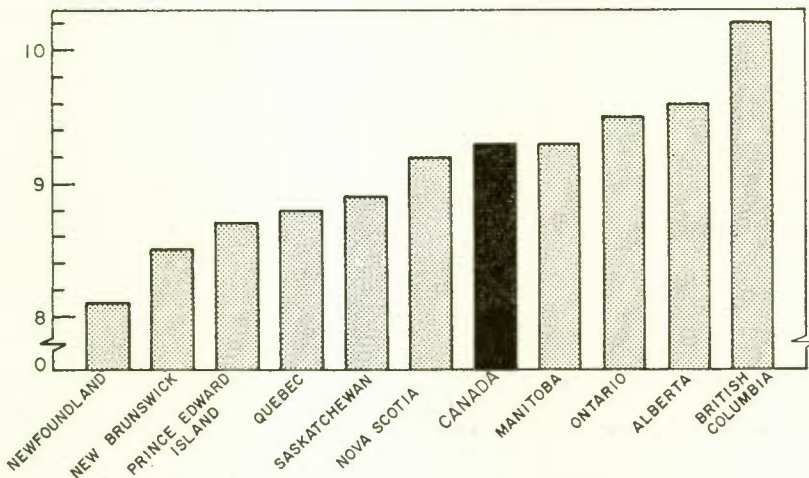
SOURCE: 1961 Census of Canada.

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Interregional differences in educational attainment are indicated in Table 5-10, showing percentage distributions of the labour force in each province on the basis of the highest level of formal schooling attained. Similarly, Chart 5-6 shows the average number of years of schooling attained by the labour force in each province. It will be recalled from Table 4-6 that there is a close association between average income and the level of educational attainment; substantially higher average earnings accrue to those who have significantly higher levels of educational attainment. The average level of educational attainment within any region will therefore have an important bearing on the average level of income in that region. Moreover, the higher the level of education and skill of income earners, the smaller are the differences in their earnings between regions. The relatively much lower proportion of the labour force who have attended secondary school and perhaps even more particularly, the lower proportion who have attained the higher levels of secondary school and university, is particularly marked in the Atlantic Provinces.

Combined with the direct effects of educational levels on average income, there are also important indirect influences. In particular, a relatively poor structure of educational attainment in a region fails to support or attract those industries and activities which increasingly

CHART 5-6
AVERAGE YEARS OF FORMAL SCHOOLING
OF THE LABOUR FORCE BY PROVINCE, 1961



Source: Based on data from Dominion Bureau of Statistics.

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rely upon an educated and skilled work force. Together, the direct and indirect effects of educational attainment contribute significantly to interregional differences in income.

Differences in Capital Input

As in the case of labour input, differences among regions in the stock of capital, its average age and degree of utilization, help to explain interregional disparities in earnings per person. In the absence of offsetting influences, the greater the quantity of physical capital that a worker in a given industry has at his disposal, the larger his productivity tends to be and hence his own personal reward or income.

Unfortunately, comprehensive estimates of the stock of physical capital for each region—including both structures and machinery and equipment—are not available. Nevertheless an approximation of interregional differences in capital input is suggested by the comparative annual rates of new investment per person in each of the provinces, averaged in constant dollars over a lengthy period of years. The levels for the various provinces in relation to the national average for total investment per capita, and for the private and public sectors of the economy, are indicated in Table 5-11.

TABLE 5-11—INDEXES OF AVERAGE ANNUAL INVESTMENT
PER CAPITA, BY PROVINCE 1951-64
(Canada-100)

	Total Invest- ment	Private Investment			Public Invest- ment
		Total	Housing	Business	
Alberta.....	153	154	131	161	149
British Columbia.....	133	133	126	135	131
Saskatchewan.....	110	113	75	124	99
Ontario.....	105	106	113	104	101
Manitoba.....	96	94	84	97	101
Quebec.....	83	85	95	81	75
Prince Edward Island.....	69	50	52	49	141
Newfoundland.....	66	59	48	62	92
New Brunswick.....	64	57	55	58	91
Nova Scotia.....	60	53	59	51	88
Canada.....	100	100	100	100	100

NOTE: Based on constant 1957 dollars. Private business investment includes trade, finance and commercial services, utilities, primary industry and construction, manufacturing and publicly owned commercial enterprises. Available public investment data cover the period 1955-63.

SOURCE: Based on data from Department of Trade and Commerce, and from Dominion Bureau of Statistics.

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The wide range of interregional variation is apparent. Over a period of some 15 years, average annual investment per person in Alberta, the highest province, has been about two and a half times greater than in Nova Scotia, the lowest province. For the private business sector alone, which normally accounts for about three fifths of the total, the range of variation has been considerably greater. In this case, the three most westerly provinces have ranked considerably above the average for the country as a whole. Ontario and Manitoba are close to the national average, with Quebec distinctly behind. But all four Atlantic Provinces have achieved only 62 per cent or less of the national average. In housing, as one would expect, the highest rates of new construction have taken place where population growth has been most rapid. Public investment has not been marked by as extreme variation as in the private sector, but even here per capita rates of additions to social capital have differed by as much as 100 per cent among the regions.

This approximation of the general nature and order of interregional variation in capital input per worker is supported by preliminary estimates of regional capital stocks of machinery and equipment for all industries and for manufacturing alone. Both the ranking of the ten provinces on a per capita basis and the range of variation from the

TABLE 5-12—INDEXES OF CAPITAL STOCK OF MACHINERY
AND EQUIPMENT PER CAPITA, BY PROVINCE IN 1964

(Canada = 100)

	Stock of Machinery and Equipment	
	All Industries	Manu- facturing
Saskatchewan.....	149	21
Alberta.....	129	59
British Columbia.....	114	127
Ontario.....	112	145
Manitoba.....	107	45
Quebec.....	77	90
Prince Edward Island.....	72	10
New Brunswick.....	68	60
Nova Scotia.....	66	43
Newfoundland.....	54	40
Canada.....	100	100

NOTE: Indexes reflect the stock of machinery and equipment in 1964, and are valued in constant 1957 dollars.

SOURCE: Based on data from Department of Trade and Commerce, from Dominion Bureau of Statistics and estimates by Economic Council of Canada.

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lowest to the highest, as shown in Table 5-12, are essentially similar to those already noted for the annual flows of new investment. Saskatchewan, with its heavily mechanized, extensive agriculture, moves to the forefront, while the relatively undeveloped region of Newfoundland takes last place in the ranking.

The data for stock of machinery and equipment in manufacturing indicate exceptionally high levels for Ontario and British Columbia, with Quebec as the only other province approaching the national average. The Ontario-Quebec contrast is of particular interest, in view of the fact that the proportion of the labour force of each province employed in manufacturing is almost identical (Table 5-13). It is clear that capital intensity per worker is much greater in Ontario than in Quebec, and influences such as these appear relevant to the differences in earnings per person employed in manufacturing shown in Table 5-14.

The limitations of the data do not permit a full evaluation of the influence of capital inputs on interregional income disparity. Nevertheless, the comparisons do indicate that the regional groupings for levels of capital input are generally the same as those defined by other factors accounting for interregional income disparity.

Differences in Regional Structures of Economic Activity

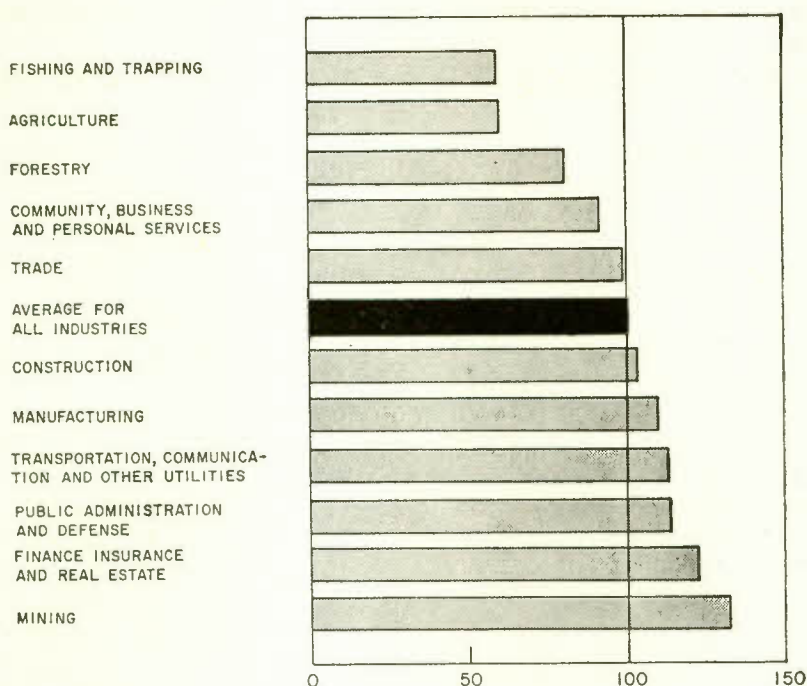
We turn now to examine whether the relative importance of different industries among the regions affects the degree of interregional income disparity. The influence of industry composition or structure arises because some branches of production yield a higher average productivity or income per worker than others. It is true that in any particular region the average level of income will depend crucially upon the distribution of its production and employment between higher and lower income industries. Consequently, the familiar diversity in the industrial structure of economic activity among the regions of Canada has led to a belief that this is one factor which accounts for a large proportion of interregional income differences. Our analysis, however, suggests that this belief is exaggerated.

It is clear that average income per employed person varies greatly among the broad sectors of the national economy. The approximate extent of this variation is indicated in Chart 5-7. Income levels in agriculture, fishing and primary forestry are clearly much below the average for all industries, while those received in mining and financial services are much above the average.

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CHART 5-7

EARNED INCOME PER EMPLOYED PERSON BY INDUSTRY AS PERCENTAGE OF CANADIAN AVERAGE, 1961



Note: Income data are based upon special 1961 census material on earned income for the non-agricultural sectors, and estimates of farm income per employed person in agriculture averaged over three years. Earned income per person used here differs slightly from the National Accounts concept employed earlier in this Chapter, but includes the total return to farm and unincorporated business enterprises.

Source: Based on data from Dominion Bureau of Statistics.

It is also true that there is considerable diversity in the structure or composition of economic activity among the regions, as is shown by the distribution of employment in each province (Table 5-13). Not only are there major differences in the proportion of the labour force employed in primary, secondary and service industries among the provinces, but the distribution of employment within each of these sectors also differs widely.

The average level of earned income per employed person in each region is obviously influenced by the interaction of the two factors of industry structure and average income levels among different industries. Available data, however, indicate that because of offsetting influences, the differences in the structure of industry among the

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regions account for only a small part of the interregional disparity in earned income. A comparative analysis of employment and earnings per worker as between agriculture and the nonagricultural sector among the five major regions, for example, shows that this kind of structural difference is of only minor importance in explaining interregional income differences. Within the nonagricultural sector itself, and

TABLE 5-13—REGIONAL EMPLOYMENT BY INDUSTRY, 1961
(Percentage distribution)

Industry	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
Agriculture.....	10.2	1.5	27.3	5.2	7.2	7.6	7.2	17.6	37.0	21.5	4.1
Forestry.....	1.5	5.0	0.4	1.7	5.0	2.0	0.7	0.3	0.3	0.5	3.5
Fishing and trapping...	0.5	7.5	6.2	3.2	2.1	0.2	0.1	0.3	0.3	0.2	0.8
Mines, quarries and oil wells.....	1.8	3.9	0.0	4.3	0.8	1.5	1.8	1.6	1.2	3.5	1.4
Total primary.....	14.0	17.9	33.9	14.4	15.2	11.3	9.7	19.9	38.9	25.7	9.8
Manufacturing.....	21.7	10.9	8.8	14.2	16.0	26.5	26.9	13.6	4.6	8.5	19.5
Construction.....	6.3	7.4	6.1	6.2	5.8	6.7	6.1	5.8	5.1	7.3	5.8
Total Secondary..	28.0	18.3	14.9	20.4	21.8	33.2	33.0	19.4	9.7	15.9	25.4
Transportation, communication and utilities.....	9.3	13.6	8.0	10.4	11.8	9.1	8.2	11.6	9.3	9.7	11.0
Trade.....	15.4	17.5	14.0	15.6	16.7	14.1	15.5	16.8	14.0	16.4	17.3
Finance, insurance and real estate.....	3.6	1.4	1.6	2.4	2.3	3.6	4.2	3.6	2.2	3.0	4.0
Community, business and personal service..	19.8	16.7	16.7	19.2	20.0	20.2	19.7	18.8	18.0	19.1	21.8
Public administration and defence.....	7.5	11.6	8.7	15.9	10.1	5.6	7.7	7.8	5.6	7.9	8.1
Industries not stated...	2.4	3.0	2.2	1.7	2.2	2.9	2.0	2.1	2.3	2.2	2.6
Total Services.....	58.0	63.8	51.2	65.2	63.0	55.5	57.3	60.7	51.4	58.4	64.8
TOTAL EMPLOY- MENT.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

NOTE: Details may not add to totals because of rounding.

SOURCE: Based on data from Dominion Bureau of Statistics.

excluding fishing, trapping and certain services, a study of employment and earnings in 37 branches of industry also suggests that different regional "mixes" of industry in themselves have a similar limited effect. Moreover, while shifts of employment from industries of lower to higher productivity have been an important factor in the longer term growth of income, they have occurred more or less proportionately

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throughout the whole country. Consequently these structural shifts have had a fairly uniform impact on average incomes in all regions.¹

The central reason why interregional differences in industrial structure apparently do not have a major effect on differences in average regional income levels is that there are significant disparities in productivity per worker in any given industry among the various regions. In other words, although certain industries show a high level of earned income per worker in the country as a whole, these industries do not show a consistently high level per worker in all regions of the country. The regional differences within specific industries are illustrated in an approximate way by the data of Table 5-14. Earned income per worker would appear to be relatively low in all major sectors of economic activity in the Atlantic area, and relatively high in

TABLE 5-14—REGIONAL EARNED INCOME PER EMPLOYED
PERSON AS PERCENTAGE OF CANADIAN AVERAGE,
BY INDUSTRY, 1961

	Canada	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
Agriculture.....	100	57	53	64	67	69	112	85	115	114	147
Forestry.....	100	78	48	55	65	84	118	84	61	97	152
Fishing and trapping...	100	65	101	94	120	76	127	101	40	59	188
Mines, quarries and oil wells.....	100	90	—	71	65	91	104	101	110	124	97
Manufacturing.....	100	83	60	79	77	94	106	92	96	101	107
Construction.....	100	72	73	83	78	94	105	102	99	110	110
Transportation, communication and utilities.....	100	77	90	82	84	97	104	99	101	103	112
Trade.....	100	78	78	82	83	101	102	98	100	102	105
Finance, insurance and real estate.....	100	94	82	95	91	102	103	92	89	98	97
Community, business and personal service..	100	69	65	77	77	96	106	97	97	102	109
Public administration and defence.....	100	91	88	99	91	94	105	99	98	97	104

NOTE: Earned income per employed person in agriculture is obtained by averaging earned income for the three years 1961, 1962 and 1963 and dividing by employment in 1961. The data for other industries are based upon a special compilation from the Population Sample Survey and covers the nonfarm labour force as of June, 1961. For the smaller provinces, therefore, the figures shown may be subject to significant error.

SOURCE: Based on data from Dominion Bureau of Statistics.

¹ The technical analysis summarized here will be detailed in staff studies, which will also discuss possible qualifications based upon more detailed breakdowns of industrial structure.

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almost all industrial sectors in British Columbia and Ontario. *It is, therefore, the regional differences in industrial productivity, rather than in economic structure, which exert a major influence on regional income disparity.* These differences in productivity, in turn, reflect many different factors of a more basic nature concerning the availability and quality of the various economic resources among the regions, and the efficiency with which these resources are combined in the processes of production.

In summary, incomplete as the evidence may be, it appears that the varying regional distribution of economic activity by sector exerts relatively little influence upon interregional income disparity, and changes in structure have contributed only moderately to narrowing the disparity over time. This is not to say, of course, that interindustry shifts from low to higher productivity industries within a region—particularly from the farm to the nonfarm sector—will not yield significant results in raising its average level of income. There is scope for these favourable shifts in all provinces, and particularly so in the Atlantic Region and Quebec. Not only do these regions have relatively high proportions of employment in the primary industries generally (which, except for mining, provide the lowest average earnings of all the broad industrial categories throughout the country), but it is also in these same industries where the gap in average earnings as compared with other regions is the most severe. However, to the extent that this type of adjustment takes place proportionately in all parts of the country, it will be more important in raising the national average level of income than in reducing interregional income disparities.

Other Factors in Differences in Earnings

We turn now to a brief reference to certain of the obvious factors in interregional differences in output per person which, though clearly important among the sources of growth mentioned in Chapter 3, are difficult to isolate and measure. Among these is the question of differences among the regions in the extent and quality of natural resources. Economists have long recognized "land" as one of the factors of production, along with labour and capital. Other things being equal, a region with an abundance of land and resources of good quality is likely to enjoy an income advantage over one less favourably endowed. We have not been able to evaluate the influence of these differences among the regions, although it seems certain that they underlie, at least in part, the marked variations in income per worker in the resource industries noted in Table 5-14.

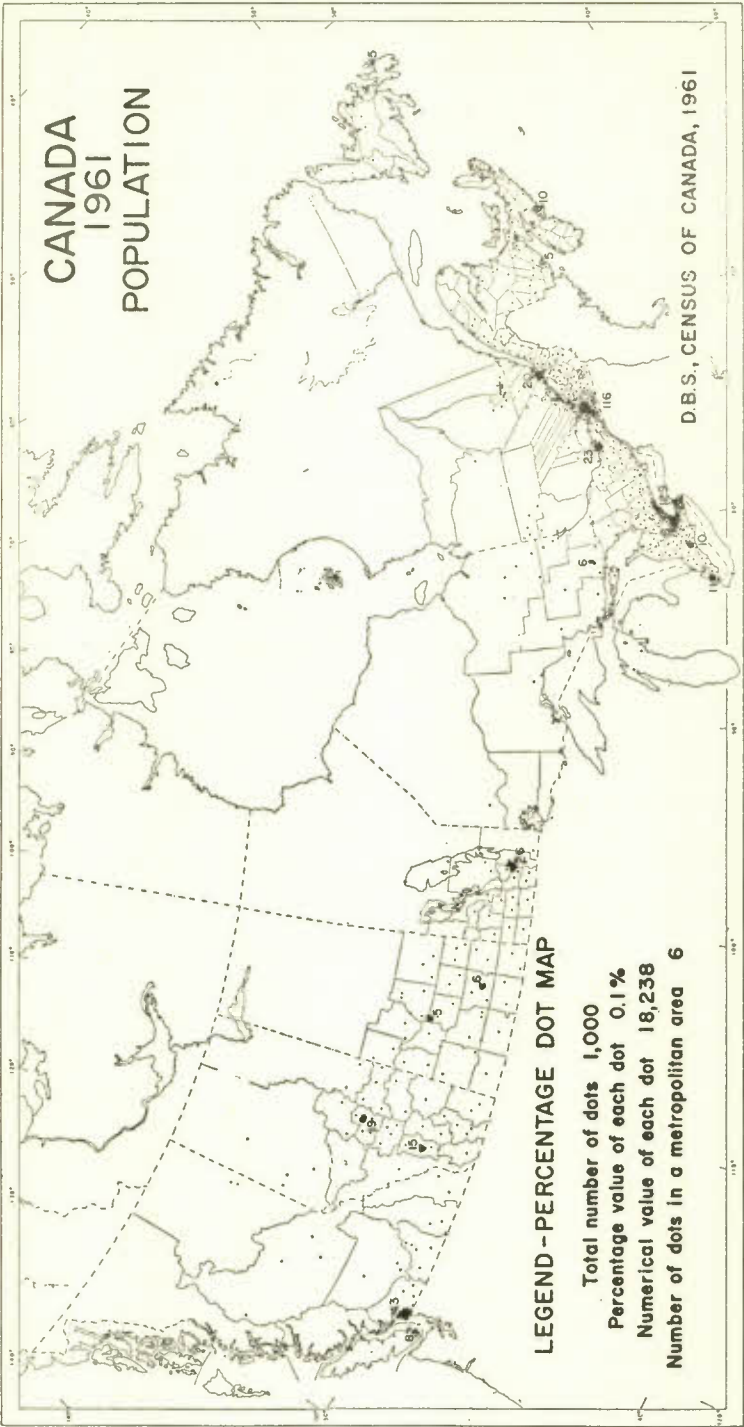
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Because of fundamental shifts in the pattern of consumption and advances in technology, however, the relative impact of resources in income differences has clearly declined. With generally rising incomes, other factors emerge more strongly in the growth process. Of major importance is the concentration of population in fairly small geographic areas, in which the most efficient production and distribution is more easily achieved. Moreover, once the process of concentration gets under way, similar powerful forces make it of cumulative importance in growth—production can be scaled still more efficiently to meet enlarging markets; business services and a versatile labour force are close at hand; new technology is more easily developed and exploited; and advanced management skills and enterprise are more readily attracted. It is on this basis that the concept of the “growth centre” as a necessary focus for regional growth has been widely advanced and accepted. The concept involves a geographic concentration of appropriate industries whose growth in the region can be effectively fostered. Once set in train, the growth process will stimulate advances in related activities which supply inputs, such as component parts, services, and fuels, to the “core” industries and make use of their output.

There is widespread evidence and experience to suggest that the process of economic “agglomeration” is an increasingly important factor in economic development. The regions of Canada, however, vary greatly in concentration of population and in locational advantages. This may be seen from the accompanying map which shows the geographic distribution of Canada’s population in 1961. The most striking feature revealed by the map is the heavy concentration of Canada’s population—and hence employment and economic activity—along a narrow band which extends from Windsor, in southwestern Ontario, to Quebec City on the St. Lawrence River. The metropolitan areas within this narrow band alone account for 31 per cent of Canada’s total population. Moreover, much of this area is contiguous to the industrial “heartland” and major population centres of the United States, thus adding to its locational advantage.

Outside of this central industrial area, the population is widely dispersed, except for a number of metropolitan centres in widely separated parts of the country. Although these centres vary greatly in size and in effectiveness as agglomerations for self-generating growth, they clearly constitute the most important focal points for the development of their respective regional areas and for improved regional balance across the country.

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INTERREGIONAL DISPARITIES IN PUBLIC SERVICES

Our analysis of regionally balanced economic development also requires consideration of the influence of public services upon regional growth and of the evidence of significant disparities in the level of these services among the various provincial regions. In earlier periods much of the public debate concerning regional imbalance in our federal system was focused upon the disparities in these services rather than upon the more basic problems of interregional differences in income and economic growth. That debate, as is well known, led in the late thirties to the comprehensive inquiry by the Rowell-Sirois Commission on Dominion-Provincial Relations, and to the explicit formulation of the concept that the Canadian fiscal system should "make it possible for every province to provide for its people services of average Canadian standards", without the necessity of imposing heavier than average tax burdens. Although the specific fiscal recommendations of the Commission were never fully implemented, this basic concept has clearly exerted a powerful influence in the far-reaching federal-provincial fiscal adjustments which have accompanied the rapid extension of the public services throughout the post-war period.

In one sense the public services—particularly in education, health and welfare, transportation and protection of persons and property—constitute a form of community investment and income. In this sense, the more similar they are in scope and standards in all parts of the country, the greater their contribution to regional balance in income. Although there is some evidence of an uneven regional incidence of federal government expenditure, on the whole, federally provided services undoubtedly moderate interregional income disparity. This is particularly true of federal transfer payments to individuals and a wide range of national services, such as defence, external affairs and financial administration, the benefits of which are presumed to accrue more or less evenly to all Canadians.

A distinctly different situation applies at the level of provincial and municipal governments. Not only are there obvious differences in service requirements, but there are also important variations in the areas and degrees of responsibility assigned to the public sector. More fundamental, however, are the disparities in regional wealth and income which form the primary basis for the support of regional services. The obvious consequence is a wide range of variation in per capita expenditures at the provincial-municipal level, and commensu-

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rate disparity among the various regions in the scope and standards of the public services provided at this level.

The extent of this disparity is shown in Table 5-15. Here it will be noted that, on the basis of averages for 1961 and 1962, provincial-municipal government outlays for all regional services were 50 per cent greater in the highest province, Alberta, than in the lowest, Nova Scotia. The rank order of the ten provincial regions is not identical with that noted for personal income per capita (Table 5-1), but there is a clear general conformity of higher expenditures in the higher income provinces from Ontario to the west, in contrast to lower outlays in Quebec and the Atlantic area. From the sketchy historical data that are available, however, it appears that the degree of relative disparity in regional public expenditure is significantly lower at present than in the 1930's. This disparity has also shown a fairly steady and distinct decline since the early 1950's (Chart 5-8).

TABLE 5-15—PROVINCIAL-MUNICIPAL GOVERNMENT
EXPENDITURES AND REVENUES

(Averages for fiscal years, 1961-62 and 1962-63)

	Expenditures Per Capita	Revenues		
		Total Per Capita	Regional Sources	Federal Sources
	\$	\$	%	%
Alberta.....	391	386	84	16
British Columbia.....	387	375	86	14
Ontario.....	369	343	85	15
Saskatchewan.....	353	372	80	20
Manitoba.....	328	277	78	22
Quebec.....	312	286	80	20
Prince Edward Island.....	312	270	53	47
New Brunswick.....	273	256	62	38
Newfoundland.....	268	243	42	58
Nova Scotia.....	260	258	65	35

NOTE: Revenues and expenditures refer to the statistical classification of net general revenue and expenditure, but include federal contributions to shared-cost programmes. Provincial government transfers to municipalities are excluded to avoid double counting.

SOURCE: Based on data from Dominion Bureau of Statistics.

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The underlying regional revenue situation is also shown in Table 5-15. Here the accompanying disparity in revenue among the regions is equally apparent, as well as the considerably greater importance of federal revenue transfers to the provinces of the Atlantic Region. More detailed studies have also shown that the superior revenue status of the three most westerly provinces is due in large part to revenues from the exploitation of natural resources. Apart from this factor, the potential revenue capacity of the provincial and municipal governments is closely correlated with underlying regional per capita income flows. Differences in this revenue potential are far more important than variations in provincial-municipal tax structures in determining the amounts of revenue available for the support of regional public services.

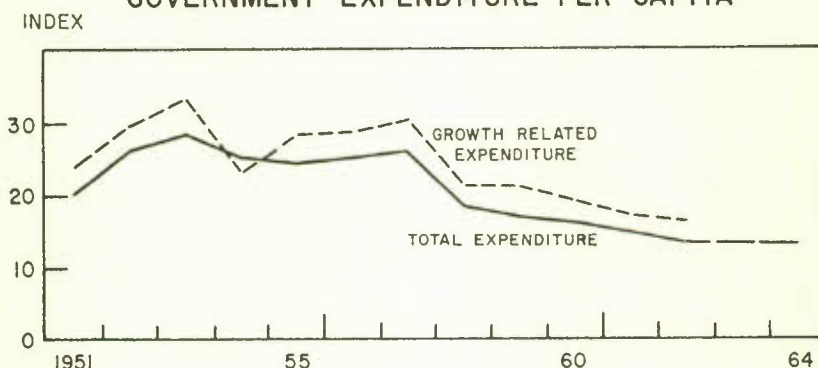
Interregional variations in the scope and standards of the public services are not only important because of their implications for interregional disparities in community income. They also bear directly upon the issue of regionally balanced economic growth. Although it is difficult to draw a clear line between the consumption and investment elements of public spending, particularly in the case of services to people, it is now recognized that a significant proportion of public outlays may be looked upon as investment related to long-term economic growth. This applies particularly to expenditures concerned with the extension and development of human and physical capital, the provision of services to assist private production, and the general advance of knowledge. As preceding chapters have indicated, these developments are increasingly regarded as major factors in long-run economic growth, and interregional economic balance is likely to be significantly influenced by interregional disparities in what might be called "growth-related" public expenditure.

There are important conceptual and statistical difficulties in defining "growth-related" expenditure in any precise manner, and particularly so for the purpose of interregional comparisons. Nevertheless an approximate approach might be attempted by taking note of those broad categories of expenditure which help to enlarge the supply, and improve the quality and effective utilization, of productive factors. In general the most important and relevant regional public outlays appear to be those for education and health, which powerfully affect the supply and quality of human capital; and those for transport facilities, research, natural resources development and industrial promotion which affect both the volume and efficiency of private production.

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These categories of expenditure comprise a large and growing proportion of total provincial-municipal expenditure. As shown in Table 5-16 and chart 5-8, however, the disparities among the regions in outlays per capita are substantial. Averaged for 1961 and 1962, regional "growth-related" outlays varied from a low figure of \$187 per capita in Nova Scotia to a high of \$298 per capita in Alberta. As in the case of total provincial-municipal expenditure, the rank order of the regions in growth-related outlays conforms broadly with the income status of the regions, the most significant exceptions being the provinces of Quebec and Nova Scotia. Over the past decade, moreover, the relative degree of spread among the regions indicated in Chart 5-8 has followed the same downward trend previously noted for interregional disparity in total expenditure. It may be noted that this analysis ignores the effect of private spending on functions such as health and education which may moderate the apparent degree of interregional difference. This is important, for example, in the case of the relatively larger role of private schools in the educational system of Quebec.

CHART 5-8
INDEX OF INTERPROVINCIAL DISPARITY
IN PROVINCIAL AND MUNICIPAL
GOVERNMENT EXPENDITURE PER CAPITA



Source: Based on data from Dominion Bureau of Statistics and estimates by Economic Council of Canada.

The range of variation in regional public expenditure on education deserves particular attention. The data are set out in Table 5-16 on a per capita basis, and the disparities again indicate a broad conformity with interregional income differences. These disparities, however, are

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TABLE 5-16—PROVINCIAL-MUNICIPAL GOVERNMENT EXPENDITURE
PER CAPITA ON GROWTH-RELATED FUNCTIONS

(Averages for fiscal years 1961-62 and 1962-63)

	Education	Health	Transport	Resources and Other	Total
Alberta.....	\$127	\$73	\$77	\$21	\$298
Ontario.....	112	80	71	10	273
British Columbia.....	104	72	72	22	270
Saskatchewan.....	106	84	59	21	270
Manitoba.....	105	63	62	19	249
Prince Edward Island.....	90	49	90	15	244
New Brunswick.....	67	57	62	14	200
Quebec.....	93	51	38	17	199
Newfoundland.....	69	58	50	12	189
Nova Scotia.....	75	56	47	9	187

NOTE: The expenditure data include federal contributions to shared-cost programmes.

SOURCE: Based on data from Dominion Bureau of Statistics.

greatly accentuated when expenditures are shown on a per pupil enrolled basis.

The difference between the two measures is accounted for by a number of factors. One of these is that the number of children enrolled in school, of age 15 and less, is larger in proportion to total population in the lower income regions. On the other hand, for children of 16 years and over, these same regions exhibit a higher "drop-out" rate, resulting in correspondingly lower percentage enrolments in the higher grades of secondary school and comparable facilities, where per pupil expenditures are likely to be considerably higher than for the lower grades.

The distribution of enrolments by grade in Quebec and the Atlantic Region appears to be one factor in their lower average per pupil expenditures. A more general factor is the relatively lower level of teacher salaries in these provinces. This is associated in turn with appreciably lower levels of training and qualification in most of the same provinces. For example, a Dominion Bureau of Statistics report on qualifications indicates that in 1961, the latest year for which data are available, the five higher-income, higher-educational expenditure regions from Ontario to the west reported that 81 to 97 per cent of their elementary school teachers possessed "full qualifications"; in Nova

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Scotia the proportion was 61 per cent; but in Quebec and the three remaining Atlantic Provinces, it ranged from 50 per cent down to only 13 per cent. "Full qualification" was defined for this evaluation as the equivalent of junior matriculation standing with two or more years of professional training, or senior matriculation with one or more years of professional training. Although interregional differences in teacher qualifications were not as marked in the secondary schools, a generally similar pattern prevailed. Something about the intangible element of quality differences in education may be inferred from this, as well as from differences in other indicators of the scope and quality of the school system, such as the range and variety of courses available, which generally increase the level of expenditure per pupil.

The available historical data indicate that interregional disparities in public outlays for education are of a long-standing nature, and indeed were considerably more marked throughout most of the past three decades. Even after allowing for the effects of population migration, it is entirely probable that these differences are closely related to the lower average levels of education of the labour force in the lower-income provinces as previously outlined in this Chapter.

Moreover, the analysis of Chapter 4 has pointed to a large and widening gap in average educational attainment between Canada and the United States over the past half century, and has suggested that this gap is an important contributing factor to the substantially lower average income in Canada. It was also suggested in Chapter 4 that the potential for accentuating the growth of average income in Canada, and for narrowing the income gap with the United States, through increased educational investment in Canada is particularly good. The analogy for the problem of income differences among the regions within Canada is clear.

A similar, although rather less clear-cut analysis applies to the other forms of regional growth-related expenditures noted in Table 5-16. In respect to health services, the relative degree of interregional disparity is less than in education, due in part at least to the more direct equalizing effects of federal grants in shared-cost health services. Further, while one or two indicators (infant mortality, for example) suggest a somewhat lower health status in some of the lower-income provinces, the differences are fairly small and the various indicators do not show a consistent pattern. The Royal Commission on Health Services has rightly pointed to the significant contribution to Canada's past economic growth from improvements in health status, and to the current losses in national output attributable to illness. However, we

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are not at all certain as to what further net stimulus either to national or regionally balanced growth might accrue from increased public investment in health services. It is, however, obviously true that when viewed as a component of income in the broadest sense, expanded provincial health services supported by federal transfers would have a further important equalizing effect among the regions.

As for regional transport facilities (mainly roads and streets), the exploration and development of natural resources, and the many other forms of growth-related expenditure, the range of interregional variation is appreciably wider than in either education or health. Our studies have shown a fairly significant correlation between rates of increase in these public expenditures among the regions and the respective regional rates of income growth. Hence it is a fair inference that a more rapid growth rate in the relatively lagging regions would necessarily involve increased public expenditure and investment in these functions, and the latter might well help to bring about the former.

Since the maximum possible growth rate is a major objective in the lower-income provinces, it follows that expanded public expenditure should be directed along those lines likely to assure the highest possible private and social rates of return. Here the developing concepts and techniques of benefit-cost analysis are highly relevant. The problems of isolating and measuring the particular benefits likely to accrue from alternative public investment in human or physical capital are admittedly difficult, and are perhaps insoluble with respect to wholly intangible benefits. Nevertheless the discipline of measuring benefits against costs, and the comparative evaluation of alternative possibilities, should provide a useful tool in formulating public programmes for maximum regional growth.

REGIONAL INCOMES AND BALANCED DEVELOPMENT

We have now examined the extent and characteristics of interregional differences in per capita income levels and in rates of growth in Canada reaching back over almost four decades. Our analysis has also explored a number of underlying factors which help to explain why these differences exist, and how they have changed over time. Marshalling the evidence outlined in terms of the broad economic characteristics of the various regions, it is possible to attempt a summary perspective.

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The Atlantic Provinces

Although there are important distinctions among them, the four Atlantic Provinces clearly constitute the region with the lowest levels of income per capita in Canada and the area which has participated least adequately in over-all national economic growth. In this sense the Atlantic Region is the "underdeveloped region" of Canada, with a particularly unfavourable set of economic circumstances and characteristics.

First, the proportion of its population normally engaged in productive activity is lower than in other areas of the country. This fact alone would appear to account for roughly half of the gap in income per person between the region and the Canadian average. Contributing to this lower utilization of manpower resources are such factors as a relatively smaller proportion of total population in the working age group of 15-65 years, lower rates of participation in the labour force, higher than average unemployment, and relatively severe seasonal unemployment.

Second, the picture is no more favourable as regards earnings per person employed. The general educational level of the labour force is below that of other regions, and a larger proportion of the population live and work in rural areas where incomes are typically lower than in urban areas. Over the post-war period for which data are available, the rate of capital investment per capita has been well below the Canadian average; while regional public expenditure on growth-related services, including education, health, transport and resources development, has been consistently and substantially lower than in other Canadian regions. These conditions have also been reflected in high and sustained rates of out-migration of people from the area and in a rate of growth of employment slower than in the rest of Canada.

These are the symptoms of a region in a low-level "income-trap", and the breaking-out of that trap poses a formidable challenge to national policies for regionally balanced economic development.

Quebec

Income levels per person in Quebec fall somewhat below the average for Canada. This is similarly true of most of the other economic characteristics broadly outlined in our analysis. Manpower utilization is about 5 per cent below the national level, mainly because of lower than average participation in the labour force and higher than

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average unemployment. Earnings per employed person also fall about 7 per cent below the average for all regions. It is not easy to isolate the basic contributing causes but lower levels of educational attainment in the labour force and a longer run lag in investment in both the private and public sectors of the regional economy undoubtedly have played a part. It is also true that to a greater extent than in most of the other provinces, Quebec faces a difficult problem of securing subregional balance. Regional disparities within the province present a sharply contrasting picture. On the one hand, rapid cumulative growth is centred upon the large, metropolitan complex of Montreal, while on the other hand there are extensive areas of slower development comparable to the circumstances of the Atlantic Region.

In terms of regional income growth, however, Quebec's performance has been well above the average for Canada. Indeed, since 1950, rising levels of income per person in this province have been a powerful force in reducing interregional income disparity in Canada. Employment has grown almost as rapidly as in Canada as a whole. Internal migration from rural to urban areas and occupations has also been an important factor in the over-all development of Quebec's economy, especially in the post-war period.

Manitoba and Saskatchewan

These two Prairie Provinces have important distinguishing features. They are essentially similar, however, with respect to income levels and related economic characteristics, in which they rank somewhat above the average for Canada. Manpower utilization is at or above the national level, because participation in the labour force is relatively high while the rate of unemployment is the lowest in the country. Seasonal unemployment associated with agriculture, however, is large. Indeed the importance of agriculture in both economies, but particularly in Saskatchewan, is an overriding influence which affects their economic status in relation to the other regions.

Earnings per employed person average close to the national level, although relatively high concentration of employment in agriculture exerts a general downward pull. The shift out of this primary industry has involved a substitution of capital for labour on the farm and high rates of migration, both to urban areas and to other provinces. Educational attainment in the labour force approximates the national average. Rates of investment per capita have been favourable, and in Saskatchewan particularly the development of new mineral resources has diversified the productive capacity of the province. In these ways

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productivity and income per capita have been successfully maintained at or above the Canadian average. Nevertheless, total regional income and employment have increased relatively slowly, because a highly mobile population has been attracted away by superior employment alternatives in the most rapidly expanding areas of the country. Consequently, a more rapid and sustained rate of regional growth and participation in national economic development will depend upon the provision of suitable employment opportunities involving high productivity and income within these regions.

Ontario, Alberta and British Columbia

Only a brief discussion is required for the three remaining regions—Ontario, Alberta and British Columbia. Although all three have clearly distinguishable economic characteristics, they have maintained a consistent standing at or near the top of the regional ranking of personal income per capita in recent decades. Manpower utilization is higher than average in Ontario and Alberta, with favourable population age structures, high labour force participation rates and low unemployment. These factors are less favourable in British Columbia, but their effects are offset by the exceptionally high rate of earnings per person employed—19 per cent greater than the national average.

In all three provinces, educational attainment in the labour force and educational investment are advanced, and rates of new investment have been well above average. In the range of factors whose impact we have not been able to measure statistically—resource endowment, scale of enterprise and the stimulus of urban agglomeration, location and the use of advanced technology—these regions are relatively more favoured than most other provinces. With all these factors contributing to their rapid growth in employment, population, and total income, these regions have clearly participated very strongly in national economic development. At the same time, to a greater extent than elsewhere, these regions have been particularly confronted with those problems associated with a sharp increase in the concentration of people and economic activity. These include specifically the problems of urban congestion, the optimum use of land, and the provision of services and facilities required to accommodate rapid urban growth. The solution to these problems clearly entails heavy capital investment and far-reaching, complex changes in the institutional framework to enable it to adapt to new needs.

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Our analysis has shown that over a period of almost four decades—embracing buoyant expansion, a severe depression, a prolonged war, and a period of revived national growth—the regional problem in Canada has remained essentially unchanged. Large interregional disparities in per capita income have stubbornly persisted despite various forces working towards better balance. These have included the significant redistribution of population, far-reaching adjustments in the structure of economic activity at the national level, and certain public policies aimed at greater equalization of regional incomes. Against such a background, the narrowing of income disparities, and the achievement of this result consistently with our other basic economic and social objectives, remains one of the most difficult issues confronting the country as a whole.

At this stage we have attempted mainly to explore the basic elements of the problem, with particular reference to interregional differences at a point in time. It will be apparent that a number of relevant questions have not been considered; for example, the relationship between urban concentration and regional growth, the economic or industrial potential of the various regions (including the availability of natural resources), the effects of rapid technological change, the roles of international and interregional trade and transport cost in development, or those intangible factors of a sociological nature which undoubtedly affect productivity and income growth. Nor have we yet had an opportunity to assess the impact of a number of particular national policies and programmes. These questions, and others, also require consideration within a framework of change over time.

In recent years most of the provinces have been placing new emphasis upon varied programmes and devices aimed at accelerating the growth rates of their economies. As might be expected, the impetus for such action at both government and community levels has probably been strongest in the regions of relatively lagging income, where inherent assets and advantages and normal market forces have not been able by themselves to bring about full utilization of resources and sufficiently rapid rates of income growth. The need for consistency and harmony between these provincial development programmes and national policies aimed at fostering economic balance among all the areas of Canada is obvious.

The results of our initial analysis are intended to help provide an over-all perspective on some of the factors affecting interregional

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productivity and income differences, as a basis for more effective and consistent provincial and national policies. In this regard, our results emphasize the crucial importance of achieving fuller utilization of resources and more rapid gains in productivity in the lower income regions. These objectives are related, in turn, to a complex of factors, such as the increased employment of labour resources, higher levels of education and skill in the labour force, an adequate volume and quality of capital, efficiency and appropriate scale in industrial organization and exploitation of natural resources, and underlying influences of motivation and attitude. Effective results depend, we suggest, upon improvements in both public and private policies in all of these areas.

The analysis is also useful, we believe, in pointing to possible dangers which must be avoided if the objective of steadily improving regional balance, within a framework of sustained national growth, is to be successfully achieved. Thus an indefinite pyramiding of mere subsidies to the lower income regions, made possible only at the cost of retarded growth in the higher income regions, would be clearly inconsistent with both sound regional development and a high and sustained rate of national growth.

Similarly, the importance of unrestricted freedom of movement on the part of productive resources within the national and regional economies clearly emerges from this analysis. It has been shown that certain large flows of population, both within regional boundaries and between regions, have been particularly important in contributing to higher levels of productivity and income. They have thus been closely associated with improved regional economic welfare and national economic growth. In this context it will be recognized that market imperfections and rigidities, as well as social forces strongly resistant to change, inhibit the mobility of resources and impair their fullest and most productive use, even under the best of circumstances. Hence it is particularly necessary to avoid restrictive and divisive measures which interfere with the free flow of labour and capital, and of goods and enterprise, across provincial boundaries. Not only are such measures damaging to the expansion of the national economy, but from the standpoint of sound regional growth they are also certain to be ultimately self-defeating.

The achievement of a better regional economic balance in Canada will involve a substantial increase in investment in both human and material resources, especially in the lower income regions. Such investment must be guided by sound economic criteria which have

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regard not only to short-run circumstances but also to the longer run strengthening of the basis for economic development, and which take into account not merely the advantages to particular interests but also the costs and benefits to society at large. The same criteria should apply to broad economic policies designed to stimulate the growth of the lagging areas. In certain circumstances it may well be necessary to set aside the application of strict economic judgments, for example, in order to accommodate overriding social objectives. But even in such cases the formation of policy should be assisted by evaluation of the economic costs and benefits of alternative methods for meeting these objectives.

It will also be recognized that regionally balanced economic development as defined in this Review is a long-run goal. Because the conditions contributing to present interregional disparity are deep-rooted, it would be a mistake to think that improved balance can be achieved simply and quickly. The appropriate policies and programmes should be formulated within a long-run planning framework, and worthwhile results will depend upon consistent and sustained policy commitments.

Economic Fluctuations and Policies for Stable Long-Term Growth

THE POTENTIAL GROWTH of the Canadian economy, as already discussed in Chapter 3, is basically determined by the quantity, quality and efficiency of use of productive resources. These are factors which affect the capacity of the economy to supply increased output. The *actual growth* of the economy may, however, deviate significantly from the potential of the economy as a result of instability in the growth of total demand—that is, the total of all sources of demand for goods and services: consumption, investment, government, and exports (less imports). Indeed, changes in demand forces, both within the Canadian economy and in international markets, have in the past given rise to considerable instability in the growth and development of the economy. This has resulted in business cycles—a pattern of fluctuations in the general level of business activity.

THE BUSINESS CYCLE

The business cycle has been described as “a type of fluctuation found in the aggregate economic activity of nations”, consisting of “expansions occurring at about the same time in many economic activities, followed by similarly general recessions, contractions, and revivals which merge into the expansion phase of the next business cycle”.¹ This sequence is recurrent but does not take place at regular intervals,

¹This description of the business cycle has been derived from the work of the National Bureau of Economic Research in the United States.

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and both expansions and contractions may vary considerably in duration, dimensions and characteristics. From a wide range of economic indicators, turning points—or “peaks” and “troughs”—can be identified in economic activity, thereby providing a basis for the measurement of periods of “expansion” and “contraction” between these points. In the following analysis, a severe contraction, such as that which occurred in 1929-33, is termed a “depression”. The shorter, less severe contractions, such as those of the post-war period, are called “recessions”.

The preceding description of the business cycle is compatible with divergent views as to the underlying causes of business cycles. Fluctuations in aggregate economic activity may be produced by many different influences. Economic and noneconomic factors are interrelated in complex ways; in fact, the distinction between them may often be arbitrary. Changes in the over-all level of economic activity can obviously be affected by such diverse factors as population growth and many other demographic influences, wars, international and domestic political developments, changes in technology, shifts in tastes and the composition of demand, the development of new products, the discovery of new resources, foreign trade developments, weather conditions, natural phenomena (such as floods and earthquakes), human and institutional relationships and problems (for example, major strikes or fears of strikes), general government policy influences on supply and demand, such as changes in the over-all government fiscal position or changes in the money supply, and basic economic interrelationships.

BUSINESS FLUCTUATIONS IN THE NORTH AMERICAN ECONOMY

The peaks and troughs of business fluctuations in Canada have rarely diverged by as much as three months from the corresponding turning points in the United States economy. This similarity in timing extends back to the decades immediately following Confederation, even though trade and other ties with the United Kingdom were then relatively much stronger and those with the United States relatively much weaker. Moreover, many characteristics of the cyclical expansions and contractions in the two countries have been broadly similar.

Geographical and historical factors have resulted in uniquely close economic interconnections between Canada and the United States. For example, over the post-war period, exports of Canadian goods to the

Economic Fluctuations

United States and imports of goods from that country have been equivalent, respectively, to one quarter and one third of all goods production in Canada. There are also extensive interconnections between business concerns across the border, while close links between financial markets and institutions are reflected in flows of both short-term and long-term capital and in interest rate and stock market changes. At the same time, the Canadian economy has demonstrated a strong sensitivity to price developments in the United States, along with a persistent tendency for similar trends in costs and profits.

Against this background, the similarities in the business cycle experience of the two countries are hardly surprising. Indeed, it is the occasional dissimilarities which are of the greatest interest in appraisals of cyclical developments from a Canadian point of view.

Illustrative of this similarity is the comparison of industrial production of the two countries, covering almost half a century shown in Chart 6-1. Four major features of economic developments in the two countries over this period can be clearly seen from the Chart:

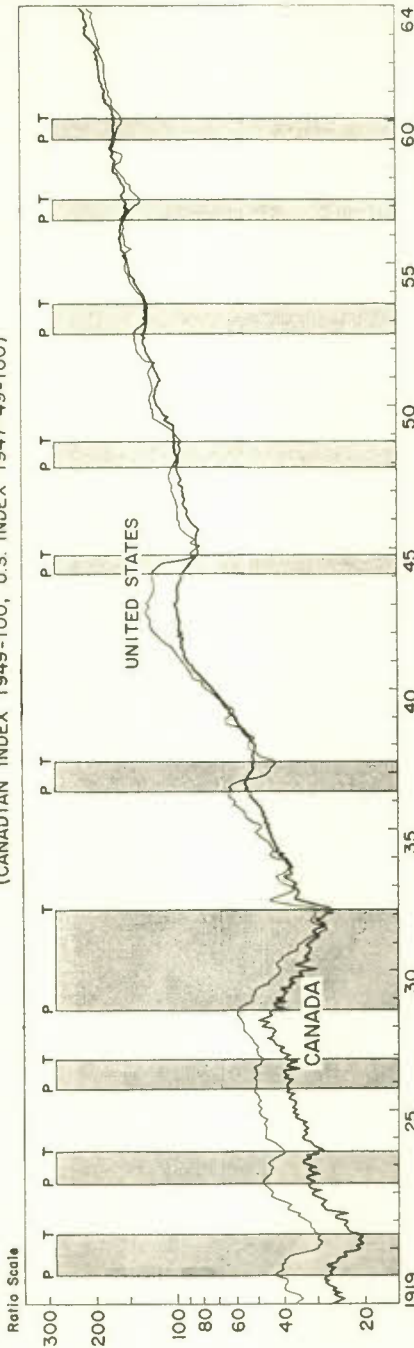
- the remarkable conformity in timing of expansions, contractions and plateaus in industrial production, an important and typically rather volatile sector of both economies;
- the diminished severity of post-war recessions, compared with those of the inter-war years, and the appearance of increasing stability in the growth of production over time;
- the fact that contractions in production have generally been somewhat more marked in the United States than in Canada; and
- the more rapid growth of production in Canada than in the United States over the period as a whole, primarily reflecting the relatively higher long-term growth of population and employment in Canada.

From the preceding discussion, it is clear that, in attempting to form impressions as to the likely future impact of business fluctuations in Canada, economic developments in North America as a whole must be a basic frame of reference. Similarly, evaluation of business cycle developments in the United States is a critical factor in assessing the development of business fluctuations in Canada.

SOME MAJOR CHARACTERISTICS OF NORTH AMERICAN BUSINESS FLUCTUATIONS

In addition to the close interdependence of business fluctuations and the concurrent cyclical pattern of economic changes within the two

CHART 6-1
INDUSTRIAL PRODUCTION INDEXES, CANADA AND UNITED STATES
(CANADIAN INDEX 1949=100, U.S. INDEX 1947-49=100)



Note: The shaded areas denote recessions, and the letters P and T denote peaks and troughs in the short-term business cycle in the United States. As indicated in the text, the timing of peaks and troughs in Canada is very close to those in the United States.
Source: Board of Governors of the Federal Reserve System, and Dominion Bureau of Statistics.

Economic Fluctuations

countries, at least four other characteristics of post-war cyclical experience in Canada and the United States deserve special emphasis. These are:

- the emergence of shorter recessions and apparently longer expansions in total economic activity;
- the reduced dimensions of both business cycle expansions and contractions;
- the continuing central role of fluctuations in business investment; and
- the increased importance of the government sector as a factor contributing to the greater economic stability in both countries.

Shorter Recessions and Longer Expansions

As already shown, one of the most prominent features of post-war business fluctuations has been the shorter average length of cyclical contractions and the apparently longer duration of business upswings. In other words, compared with previous experience there has been greater stability in the economic growth of both Canada and the United States in this period. This appears to be true not merely in comparing the post-war years with the inter-war years, but also in comparisons with still earlier historical experience—for example, going back to 1873 for Canada and stretching over more than a century for the United States (Tables 6-1 and 6-2).

TABLE 6-1—AVERAGE DURATIONS OF CANADIAN PEACETIME CONTRACTIONS AND EXPANSIONS, SELECTED PERIODS, 1873-1965

Period	Contractions		Expansions	
	Number	Average Duration	Number	Average Duration
		(In months)		(In months)
1873-96.....	6	24	5	26
1919-38.....	4	23	4	36 ⁽¹⁾
1946-65.....	3	12	4	36 ⁽²⁾

⁽¹⁾Canada is regarded as having had a long uninterrupted business expansion from 1924 to 1929. The United States, on the other hand, is regarded as having had a cyclical peak in 1926 and a trough in 1927. This difference in historical experience is an important factor in the relatively longer duration of expansions in Canada than in the United States prior to the Second World War (Table 6-2).

⁽²⁾Includes, as of December 1965, 57 months of the current (still incomplete) expansion.

SOURCE: E. J. Chambers, "Canadian Business Cycles Since 1919", *Canadian Journal of Economics and Political Science*, Vol. 24, No. 2 (May 1958); E. J. Chambers, "Late Nineteenth Century Business Cycles in Canada", *ibid.* Vol. 30, No. 3 (August 1964); and (since 1954) tentative estimates by the Economics Branch, Department of Trade and Commerce.

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TABLE 6-2—AVERAGE DURATIONS OF UNITED STATES PEACETIME
CONTRACTIONS AND EXPANSIONS,
SELECTED PERIODS, 1854-1965

Period	Contractions		Expansions	
	Number	Average Duration	Number	Average Duration
		(In months)		(In months)
1854-1900.....	9	23	10	25
1900-39.....	10	20	9	24
1945-65.....	3	10	4	39 ⁽¹⁾

⁽¹⁾Includes, as of December 1965, 58 months of the current (still incomplete) expansion.
SOURCE: *Business Cycle Developments*, U.S. Department of Commerce.

In both Canada and the United States, the average duration of post-war contractions has been approximately half of the averages of earlier periods, mainly as a result of the avoidance of a severe contraction, or depression, in the post-war period. It is also true that the average duration of expansions has been longer.

Reduced Post-War Intensity of Business Fluctuations

On the average, post-war contractions have been much more moderate in terms of the rate of contraction of economic activity during recessions. Similarly, the post-war expansions have also been more moderate in terms of the rate of expansion of economic activity during business upswings. Illustrative of this moderation in rates of change in the level of economic activity in both contractions and expansions are the movements in Canadian and United States industrial production shown in Tables 6-3 and 6-4.

TABLE 6-3—AVERAGE MONTHLY PERCENTAGE RATES OF
CONTRACTION AND EXPANSION IN CANADIAN INDUSTRIAL
PRODUCTION, SELECTED PERIODS, 1919-65

Period	Contractions	Expansions
1919-38.....	-0.85	+1.02
1946-65.....	-0.11	+0.55

NOTE: Somewhat different techniques have been employed in computing the Canadian rates of change in this Table and the United States rates of change in Table 6-4. Precise comparisons should therefore not be made between the data in these two Tables.

SOURCE: Based on data from the Dominion Bureau of Statistics and estimates by Economic Council of Canada.

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TABLE 6-4—AVERAGE MONTHLY PERCENTAGE RATES OF
CONTRACTION AND EXPANSION IN UNITED STATES INDUSTRIAL
PRODUCTION, SELECTED PERIODS, 1892-1965

Period	Contractions	Expansions
1892-1914.....	-1.35	+0.95
1919-38.....	-1.84	+1.37
1948-65.....	-0.72	+0.73

NOTE: Somewhat different techniques have been employed in computing the United States rates of change in this Table and the Canadian rates of change in Table 6-3. Precise comparisons should therefore not be made between the data in these two Tables.

SOURCE: J. Shiskin, "The Current Expansion in Historical Perspective", *Business Cycle Developments*, Bureau of the Census, U.S. Department of Commerce, January 1965.

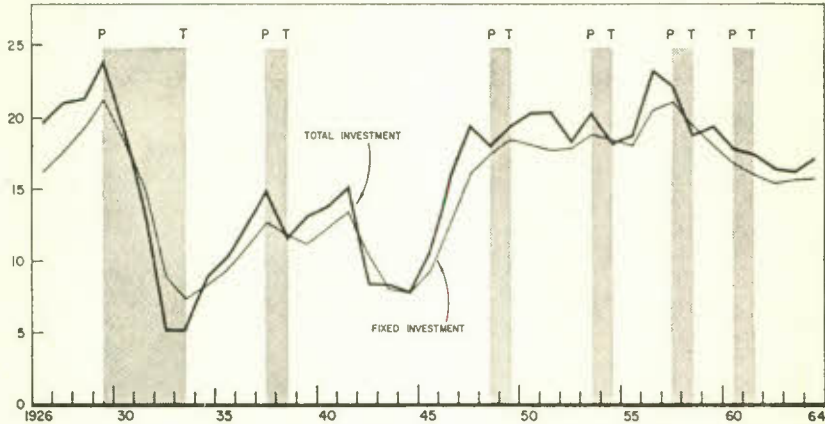
A major factor in the greater cyclical stability experienced in the post-war period has been the avoidance of a depression. In the past, depressions have typically occurred about once every two decades. They have involved protracted declines in economic activity, generating extremely high rates of unemployment and substantial slack in the use of productive capacity, with eventual rapid recovery feeding upon the existence of such slack. In the post-war period both Canada and the United States have successfully avoided such a depression, although the 1958-60 upswing was incomplete, in the sense that it did not carry the two economies back to relatively full utilization of economic resources and productive capacity. Thus, considerable economic slack had developed in both countries prior to the beginning of the current upswing early in 1961. This fact, which was an important factor in the calculation of our economic potentials to 1970 in the *First Annual Review*, has undoubtedly contributed to the over-all dimensions and the long duration of the current business upswing (Chapter 2).

Volatility of Business Investment Expenditures

A central feature of past business cycle experience has been the volatility of total business investment expenditures. Expenditures on inventories have typically been the most volatile element in such outlays. On the other hand, expenditures on fixed investment, while also usually varying substantially over the course of "short cycles", reveal a tendency to develop cumulative trends in one direction for periods that may stretch over two or three "short cycles". The swings in expenditures on fixed investment dominate the longer term behaviour of total business investment in Canada (Chart 6-2).

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CHART 6-2
FIXED AND TOTAL BUSINESS INVESTMENT
AS A PERCENTAGE OF GROSS NATIONAL PRODUCT

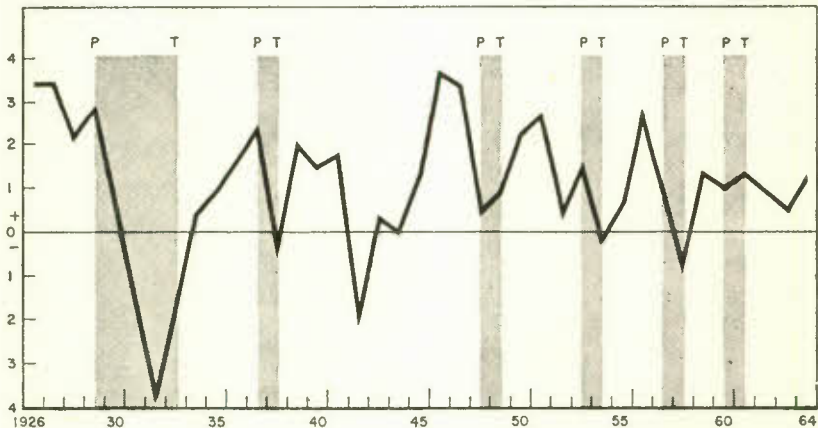


Note: The shaded areas denote recessions, and the letters P and T denote peaks and troughs in the short-term Canadian business cycle. Based on data in 1949 dollars.

Source: Based on data from Dominion Bureau of Statistics.

It will be noted that fixed investment was rising as a share of GNP from the end of the Second World War until 1957. The year 1957 was also a turning point in relation to post-war unemployment and the

CHART 6-3
CHANGE IN NONFARM BUSINESS INVENTORIES
AS A PERCENTAGE OF GROSS NATIONAL PRODUCT



Note: The shaded areas denote recessions, and the letters P and T denote peaks and troughs in the short-term Canadian business cycle. Based on data in 1949 dollars.

Source: Based on data from Dominion Bureau of Statistics.

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rates of growth in productivity and total real output. Changes in nonfarm business inventory investment tend to intensify short-term swings in total investment but do not reveal any clearly discernible longer term swings. The magnitude of fluctuations in this type of investment in relation to GNP appears to be moderating over time.

The behaviour of business inventory investment remains highly volatile. This is indicated in Chart 6-3. The inventory swing may be equivalent to several per cent of GNP over the course of a single year. In fact, a decline in inventories is usually the major single element in periods of decline or plateau in GNP during a cyclical contraction. Nevertheless, it should be emphasized that the declines in inventory investment are usually very brief. The single exception was the behaviour of inventory investment between 1929 and 1933. However, final demand¹ was declining sharply during this period. It is inconceivable that this performance of inventory investment would or could have occurred under conditions of sustained final demand.

Changing Importance of the Government Sector

Over the past few decades, the relative size of the government sector has grown very considerably. In the United States, for example, government expenditure on goods and services (measured in current dollars) has risen from 6 per cent of GNP in the 1899-1908 decade, to 8 per cent in the 1920-29 decade, to 17½ per cent from 1947 to 1955 and to roughly 20 per cent from 1955 to 1964.² Longer term changes and the current position in Canada are indicated in Table 6-5.

TABLE 6-5—FEDERAL, PROVINCIAL AND MUNICIPAL GOVERNMENT EXPENDITURES ON GOODS AND SERVICES AS PERCENTAGE OF GROSS NATIONAL PRODUCT

	1926-29 Average	1954-57 Average	1964
Federal.....	2.4	9.1	6.5
Provincial.....	1.9	3.3	4.1
Municipal.....	5.4	5.4	7.7
Total.....	9.7	17.8	18.3

NOTE: Based on data in current dollars.

SOURCE: Based on data from Dominion Bureau of Statistics.

¹"Final demand" is defined as GNP excluding the value of the physical change in inventories.

²Investment was relatively depressed in Canada and the United States during the late 1950's and early 1960's. Some of the comparisons in this section are thus based either on the 1947-55 period (United States) or on the 1954-57 period (Canada). The period of comparison in the 1920's was in each case affected by similar cyclical influences to those operating in the selected post-war periods.

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Capital investment expenditures by federal, provincial and municipal governments as a percentage of GNP are shown in Table 6-6. Such expenditures at the provincial and municipal level constitute an important element in the total expenditure on goods and services by these governments, and have constituted a rising share of GNP. The federal government's capital expenditures have been much smaller as a percentage of GNP in recent years than in the earlier post-war period. They have also been relatively much smaller than combined capital expenditures of provincial and municipal governments, although the latter include the indirect federal contributions to many types of such expenditures through shared cost programmes.

TABLE 6-6—FEDERAL, PROVINCIAL AND MUNICIPAL GOVERNMENT
CAPITAL EXPENDITURES AS PERCENTAGE OF GROSS
NATIONAL PRODUCT, 1949, 1956 AND 1964

	1949	1956	1964
Federal.....	1.05	1.24	0.67
Provincial.....	1.09	1.50	1.68
Municipal.....	1.05	1.38	1.61
Total.....	3.19	4.12	3.96

NOTE: Based on data in current dollars. Covers capital expenditures of government departments only and not government-owned enterprises.

SOURCE: Based on data from Dominion Bureau of Statistics.

The longer term rise in the relative importance of total government spending on goods and services may be contrasted with the longer term shifts in the importance of private investment in relation to GNP. In the United States, the current dollar value of gross private domestic investment fell from over 18 per cent of total output in the 1899-1908 decade to less than 16 per cent in 1920-29 and to less than 15 per cent in the 1947-55 period. Even though the comparable ratio of private investment to GNP in Canada was slightly higher in 1954-57 (22 per cent) than in 1926-29 (19 per cent), the relative importance of the government and the private investment sectors has undergone a major shift in both countries since the 1920's and 1930's. In the United States, the private investment sector was double the size of the government sector in 1926-29; by 1947-55 it was only four fifths the

size. In Canada, private investment was also double the size of the government sector in 1926-29, but only about one fourth larger in 1954-57.

The rising trend in government expenditures at the non-federal levels in both Canada and the United States over the post-war period has been an important source of strength in the growth in demand, sometimes adding to excessive demand pressures, but at other times helping to counteract weakness in business fixed investment expenditure.

In addition to the rise in total direct government expenditure on goods and services, government transfers to persons have increased and these have played a significant role in maintaining or raising personal incomes during recessions. In Canada, such transfer payments (excluding interest payments on government debt) rose from under 2 per cent of personal income in 1926 to over 12 per cent in 1964. They constitute a component in personal income which is not sensitive to business fluctuations, thus helping to enhance the stability of personal incomes and expenditures.

This increased relative importance of government expenditures, both on goods and services and transfers to persons, has led to greater stability in the economy, since such expenditures tend to be much less cyclically volatile than total expenditures in the private sector. The longer term experience for the three levels of government in both countries suggests little correspondence between expenditure changes and the timing of business cycles.

A further important source of stability arises more or less automatically through the operation of what have come to be termed "built-in stabilizers", which are much more important now than in the 1920's. The most powerful element of these stabilizers is the tendency for federal government revenues to rise much more rapidly than private incomes during expansion, and to decline more than private incomes during recession. Other stabilizers include contracyclical changes in unemployment insurance and government social assistance payments, which tend to rise in periods of recession and to decline in periods of expansion. These latter elements not only play a contracyclical role in moderating expenditure fluctuations in the private economy, but also ease the hardships of unemployment upon individuals and their families. Thus, as regards both government revenue and expenditure, there are automatic tendencies for the government sector to act as a "shock absorber" in moderating cyclical variations in income in the private sector.

Towards Sustained and Balanced Growth

Total revenues and expenditures of the federal government and of the combined provincial and municipal governments, calculated on a national accounts basis, are shown in Chart 6-4 in relation to levels of unemployment. As may be observed, combined expenditures and revenues of provincial and municipal governments have advanced relatively strongly and steadily since 1953 and have shown little variation in relation to changing levels of unemployment or general business conditions. Both federal revenues and expenditures have increased more slowly over the whole period since 1953. Although federal expenditures show some variability, these have not been closely related to changing levels of unemployment. Federal revenues, however, have shown large and quick changes in response to changes in the levels of unemployment and economic conditions. Thus, fiscal stabilization, as reflected in the size of budget surpluses and deficits, takes place primarily at the federal level.

THE SETTING FOR STABILIZATION POLICY

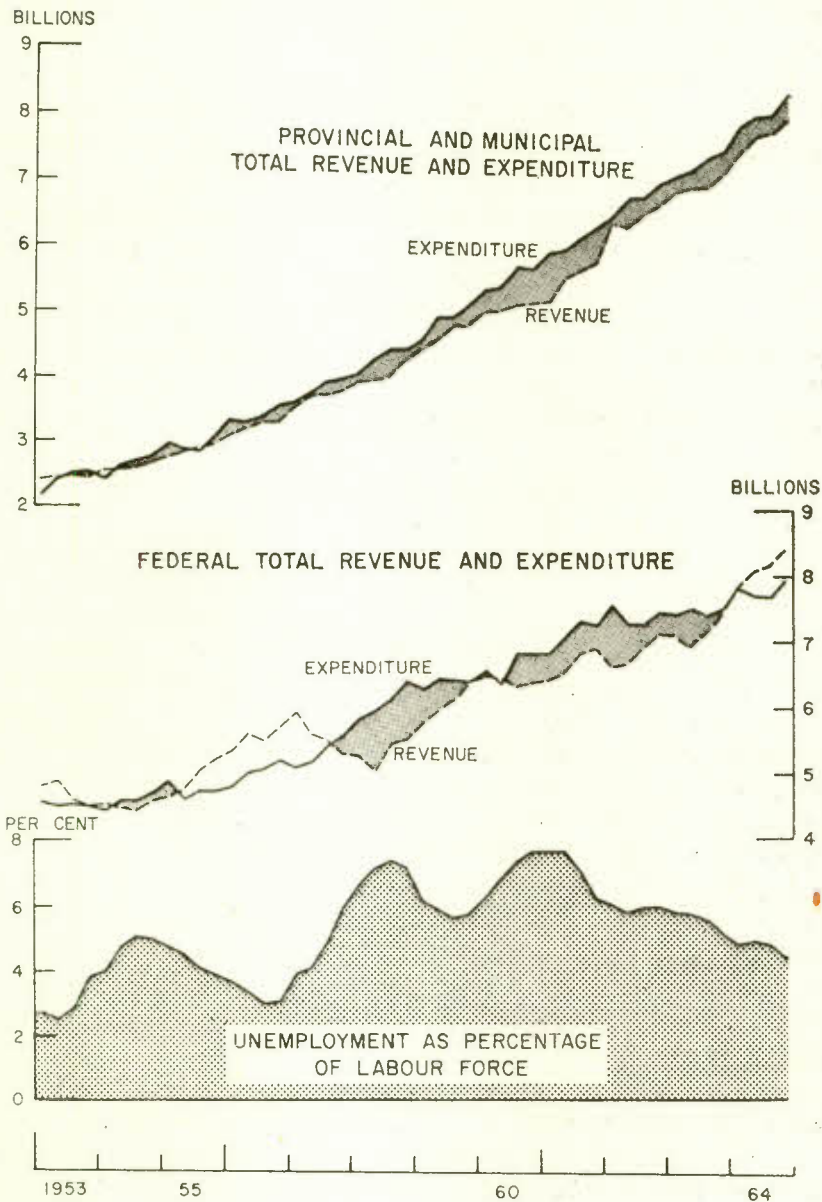
The traditional instruments of stabilization policy in Canada have been monetary and fiscal policy. The former mainly concerns the management of the money supply and credit conditions by the Bank of Canada; the latter relates to adjustments in taxes and expenditures by governments. Any appraisal of the current and potential role of these policies must obviously have regard not only to any recent and prospective changes in the nature and patterns of economic instability, which were discussed earlier in this Chapter, but also to the circumstances in which such policies must operate.

The International Environment

The Canadian economy is highly sensitive to international developments. Canada is not, of course, unique in this regard. Moreover, during the post-war period most countries—and perhaps especially the industrially advanced countries—have been becoming increasingly interdependent in the world economy, the many links of which virtually ensure that significant disturbances originating anywhere in the system produce widely diffused effects. Yet Canada is in an unusual position—not so much in terms of the relative over-all importance of external versus domestic influences, but in respect of the exceptional concentration of its external economic relationships with a single international economic partner, the United States.

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CHART 6-4
GOVERNMENT FISCAL OPERATIONS AND UNEMPLOYMENT



Note: Quarterly data seasonally adjusted at annual rates.
Source: Based on data from Dominion Bureau of Statistics.

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Thus, should a significant disturbance occur in, or seriously impair the performance of, the United States economy, Canada could not realistically expect to avoid experiencing a similar type of disturbance, although, as was indicated earlier, the Canadian economy tends to be somewhat less cyclically volatile.

These observations imply that Canadian economic stability is necessarily intimately related to United States and world stability. This will continue to be so in the future. But in considering the implications of this sensitivity of the Canadian economy to external forces, it is appropriate to take account of a number of recent changes in the international economic environment.

First, although it is not possible to state categorically that a contraction of the magnitude of the Great Depression of the 1930's will not or cannot occur in the United States, a number of factors suggest that it is unlikely in the foreseeable future. These factors include more conscious development of governmental and central bank policies for dealing with major and persistent economic imbalances, an accompanying shift in public and political attitudes regarding the potential role and need for stabilization policies, the increased size of the public sector and the reduced relative size and importance of the private investment sector, the conscious and deliberate pursuit of stable growth policies by the major industrially advanced trading partners of the United States, and the vastly increased information available on all aspects of economic activity together with improved understanding of how an economy works. Some of these factors appear to have been instrumental in helping to avoid a major contraction in the United States economy in the post-war period. This, in turn, has been the major contributing factor to the achievement of a steadier path of long-term growth, with milder short-term cyclical movements.

A second major influence affecting Canadian stabilization policy is the impact of United States policies to promote stable growth. Over the past few years the United States government has deliberately sought to implement economic policies designed to encourage the stable growth of production and employment and to narrow the gap between actual and potential output.

Third, there has also emerged over the post-war period a widening basis for more co-ordinated and concerted international efforts to achieve steady growth in the world economy. This is reflected in the work of various international institutions, perhaps especially the Organization for Economic Cooperation and Development (OECD) and the International Monetary Fund (IMF). In November 1961, the

Council of Ministers of the member countries of OECD established an output growth target of 50 per cent for the 1960 decade for all member countries combined. This implied an average annual rate of growth of 4.1 per cent in their combined output. OECD is currently undertaking a mid-term review of performance to date by each of the member countries, together with an assessment of prospects and problems for the balance of the decade. The country reviews are expected to provide the basis for discussion and co-ordination between the member countries. Since the membership comprises the countries with which the bulk of Canadian trade is conducted, the establishment of a common over-all growth objective, together with the setting up of machinery to facilitate co-ordination of policy and performance and to review progress and revise targets, has been an important development from the Canadian point of view. In addition to this vehicle of communication concerning longer term growth policies, opportunity is provided in the annual reviews of the economic performance and policies of member countries conducted under the auspices of both the IMF and the OECD for a continuing international exchange of views and information.

While it would be imprudent to discount entirely the possibility of severe shocks originating in the international arena in the years ahead, it appears reasonable, in the light of these various considerations, to conclude that the stabilization questions most likely to engage the attention of Canadian authorities over the medium-term future would concern: (1) the possible emergence of a modest recession, common to Canada and the United States, featuring inventory liquidation, perhaps related to a degree of hesitancy in expenditures on fixed investment; (2) the appropriate response to any abnormal upsurges in private investment or defence spending, or to some other combination of strong expansionary forces tending to generate general inflationary pressures; or (3) the possible need to counter any re-emergence of a significant degree of economic slack reflecting a failure to make full and efficient use of our rapidly expanding productive resources.

*Limitations on the Scope for Independent Canadian
Stabilization Policies*

In addition to making Canadian economic activity sensitive to external disturbances (especially those emanating from the United States), Canada's external links also tend to place limits upon the scope and effectiveness of independent Canadian stabilizing action to mitigate the effects of such disturbances. In particular, given the his-

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torically strong and pervasive pattern of dependence on imports in many sectors of production and consumption, the effectiveness of changes in policies deliberately aimed at stimulating domestic demand and output will be tempered by "import leakages". Similarly, the range and closeness of international financial connections limit the extent to which domestic conditions can be influenced by independent Canadian monetary and financial policies. The present fixed exchange rate system for the Canadian dollar is also a factor affecting the scope for independent stabilization policies. In addition, with regard to monetary policy, the scope for independent action is affected by the current agreement with the United States that Canadian borrowing in the United States will be exempted from the Interest Equalization Tax providing that Canada's foreign exchange reserves are not enlarged on the basis of such borrowing.

MONETARY POLICY

It will be clear from the above that any assessment of monetary policy as an instrument of domestic economic stabilization must start with the realization that, more than most instruments, it must at all times take account of external considerations. Sometimes, too, as was the case in 1965, it must be used to counteract the potentially disruptive effects of developments in domestic financial markets. Subject to these important provisos, one may ask certain basic questions about monetary policy in its role as a domestic economic stabilizer: What sectors does it affect? How effective is it? How long does it take to become effective? A number of recent investigations, including particularly those undertaken by the recent Royal Commission on Banking and Finance, have helped to shed light on these questions.

There would appear to be a basic consensus in these investigations that monetary policy can be an effective instrument for influencing the levels of expenditures in the private sectors of the economy. But there now appears to be considerable doubt about the view that corporate investment responds directly or quickly to changes in monetary policy. The impact of monetary policy would appear to work through the financial markets and institutional framework of the economy to fall primarily, in the first instance, on residential construction, consumer expenditure on durable goods, and small business spending. Ultimately,

however, changes in expenditures in these sectors of the economy will cumulate to affect corporate investment plans and expenditures.¹

Perhaps an even more important question relating to the role of monetary policy as an instrument of stabilization concerns the period elapsing between the time of need for stabilizing action in the economy, and the time when such action takes effect. For example, if the monetary authorities have to wait until expenditures actually weaken before taking steps to generate counterbalancing expenditure increases, three sources of lag in the effects of policy actions behind the time of need may be distinguished. First there may be a lag involved in recognizing that action is needed. This arises from the delay in collecting and analyzing statistical information on the economy's performance. As recently as a decade ago a lag of almost a full year was not uncommon between the actual beginning of a recession and a full and accepted recognition of its emergence. A second lag may occur in deciding upon and implementing an appropriate policy response to the disturbance. Finally, an "outside lag" may occur between the time when policy action is initiated and the time it affects income and expenditure in the economy at large.

Improved economic analysis and forecasting may reduce the "recognition lag", and the "action lag" may be reduced through swifter decisions once the need for action is recognized and accepted. However, the "outside lags" would appear to be quite long. The Report of the Royal Commission on Banking and Finance notes delays of up to a year before operations influencing the money supply are fully reflected in the behaviour of bank lending, although prior effects will usually be felt in the securities markets. Other studies suggest that considerable lags are typically experienced before changes in the money supply and credit conditions are reflected in changes in expenditure on goods and services and in income.

It must be recognized here that technical problems, particularly those relating to the relevance of many nonmonetary variables, make it difficult to measure the influence of monetary policy on subsequent income levels, and that it may be inappropriate to imply that the relationship can be adequately expressed in terms of simple "lags". However, it may at least be concluded that monetary policy action probably takes a significant number of months to begin to exert any appreciable effects on domestic incomes and expenditure; further, that the combined durations of the recognition lag and the outside lag

¹See the forthcoming volume *Conference on Stabilization Policies* to be published by the Economic Council of Canada.

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appear to have been long in relation to the average duration of post-war North American contractions (about ten months). Thus, various authorities have suggested that monetary policy effects are mostly perverse during cyclical contractions (assuming monetary policy prior to the business cycle peak to be usually restrictive). A similar period of perverse effects has been identified during some expansions, following the appearance of need for moderating the rate of rise of aggregate expenditure.

The preceding discussion of the uncertainties surrounding the effectiveness and timeliness of monetary action to counter cyclical disturbances should not be construed as criticism of the actions of the monetary authorities in Canada or elsewhere. Indeed, it is worth noting that central bankers, who are usually regarded as being in the best position to assess the efficacy of monetary policy in promoting stability, have traditionally tended to be modest in their evaluation of its effectiveness.

However, it must be concluded from presently available evidence that the effects of monetary policy may have been insufficiently timely to check post-war recessions while they were under way. To the extent that monetary action did produce significant domestic effects—and it must be recognized that the full nature and extent of such effects are still far from clear—it may even have added to short-term instability and uncertainty. It must in fairness be emphasized that these conclusions have been reached with the benefit of hindsight. Despite notable improvements in forecasting and analytical techniques, it has not been possible to be certain, at the beginning of a recession, whether the emerging weakness would be purely temporary or would cumulate to major proportions.

FISCAL POLICY

As in the case of monetary policy, there is little doubt that fiscal policy can be an effective instrument for influencing levels of expenditure, income and output in the economy, although uncertainties remain as to responses to various types of fiscal action. Fiscal action taking the form of a changed level of federal spending influences aggregate expenditures directly, as well as indirectly through its effects in varying incomes. In the case of an income tax change, expenditures are influenced indirectly via the effect of the changed tax on income levels. The impending publication of the Report of the Royal Commission on Taxation makes it inappropriate at this time to focus comment upon

the efficacy for stabilization purposes of different forms of federal tax changes, since this is one of the matters falling within the Commission's terms of reference.

As regards the role of variations in the levels of government expenditure, a given increase in government expenditure will exert a different amount of "leverage" on total expenditures depending upon whether it is used to purchase goods and services directly or to stimulate such purchases indirectly through subsidizing some form of private activity (e.g., housing construction). Moreover, changes in different types of government expenditures will affect domestic income and output in different ways. Similarly, such changes will influence imports in different ways; this may be particularly important if the balance of payments position imposes constraints upon stabilization policy.

On the question of timeliness, it appears that fiscal policy suffers from similar handicaps to those confronting monetary policy. Again, a "recognition lag" is discernible, followed by an "action lag" and an "outside lag". There appears to be no reason why the lag involved in recognizing the need for action should differ as between monetary and fiscal action; but whereas the Bank of Canada may act very rapidly once the need for monetary action is apparent, securing fiscal action can be a lengthy process, because of the nature of the legislative requirements and the institutional procedures involved.

Federal fiscal policy has in fact been rather closely oriented to the institutional practices associated with the introduction of an annual spring budget. The outline of the main expenditure estimates is established broadly in the preceding September, when federal government departmental estimates are initially drawn up. These are subjected to Treasury Board scrutiny and receive government approval during November and December. They are then placed before Parliament and published in the new year. If the need to increase expenditures beyond the amounts included in the main estimates becomes apparent, it is necessary to prepare supplementary estimates or to wait until the next main estimates. Further lags may be involved, for example, if departments are not in a position to place contracts immediately after authority is granted. There are additional lags following the placing of contracts before there is a significant increase in actual expenditures, and the information available suggests that these lags tend to be fairly long.

On the revenue side, tax changes may be introduced either in the spring budget or in supplementary parliamentary action between spring budgets, although in practice such supplementary action has

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been rare. The main source of past lags appears to have arisen from the time required for underlying assessments needed for significant changes, and from the established practice of annual budgeting. Following the announcement of the proposed tax changes, further delays occur if there is a need to establish new administrative arrangements prior to their taking effect. In the case of the personal income tax, changes have not typically come into effect for about two months because of the need to prepare and distribute new payroll deduction tables. Additional lags will be experienced before a tax reduction is reflected in expanded consumer purchases, although in the case of the personal income tax there is evidence of a fairly rapid response, with a substantial portion of a cut being reflected in higher spending within a few months.

Unless the need for stabilizing fiscal action becomes apparent shortly before a budget is due to be presented, it appears that the total of recognition, action, administrative and outside lags may be too great for either tax reductions or expenditure increases to be very effective in reversing recessions, considering their typical length in the post-war period. Nevertheless, the stimulative effects of fiscal action may have strengthened the recoveries, particularly in the early stages.

A further complication regarding the use of fiscal policy may arise, especially in a federal system such as exists in Canada, when the revenues and expenditures of provincial and municipal governments are large in relation to those of the federal government, and when there may be an inadequate basis of co-ordination among different levels of government for timely, appropriate and concerted adjustment of fiscal measures to deal with changing economic conditions.

The foregoing comments pertaining to discretionary fiscal policy may be summed up as follows. Varying government expenditure on goods and services will affect aggregate expenditure, output and employment directly but, in practice, it has been difficult to achieve the required degree of flexibility. Tax changes may be initiated more rapidly than expenditure changes, but the effects on aggregate demand are, of course, indirect. Thus, although fiscal policy may be effective, its potential ability to counter short-term fluctuations in aggregate demand, particularly those characteristic of minor recessions, may be constrained by institutional arrangements and the underlying social attitudes which these reflect. Suggestions which have been made to improve the flexibility of fiscal policy include greater use of supplementary budgets and the establishment of standby or emergency

appropriations on the expenditure side in conjunction with the advance planning necessary to make such arrangements effective.

POLICIES FOR STABLE LONG-TERM GROWTH

In the *First Annual Review*, we placed special emphasis on the need for fiscal and monetary policies to be formulated with respect to longer term horizons. While acknowledging the need for adapting these policies to special situations which may arise from time to time, it was stated:

"...we believe that continuing attention must be given to maintaining an appropriately expanding monetary system favourable to the longer term growth of the economy. This would help both to minimize the dangers of shorter term instability and to assist in the successful attainment of orderly progress towards consistent high standards of performance in the Canadian economy."

and further:

"...we believe that the consistent shaping of fiscal policy to longer term objectives and potentials will contribute to a pattern of smoother and steadier economic growth in which the risks of cyclical instability would be reduced."

In the light of the preceding analysis in this Chapter, we believe that these conclusions warrant not only reiteration but still greater emphasis. In the light of post-war experience, the principal discretionary instruments of stabilization policy have turned out in practice to be rather clumsy tools for flexible and timely countering of short-term cyclical instability. In other words, the analysis raises questions about the usefulness of orienting such policies to the peaks and troughs of short-term business fluctuations as the appropriate points of reference when the performance of the economy is being evaluated or when the need for action is being determined. A shift in the emphasis of such policies towards the promotion of sustained economic growth appears to be required, focusing attention on actual growth in relation to potential growth. This does not mean that fiscal and monetary policies will have any less effective role to play. Indeed, the primary thrust of this conclusion is that these policies should be given wider scope to play the role which they can most effectively play, and that they should not be narrowly confined to the field of short-term cyclical stabilization where, in any event, their adaptability and usefulness has proved to

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be subject to important limitations, at least under post-war Canadian conditions. This will still require flexibility in the posture of these policies. It will also require strong efforts to improve forecasting capabilities as a basis for policy formulation and adaptation—especially in the case of forecasting aimed at discerning whether any anticipated weaknesses or expansionary pressures are likely to be temporary or to result in substantial and prolonged economic slack or persistent inflationary pressures. Major adjustments in monetary and fiscal policy should be designed to deal with the latter situations rather than with temporary and short-term instability.

This conclusion is, of course, subject to a number of important considerations, two of which deserve particular emphasis. The first is that the large degree of international economic interdependence of the Canadian economy means that stabilization policies must always be sensitive to international conditions and to Canada's external economic relations. The orientation of such policies to longer term economic horizons and objectives, no less than the earlier orientation of such policies to the objective of avoiding short-term cyclical peaks and troughs, must be developed in the context of a highly "open" economy. The authorities responsible for policy must also be constantly alert and prepared, especially as regards monetary policy, to undertake tactical adaptations to meet sudden shifts in Canada's international economic position. At the same time, a basic and purposeful orientation of Canadian economic policies to the maintenance of sustained growth would tend to bring Canada more in line with the basic policy approaches now being pursued or developed by Canada's principal economic partners.

Second, short-term instabilities—originating in either external or domestic developments—are a prominent feature of sensitive financial markets. Here again, tactical adaptations, especially in monetary and debt management policy, may be required to meet special situations. But in such situations the basic underlying strategy of policy must be conserved.

There is also a basic need for adequate co-ordination between monetary and fiscal policy within a common framework of appraisal of economic developments and problems and with careful regard to appropriate combinations of monetary and fiscal measures. Similarly there is a need for adequate co-ordination among federal government departments as a basis for consistent and coherent fiscal policy.

Earlier in this Chapter considerable emphasis was placed on the stabilizing effects of a larger government sector in the Canadian

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economy and, even more particularly, of the greatly strengthened role of "built-in stabilizers" as a factor which automatically helps to offset instability in income and expenditures in the private sectors of the economy. The diminished relative importance of federal government expenditures on goods and services over the past decade was also noted, along with the fact that it has only been at the federal government level that clear-cut contracyclical variations in revenue and expenditure have occurred.

In the light of this experience, there is concern that rearrangements in federal and provincial revenues and expenditures could be allowed to develop in ways which might undermine the potential capabilities of the government sector (including all levels of government) to play an important and coherent role in the maintenance of stable and sustained growth in the future. We wish, in this context, to emphasize strongly that we fully appreciate the needs for such rearrangements, and have indicated in our *First Annual Review* that the most expansive categories of government expenditure to 1970—including education, transportation and health services—fall largely in areas of provincial-municipal responsibility. But such rearrangements necessarily involve great shifts in both resources and responsibilities which will have the effect of reducing the federal government's capacity to operate fiscal policy. In other words, the basis for fiscal decision-making and for the application of discretionary fiscal policy is becoming more widely dispersed among the provincial and the federal governments. In addition, there is an accompanying dispersal of the so-called "built-in stabilizers". The dispersal of fiscal resources and responsibilities could lead to a situation in which the potential role of fiscal policy may be weakened, and the dangers of mutually inconsistent actions by various fiscal authorities accentuated, not only in relation to the possible need to cope with serious recessions or with the emergence of significant economic slack, but also in relation to the possible need to counter excessive demand pressures. In whatever rearrangements may be worked out in this field, there is thus a vital need to preserve an adequate basis for an effective deployment of fiscal policy to counter any serious weakness which may emerge and to promote the maintenance of high employment and sustained growth. This will require adequate machinery for concerted and co-ordinated fiscal policies between governments.

The principal conclusion arising from the analysis of this Chapter should perhaps be elaborated in relation to the concept of the potential growth of the economy developed in the *First Annual Review*. The

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concept was evolved in the context of the need for consistent and simultaneous achievement of certain basic economic and social goals for the Canadian economy—sustained high employment and rapid growth, together with reasonable price stability, a viable balance of payments position and an equitable distribution of rising incomes. It is important, therefore, that an analysis of potential output should be used as an essential guide to the appropriate formulation and implementation of monetary and fiscal policy. In other words, what is really important as a basis for assessing policy adjustments is not the question of whether a recession is imminent or even under way, but whether the economy is falling significantly below its continuously expanding potential, thereby failing to make full and efficient use of its growing economic resources. Conversely, there is the opposite question—are there strong and persistent forces pressing the economy too rapidly towards, or too hard against, its potential, thereby inducing an overheating of the economy or the kinds of economic imbalances that may undermine the longer term capability for maintaining steady progress and prosperity.

It is relevant in this context to suggest that what is required of policy in the promotion of stable growth is to seek to maintain, in relation to careful estimates of the supply capabilities of the economy, stable and sustained expansion in *final demand* for goods and services—that is, in total demand excluding inventory demand. An important requirement for such a policy is the fostering of a rate of growth in business investment in line as far as possible with the growth of potential output, on the assumption that similar policies are being implemented in other industrially advanced countries and particularly in the United States. In the longer run it will be to the advantage of most business firms themselves to plan their expansion in accordance with the economy's potentials rather than, as has been too often the case in the past, basing such plans on short-term rates of growth which are substantially above or below these potentials and thus unlikely to be long-lived.

Such a policy also requires that longer run government revenue and expenditure plans be based on the economy's growth potentials. This does not imply that governments should not take effective fiscal action to offset expected or emerging weakness, or excessive strength, in total final demand in the economy. But it does imply that they should seek to depart from fiscal policies appropriate for conditions of stable growth only to the extent required to promote growth in over-all final demand at the potential rate. In essence, the emphasis should be on

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steering the economy along a charted course of potential economic growth rather than simply *reacting* to emerging (or past) developments.

An important implication of this approach is that it should not be a major objective of stabilization policies to modify inventory fluctuations. In the past these have not, in any event, proved to be amenable to timely and adept modification by discretionary stabilization policies, and there are dangers that attempts to counter such fluctuations may well add to instability in final demand. Moreover, one of the most effective ways of reducing the extent of inventory fluctuations would be through the maintenance of stable final demand broadly in line with the growth of potential output.

This approach should not be interpreted to reflect indifference to the hardships which individuals may suffer as a result of any remaining short-term fluctuations. Indeed, we are very much concerned about the need for softening the impact on individuals of minor recessions which may continue to recur from time to time in the future, even within the context of sustained improvement of living standards. These hardships can best be alleviated by improved provisions for social services and for assisting the unemployed. If high growth and reasonable stability are achieved, measures to alleviate economic hardships among individuals would be less burdensome, and could be more generous. Further, improved policies and programmes for mobility, retraining and other labour market services would help to minimize both unemployment and underemployment, resulting in a reduction in the average long-term rate of unemployment.

Finally, the growing degree of international economic interdependence again deserves emphasis. Canada will be unable to pursue appropriate policies to facilitate steady and balanced domestic economic growth if such growth is not being maintained in the world economy. This requires that Canada play a full and active part not only in concerted international initiatives for maintaining a strong expanding world economy, but also in international efforts to improve the world's monetary and trading system.

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Conclusions and Recommendations

IN THE PRECEDING chapters we have presented the results of the studies we have carried out during the past year of some of the more significant factors which will influence the performance of the Canadian economy in the years ahead. The general conclusions and the general implications for policy have been indicated already in each of the successive chapters. In many instances, these general conclusions call for certain changes and improvements, or point to the need for specific courses of action. The purpose of this Chapter is to set forth, very briefly, our views and recommendations concerning these more particular and specific matters of policy.

For convenience, the matters of policy may be grouped under three headings; namely, policies for improved productivity, policies for regionally balanced economic growth, and policies for stable growth.

POLICIES FOR IMPROVED PRODUCTIVITY

Continuing improvements in productivity are an essential basis for the satisfactory achievement of all our social and economic goals. Rising productivity, is at one and the same time, the indispensable condition for the achievement of rising standards of life and a powerful factor in the circumstances required to ease the possible strains and conflicts among the various aims and purposes of our increasingly complex society. In addition to enlarging incomes, improvements in productivity are important for increasing profitability and competitiveness of Canadian industry, for better interregional balance, for

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providing growing resources for social purposes, and for maintaining a viable balance of payments.

The total output or income of an economy is determined both by the *quantity* of the productive factors employed—labour, capital and natural resources—and by the *quality* of such factors and the *efficiency* with which they are combined to produce output and income. The productivity of the factors depends upon the two elements, quality and efficiency. It is with these two elements that we are primarily concerned here.

Improving the Quality of the Factors of Production—The Crucial Importance of Education and Training

By far the most important factor of production is the human factor, the labour force, which includes *all* types of manpower employed in the economy, i.e., workers, farmers, owner-operators and other own-account workers, supervisors, and managers. Roughly three fourths of all income in the economy accrues to the labour force, reflecting the contribution of all human resources to production; the balance arises out of the ownership of property, i.e., capital and natural resources. Consequently, the quality of the labour force as determined by education, training, skill, managerial competence, and the application of effort, plays a very large role in improving the productivity of the economy. A mounting volume of evidence points to education as a crucially important factor.

Our analysis of the educational attainments of the Canadian labour force and our study of the economic implications of Canadian education and training policies indicate that:

- The educational attainment of the Canadian labour force has risen significantly over the past half century, but this improvement was less than it could have been. The advance in the United States was more rapid and, consequently, the “educational gap” between the two countries has widened. This widening gap developed particularly at the secondary school level during the inter-war years and at the university level during the post-war years.
- There is at present a general shortage of manpower with higher educational and skill qualifications. The shortages extend from the high school level on up, and are most severe at the professional and university level. These deficiencies in the supply of skills constitute one of the major obstacles to be overcome in achieving a satisfactory rate of improvement in productivity and of economic growth in Canada.

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—The future benefits from increased efforts in education are very large, and the economic returns to the nation from increased investment in education are likely to exceed by a considerable margin those from most other types of expenditure. This economic gain is complementary to the contribution of education to the human, social and cultural development of individuals.

We recommend that the advancement of education at all levels be given a very high place in public policy, and that investment in education be accorded the highest rank in the scale of priorities. In particular, we urge that immediate attention be given to the following:

- (1) The rapid and substantial expansion of post-secondary education in all parts of Canada. The aim should be to provide a ready opportunity for higher education to every qualified Canadian student so that financial obstacles will be eliminated as a barrier to higher education. A substantial increase in funds for research is a necessary feature of expanded and improved education at the higher levels.
- (2) The closing of the remaining gaps in school facilities and professional resources at the secondary school level so that such education is a real and practical possibility for all Canadian children.
- (3) The development and implementation of greatly expanded programmes to upgrade and bring up to date the education and skill qualifications of the existing labour force, including professional workers and management. Continuing education and retraining must play an ever-increasing role in the future.
- (4) Social and other measures to reduce drop-outs in high school to achieve a much higher rate of high school completions.
- (5) Vigorous efforts through research, the use of new techniques, and upgrading the qualifications of teachers to improve the quality and methods of education.
- (6) Closer co-operation between business, labour and the educational system, along with improved counselling of students, regarding future manpower needs and the most effective ways of meeting these needs.

Achieving a More Efficient Use of Productive Resources

Productivity depends not only on the quality of the factors of production, but also on the efficiency with which they are used; namely, how effectively labour and capital are combined and organized for production to satisfy wants in our society. The promotion of

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increased efficiency is a complex task and involves efforts in many directions. A number of studies have indicated that there is substantial scope for improvement in Canada in at least two broad areas—the scales of output including degrees of specialization, and the development and application of new technology.

(i) Trade and Adjustment Policies to Promote Efficiency

We have stressed the full part which Canada must play not only in concerted international initiatives for maintaining a strong expanding world economy but also in international efforts to improve the world's monetary and trading system. This role recognizes the growing degree of international economic interdependence. More specifically, an active and meaningful role by Canada in negotiations to broaden and deepen nondiscriminatory multilateral trade coincides with our long-term interests and position as a major world trader. Such negotiations should also be viewed in the context of offering opportunities for strengthening Canada's international competitive position, thereby helping to minimize possible constraints on future growth arising from balance of payments problems.

Many Canadian producers, especially those of highly processed products and finished manufactured goods, are oriented to the relatively small domestic market and do not obtain the maximum economies of specialization and scale. This situation calls for policies designed to widen markets and to lengthen production runs. In particular we recommend in accordance with the foregoing basic commercial policy that:

- (1) Maximum use be made of the opportunities available in the present Kennedy Round of multilateral trade negotiations to remove obstacles to Canadian trade. Improved access to foreign markets for Canadian exports, especially for manufactured goods, and the appropriate reductions in tariffs that Canada must be prepared to pay for benefits gained from other countries, should promote greater efficiency and lower costs in Canada.
- (2) Since, in addition to multilateral arrangements, Canada has a number of bilateral and special trading arrangements, the achievement of expanding trade and economically sound industrial specialization be the dominant economic criterion of any such arrangements.
- (3) In anticipation of possible adjustments in the structure of production resulting from future reductions in trade bar-

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riers, immediate steps be taken to establish a general programme under which adequate and effective assistance would be available to particular industries and groups of workers which may be adversely affected by any such reductions. The basic purpose of such a programme would be to bring about an effective and speedy transfer of productive resources from less efficient to more efficient lines of production. The resulting improvements in the productivity of the economy would amply justify the costs involved. For industry, the programme should include provisions for temporary financial, technical and research assistance where this is needed to reorganize and expand production facilities. For workers, the programme should include ample provisions to compensate adequately for time lost, for dislocation and for costs of retraining and transfer. Such provisions are all the more necessary in the absence of adequate labour market policies. Where consumers are protected by increased foreign competition, specialization agreements or mergers to increase efficiency and eliminate excessive duplication might well be appropriate to achieve successful adjustment. This would warrant a re-examination of anti-combines policy and administration in the context of reduced trade barriers.

- (4) Continuing close attention be given to improving the financing and other facilities designed to strengthen the ability of Canadian industry to supply manufactured goods and equipment imported by the developing countries. Improvement of Canada's long-term ability to supply such needs efficiently and competitively would enhance the value of our assistance to these countries consistently with Canada's own internal requirements for economic growth. Special efforts are needed to keep abreast of international trends, practices and opportunities in this increasingly important area of trade. Canada also has a basic interest in an appropriate international resolution of the problem of stabilizing and increasing exports from the developing countries as a necessary step in achieving rising levels of Canadian exports to these countries.

(ii) Policies for Expanded Research and Development

In our *First Annual Review* we pointed out that, in order to achieve a satisfactory rate of improvement in productivity and to enhance our competitive position in the world, Canadian industry must be in a

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position to make adequate use of the rapidly expanding resources of science and technology. In order to do this, we must increase greatly our own efforts in research and development (R & D). These greater efforts are necessary so that Canadian industry may be equipped to make the best use of available foreign technology and also to expand considerably its own contributions to new technology to provide a basis for profitable innovation and specialization.

During the past year, with the help of the Council's Advisory Committee on Industrial Research and Technology, we carried out a study of the government's existing and proposed measures and incentives to encourage R & D activities in Canadian industry. The report of the Advisory Committee is being issued in a separate publication.¹ We have noted the encouraging results being achieved by the various special assistance and grant programmes administered by the National Research Council, Defence Research Board and the Departments of Industry and Defence Production. We have examined also the experience and results gained under the general tax incentive programme which was started in 1962 and which will expire in 1966. This tax incentive programme has played a significant role in the rapid expansion of R & D in Canadian industry over the past four years. There is a need for a similar but improved and more widely effective incentive programmes for the future.

The Income Tax Act, as amended in 1962 to include the tax-based general incentive programme, contains a number of deficiencies, inequities and limitations associated with definitions used, the base period and the distribution of benefits. The experience gained should make it possible to develop a better and more effective scheme. An improved tax-incentive programme should be broad and widely available to small and large companies alike. It should encourage the taking of risks in the exploitation of new ideas and methods on the basis of widespread initiatives. The administration of the programme should be simple, clear and as free as possible from detailed interventions, centralized discretionary controls, and delays. The qualification of a particular project for benefits under the programme should be automatic and should be based solely on whether or not the project meets the definition of "scientific research and development". Also, such qualification should not depend on the extent of increases in R & D

¹ *A General Incentive Programme to Encourage Research and Development in Canadian Industry*, Report to the Economic Council of Canada by the Advisory Committee on Industrial Research and Technology, Queen's Printer, Ottawa, December 1965.

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expenditures over a base period amount. The period for which the programme is available should be sufficiently long to encourage long-range forward planning. In particular, we recommend:

- (1) that the programme of tax-based incentives for research and development in industry be continued beyond the lifetime of the present programme which is scheduled to end with the taxation year 1966;
- (2) that the new programme be introduced for a prolonged period of, say, ten years;
- (3) that the incentive be a credit against *tax payable* in the form of a meaningful percentage of all expenditures allowable under the definition of "scientific research and development" published for the purposes of the programme and covering scientific R & D performed in Canada, and that companies having insufficient tax payable to cover the full credit receive the balance in the form of a credit against future taxes.

Although we have stressed here the importance of increased R & D efforts it does not diminish the significance, in our opinion, of the need for more intensive application of existing technology and completed research.

POLICIES FOR REGIONALLY BALANCED ECONOMIC GROWTH

Over the past four decades there has been relatively little progress towards the achievement of a better balance in the economic development of the different regions of Canada. Despite various policies and programmes, very wide disparities have continued to persist in average per capita incomes. Also, there have continued to be wide differences in the extent to which the human and material resources of each region have found opportunities for productive use. While national prosperity has always tended to have a widely diffused favourable influence in all regions, rapid national growth has not by itself served to bring about any significant or lasting reduction in these large and stubborn differences.

The smaller per capita incomes at the lower end of the scale of interregional disparities; namely, the Atlantic Region and Quebec (mainly the eastern portion of the province), have been due in part to a relatively low utilization of the available human resources arising from a lack of economic opportunities; and, in part, to a generally lower average level of earnings across virtually the entire structure of

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economic activity. These smaller rates of earnings reflect circumstances which have an adverse effect on productivity; namely, generally lower educational and skill attainments, smaller scales of output and long distances from large markets, smaller stocks of productive facilities and of social capital, less abundant natural resources, inadequate use of developing technology, and lower scales of public expenditures and investment in growth-promoting services.

Efforts to promote more regionally balanced growth should be aimed at achieving a more rapid increase in the incomes of the lagging regions by methods which do not retard the development of the faster-growing regions of the country. In this way the economic growth of the national economy would be improved to the benefit of all regions in Canada. In order to accomplish this result it is essential that regional development policies be directed to two basic objectives—the increase of opportunities for high-productivity employment, and the acceleration of programmes which can make the maximum contribution to improvements in productivity generally in the region. These objectives involve the following fundamental criteria and guidelines for action:

- (1) the avoidance, as far as possible, of subsidies merely to create temporary activity or to sustain indefinitely low-productivity industries and declining occupations;
- (2) encouragement of efficient agglomerations of activity—growth centres—within the different regions in order to achieve increasing economies of scale, larger markets, and more useful pools of skills, and to avoid uneconomic scatter and dispersion;
- (3) the taking of decisions in respect of investments in social capital in accordance with an adequate consideration of the economic and social benefits to be obtained in relation to costs;
- (4) the recognition of the urgent need to make available additional financial resources to the governments of the lower-income regions and through the appropriate federal agencies in order to help break the vicious circle of low productivity, low incomes, low government revenues and low investments in growth-promoting services which are needed to improve the quality and effective utilization of the available human and material resources—in particular, education, training, research, health, transport facilities, resource and industrial development, and the development of wider markets;
- (5) the necessity for close co-ordination in the formulation and implementation of consistent regional development policies and

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programmes among all levels of government (this is particularly important in view of the wide range of programmes and policies affecting regional development, both on the part of the provinces, and through certain federal agencies such as the Atlantic Development Board, the Area Development Agency, and the Agricultural Rehabilitation and Development Administration) ;

- (6) the avoidance of self-defeating restrictive and divisive measures which interfere with the free flow of goods, capital, labour and enterprise between all the provinces. Such measures must be avoided if we are to achieve simultaneously the twin goals of more satisfactory growth in every region and a rapid expansion of the national economy from which all would benefit.

It is clear that the narrowing of interregional income disparities and the achievement of a more regionally balanced economic growth involve large, urgent, and especially challenging tasks. Many decades of experience have shown that these tasks cannot be accomplished by piecemeal expenditures, superficial expedients, unproductive works, and mere transfers of income. The appropriate policies and programmes will need to be formulated within a long-run consistent framework and carried out with a continuing regard for the real and underlying problems involved.

POLICIES FOR STABLE GROWTH

The Canadian economy in 1965 has reached a level of actual output which is closer to potential than at any time since 1956. Going into 1966, the economy will have experienced close to five years of expansion since the end of the last cyclical recession in the first quarter of 1961. This ranks as the longest peacetime cyclical expansion in Canadian history, and parallels the similar peacetime record expansion in the United States. Despite the extraordinary length and dimensions of the current upswing, general inflationary pressures have not developed up to the present. Nor does recession appear to be an imminent danger. The over-all expansion has, on the whole, been remarkably stable as the economy has moved towards higher standards of performance in relation to its goals.

Nevertheless, with a continuation of a favourable international environment for growth, and with high and strongly rising levels of total demand pulling the economy closer to full utilization of its expanding productive resources, supply factors require much more

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careful attention in the Canadian economy. Two important, but not unrelated, aspects should be distinguished. First, under the spur of vigorous competition, greater efforts must be devoted to making more efficient use of available productive resources, which will generally be in shorter supply in relation to demand than in recent years. Second, although there is no clear evidence of excessive over-all demand growth resulting in general overheating in the economy, certain symptoms of strain have appeared in 1965, particularly in the form of growing elements of mismatching of supply and demand.

In our judgment, it is these factors of *increased efficiency* and *better matching of supply and demand* in the use of our productive resources that should be the areas of most immediate concern at this time for both private and public policies, if our employment and growth goals are not to be endangered by spreading inflationary pressure patches in the economy. Failure to prevent the spread of such patches by means of more effective measures to increase efficiency and promote a better matching of supply and demand would inevitably require a curtailment of general demand forces. This would be particularly unfortunate, since there is accumulating evidence that productivity gains may be stimulated by a prolonged maintenance of high levels of demand in relation to potential output—at least, when such conditions are supported by adequate competition, a high degree of resource mobility, and adaptive attitudes on the part of both managers and workers. Instability in growth over time tends to slow the long-run average rate of growth. Among other things, it increases uncertainties which tend to discourage initiatives for adjustments to change and to new opportunities for advances in productivity and real incomes. Such instability and the uncertainties which it generates may also tend to encourage negative and restrictive attitudes and practices in many parts of the economy.

To a larger extent than at any time in almost a decade, the central task of policy appears to be shifting to *maintaining*, in as consistent and stable a manner as possible, the relatively high standards of performance which the economy is now approaching. This requires a general setting of economic policies favourable to the stable growth of final demand in line with the economy's growing potential output, and implies a policy which would permit the present moderate degree of fiscal restraint on demand to work more strongly in the event of general overheating. (We shall return to these matters in our discussion of monetary and fiscal policies later in this Chapter.)

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Manpower and Labour Market Policies

The area of greatest need for urgent and effective action is that of manpower and labour market policies. The goal of a sustained high level of employment will be jeopardized without such action.

In our *First Annual Review* we placed great emphasis on the need for promoting the efficient use of manpower resources, and urgently recommended the improvement of manpower and labour market policies. In particular, we urged the development of measures which would increase the potential flexibility of the labour market to match unemployed workers with available job vacancies. Measures are also required to facilitate necessary adjustments of workers from low-productivity occupations and low-income localities to higher-productivity and higher-income job opportunities. As long as there are unemployed or underemployed workers who lack knowledge of job openings and alternatives, or who do not have ready access to basic education and training to take advantage of these, or who lack the means to move to expanding employment opportunities, so long will we fail to meet the fundamental needs of a dynamically expanding and changing economy.

Moreover, we wish to emphasize that the development of strong initiatives and effective policies to promote adaptability and mobility of the labour force, to facilitate the matching of demand and supply of labour, and to generate timely and useful information about labour market conditions, will yield high rates of return in relation to the resources required to implement them. These policies will assist individuals in terms of their income and welfare by providing them with higher lifetime earnings exceeding the costs involved. They will also generate rising real income, output, standards of living, and government tax revenues.

(i) The Establishment of an Effective Administration

Whether an active manpower policy is to be successful hinges critically on effective administration. It is essential that a proper administrative structure be established for co-ordinating labour market programmes. This is an important initial step.

Since our *First Annual Review* was published, steps have been taken to separate the National Employment Service (NES) from the Unemployment Insurance Commission and have it transferred to the Federal Department of Labour. This is a necessary beginning towards achieving appropriate co-ordination of manpower policy. However, the way

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in which the NES is transferred to the Department is of crucial importance. Simply relocating the NES as a branch of the Department will not suffice.

It is imperative that the NES, together with relevant labour market functions, be set up in such a way that manpower policy will achieve the highest possible stature. It was not possible for manpower policy to achieve such stature as long as the Employment Service was treated as a subsidiary operation related merely to the payment of unemployment insurance. Nothing will have been achieved by this transfer if the NES becomes little more than another branch of the Department of Labour.

The need for a single agency to co-ordinate and control the various aspects of manpower policy arises from two considerations. The first is that the users of manpower services—prospective job-seekers and employers—have particular requirements which may involve counselling, retraining, mobility allowances and placement, in any combination, and that an active and co-ordinated initiative is required regarding these functions. The second consideration is administrative efficiency in the implementation of a general policy with a number of important and overlapping aspects. Ideally, the information obtained from prospective employers would be recorded and then processed by an operations analysis and forecasting unit in such a way as to assist placement officers, training authorities, long-range planners, and the administrators of mobility allowances. In the same way, a job applicant should be interviewed and counselled by a person or persons who would have the authority to refer him to an employer or make the necessary arrangements to enrol him in a training programme, or apply for a moving allowance, or any combination of these. Such co-ordination, administrative efficiency, and adequate serving of the public require that manpower policy be administered by a single agency.

What is needed is a manpower agency which would be more than a "placement service", important as this function is. It should be a *key operational* agency for implementing manpower policies, and the *sole co-ordinating* agency of all policies and programmes related to the labour market. There are a number of alternative methods for ensuring that this manpower agency could fulfil these important roles. For example, this could be done within the Department of Labour, but this would require a very major change in the function and character of the Department. Under such an arrangement, the head of this agency would need to have under him all of the relevant manpower functions at present being carried out in a number of branches of the

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Department of Labour, such as technical and vocational training, the manpower consultative service, research, etc. The operating head of the agency would need to have the highest possible status under the Minister of Labour. In addition to being a first-rate administrator of a very large organization with a wide range of complex functions, the head of this agency would need to be qualified to work with other departmental heads who are concerned with general economic policies.

Another alternative would be the establishment of a new ministry of manpower services. Such a ministry could be the sole co-ordinator of all manpower policies and programmes, including not only those now in the Department of Labour but also those in the Department of Citizenship and Immigration.

In our *First Annual Review*, we called attention to the fact that if a public employment service is to be truly effective, those who are directly affected by its operations must have the opportunity of advising it. In addition to a strong national advisory committee, effective regional and local advisory committees are essential. The Employment Service, which would become a key part of whatever manpower agency is established, is basically a field operation, which means in effect that policies can be implemented only by the regional and local offices. It is at the local level where the demand for labour market services exists. For these reasons, we emphasized the urgency of establishing much stronger advisory committees than currently exist at the regional offices of the NES and at the local office level of at least the larger urban centres across the country. As we pointed out: "Local committees advising the Employment Service should be active bodies having adequate terms of reference and should be representative of business and labour, and of local educational and other professional officials who have a high standing in their communities and who are in a position to have a better knowledge of labour market conditions and requirements." Until such co-operation and co-ordination are effected, the Employment Service will continue to be handicapped in meeting adequately vital needs at the local level, which is, after all, the primary purpose of any employment service. Furthermore, without such local participation, the best policies adopted at the national level will have little prospect of being effectively implemented.

(ii) Expansion of Programmes for Training and Retraining

An urgent need, as we stated in our *First Annual Review*, is to develop facilities to improve occupational mobility, i.e., the basic

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education, training and retraining of both new entrants to, and existing members of, the labour force. The shortage of skilled people in Canada today in relation to employer demands, and the fact that both government and business are seeking skilled people abroad, underscore the continuing deficiency of our training programmes.

It is true that vocational education and training programmes have been greatly expanded under the Technical and Vocational Training Assistance Act in recent years. However, these programmes are having comparatively little effect on the *adult* labour force. Their primary effect has been on the expansion of facilities for students in vocational high schools. There has not been any significant breakthrough in the training or retraining of existing members of the labour force. The need for a major thrust in this area is all the more important since it will take decades to raise the levels of skills of the total labour force if training is very largely limited to younger persons.

In spite of the increasing number of well-trained young people coming into the labour force, the present deficiency in the supply of skilled manpower will take many years to remedy. The demand for labour with technical qualifications is increasing more rapidly than the supply can be expanded through the young people coming out of the school system. Moreover, continuous retraining and upgrading of labour are essential in adapting the labour force to changing technology in the process of dynamic and sustained economic growth.

For all of these reasons it is essential that more resources be devoted to educating, training, and retraining the existing Canadian labour force. At present, there are four relatively under-used programmes on the federal statute books. These programmes were intended to provide pre-employment training for people out of school, training in co-operation with industry, training of the unemployed, and training of the disabled. Among the reasons for the inadequate use of these programmes are the following:

- There is a lack of adequate knowledge among the general public, particularly with regard to what courses are available, the qualifications for taking the courses, the duration of the courses, and the conditions under which they may be taken.
- Workers, especially unemployed workers, are not being informed and counselled adequately about the need for retraining. Various surveys indicate that workers generally do not understand the need for training even when they know that training facilities are available.

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- Inadequate training allowances appear to be acting as a brake on the programmes.
 - Frequently, the curricula, timetables and facilities are not suitable for meeting the needs of adults.
 - There is a scarcity of qualified vocational teachers, and the number of teachers being trained is declining rather than increasing.
 - Provincial and local educational authorities do not have adequate information regarding developing and future manpower needs.
 - Because many authorities are involved, the responsibility for the initiation of programmes is often not clear. Consequently, programmes that are needed do not get implemented.
- Effective steps must be taken to overcome these deficiencies and shortcomings.

(iii) More Adequate Labour Market Information

Nothing is more crucial to the development of an effective employment service and to the improvement of the functioning of the labour market than job vacancy data. Thus, we urged in our *First Annual Review* that steps be taken to develop comprehensive and reliable information on job vacancies. We are, of course, fully aware that there are technical difficulties involved in this area. It is, nevertheless, significant that in the past couple of years experimental programmes have been undertaken in the United States, jointly by the Bureau of Labour Statistics and the Bureau of Employment Security, for the purpose of testing the feasibility of collecting job vacancy data on a regular basis by means of surveys. The results thus far have been promising. A similar programme, undertaken jointly by the proposed new manpower agency and the Dominion Bureau of Statistics, should be initiated in Canada as soon as possible.

What is needed is specific and up-to-date information on job opportunities by occupation, industry, area, wage rates, skill and educational requirements. The more specific such information is, the easier will be the task of placement officers in matching unplaced applicants with unfilled vacancies, thus assisting both unemployed workers and employers. Such information is also vital for appropriate initiatives for counselling and guidance activities, for planning training programmes, for assisting the mobility of workers and, more generally, for labour market analysis which is essential for the formulation of effective manpower policies.

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(iv) Effective Programmes of Assistance to Promote Mobility

We urged a year ago that a programme of adequate financial allowances be made to facilitate geographic mobility where this was desirable. This has become an increasingly urgent matter in view of bottlenecks which have developed in the labour market. There are, of course, noneconomic problems impeding adequate labour mobility. However, financial obstacles to mobility can be reduced if not substantially eliminated.

We were gratified that the government announced last spring a new programme to further assistance to workers moving to new jobs. It is difficult to understand the delay in putting this programme into operation. This delay has resulted in unnecessary manpower bottlenecks.

We have, furthermore, serious reservations concerning the division of unemployed workers into two different categories in the administration of this programme, with one category qualifying for outright grants and the other receiving loans repayable over a two-year period. According to the government's announcement, workers who have been unemployed for four of the previous six months will qualify for a grant, whereas workers who have been unemployed for any period of time less than this will receive loans.

Apart from difficulties which must surely arise in administering these two kinds of assistance, it seems to us that the loan feature of this programme will prove self-defeating. For example, a loan of \$500 to \$1,000 to a family of several dependants, repayable over a two-year period, may appear to an unemployed worker a formidable debt to contract before he and his family move to a new and perhaps uncertain economic environment. Furthermore, this system of categories for loans and grants would tend to penalize the more enterprising individual who seeks to shorten the duration of his unemployment. If a mobility allowance programme is considered of vital importance, as we believe it to be, then provision should be made for extending grants to encourage needed mobility. Appropriate safeguards can be devised to avoid abuse of such allowances.

Skilled Manpower Shortages

Demands are currently running far ahead of supplies of management, professional and more technically skilled labour. We anticipate that this situation will continue, and will probably intensify, especially in view of the fact that there will be no increase in the male labour

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force in the critically important 35-44 age group over the next five years. These shortages could well become an important factor retarding productivity growth and the required expansion of the economy. It is therefore imperative that strong efforts be made both within government and the private sectors:

- (1) to use existing manpower talents, especially at the higher levels, as effectively and efficiently as possible;
- (2) to establish (where they do not exist) and to improve (where they do exist) manpower planning policies;
- (3) to introduce and step up effective, forward-looking manpower training programmes, including in-plant and management training;
- (4) to help to ensure a better matching between the education and training being provided in the educational system and potential requirements for manpower;
- (5) to reappraise management, professional and labour union procedures and practices which impede the training, mobility and more effective use of scarce manpower skills.

Especially in the circumstances we visualize of sustained high employment, no business firm or other organization can afford to under-utilize scarce manpower talents, or to neglect possibilities for enhancing the underdeveloped potentials of its working force.

Price and Cost Pressures

Price and cost developments in Canada are closely related to those taking place outside the country, especially in the United States. For a number of years, prices have been very stable in the United States and determined efforts are being made to maintain a high degree of such stability. Even on the assumption that Canada will not be exposed to any serious degree of importation of inflation from outside, *an important current requirement for averting the emergence of a widespread pattern of excessive price and cost pressures is to maintain flexibility and competitive markets in the economy.* This will help to minimize the risks of bottlenecks and inflationary pressure points which basically reflect inefficiencies in the use of resources and which offer opportunities for excessive wage and price advances through the exploitation of special situations.

We will be reporting more fully in the coming year on the government's request that we study the factors affecting price determination, and the interrelation between movements in prices and costs, and levels

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of productivity and incomes. In Chapter 2 we have outlined briefly some of the recent developments in these relationships. At this time we wish to emphasize in the strongest possible terms that sustained high employment and sustained progress towards the economy's 1970 potential will depend to a very important degree on the maintenance of an adequate measure of price and cost stability. The merging of an increasing number of excessive price and cost pressures into general and persistent inflationary conditions would ultimately call for the use of over-all policies of effective restraint on demand. Such policies would tend to slow down the rate of economic growth. In order to avoid, as far as possible, the need to resort to such general growth-retarding measures, we therefore recommend examination of various possible methods for helping to contain excessive price and cost pressures at *particular* points in the economy, and to promote competitive conditions favourable to the maintenance of reasonable price and cost stability, including:

- (1) longer-term expenditure planning programmes at the government level, with closer attention to appropriate timing and patterns of outlays to minimize excessive pressures at particular points in the economy;
- (2) the use of available instruments, including trade, tariff and other policies for strengthening domestic and external competition; such policies were used earlier in the post-war period in Canada, and have been used in a number of industrially advanced countries in recent years, with the objective of helping to restrain inflationary pressures;
- (3) the promotion of better public understanding that excessive price increases are inimical to the attainment of stable long-term growth, and that excessive increases in wages, salaries, profits or other incomes not only pose a threat to price stability but can also lead to instability in production and employment.

In view of the particular pressures which are developing in construction activity, we also recommend careful examination of possibilities for postponing and stretching out major construction projects in areas of particularly acute shortages of construction manpower and capacity.

Regarding construction programmes and activities of the Federal Government and its agencies, there is a need for effective co-ordination of construction expenditures which are now scattered over a large number of federal departments and agencies. Suitable procedures and machinery are required for this purpose. Effective co-ordination of this nature would facilitate better long-term planning of federal construc-

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tion programmes, and more appropriate timing of changes in such activities to assist in stabilizing the over-all volume of construction in the economy over time.

Monetary Policy

We believe that the basic strategy of monetary policy should be concerned with expanding the money supply roughly in line with growing potential output, with a view to facilitating stable expansion of total final demand. We recognize, however, that the degree of success of such a monetary policy strategy will depend critically on whether a comparable strategy is being pursued in the United States, especially in the light of three important factors—the return to the fixed exchange rate system for the Canadian dollar; the Canada-United States agreement respecting an upper boundary to the expansion of Canada's foreign exchange reserves; and the large degree of mutually advantageous interdependence in capital markets and in business relationships existing between Canada and the United States. In view of these circumstances, any markedly divergent monetary policies between Canada and the United States are not feasible.

Short-term instabilities—of either external or domestic origin—are a prominent feature of sensitive financial markets. These may inevitably require tactical adjustments in monetary and debt management policies to meet special situations. Indeed, the past year has witnessed a number of such tactical adjustments in Canada's monetary management. These were very skilfully handled within the underlying framework of a policy strategy which appears to have approximated that suggested above.

But a better understanding in the Canadian financial community of the basic underlying strategy, within which such temporary tactical adjustments may be necessary from time to time, would, we believe, help to provide a basis for more stable financial markets. To the extent that this could be achieved, it would also help to minimize the difficulties created for the monetary authorities themselves, as regards both the taking of appropriate action in periods of instability and the subsequent readjustment of policy back to the underlying strategy.

At the same time, the instabilities which have arisen in Canada's financial markets during the past year urge a careful reconsideration of both the needs and possible methods for improving and strengthening Canada's existing framework of financial institutions. More generally, to minimize distortions and instabilities in credit and financial mar-

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kets, and to ensure easier access by homebuilders, consumers and small business to credit, various recommendations of the Royal Commission on Banking and Finance deserve careful attention—including measures to promote more competitive credit conditions, and removal of the arbitrary 6 per cent interest rate ceiling which currently forces many small borrowers into loans at much higher rates.

Implicit in the above conclusion about the basic strategy for monetary policy is the view that monetary policy should not be essentially designed to deal with short-term cyclical instability in total demand. We believe that, within the limits which are necessarily imposed by external constraints, any fundamental adjustment in the basic strategy of monetary policy—that is, from the strategy of expanding the money supply roughly in line with potential output—should only be contemplated when final demand threatens either (1) to press in a persistent and prolonged way hard against the potential capacity of the economy to meet such demand, or (2) to fall persistently below potential, with a consequent prolonged situation of significant economic slack.

Even without any such basic adjustment in strategy, there will of course be tendencies for automatic shorter-term adjustment in monetary and credit conditions in response to shorter-term changes in economic conditions. For example, strong short-term credit demands which substantially outpace the growth in the money supply in line with potential output, will tend to generate a tightening of credit conditions, at least within the limits set by Canada's international financial relationships. Conversely, some shorter-term weakening of credit demands will tend to ease credit conditions.

With appropriate emphasis and co-ordination among other policies designed to promote stable and sustained growth, we do not believe that it would be either necessary or desirable at this time to adjust the fundamental strategy of monetary policy outlined above to one involving more basic restraint. Once again, however, it should be emphasized that the monetary authorities will have only a limited degree of independence to pursue any basic course of policy which does not evolve in relatively close accord with monetary conditions in the United States.

Fiscal Policy

(i) The Basic Strategy

We believe that the context within which medium-term fiscal policy should be formulated is the basic strategy of fiscal policy for stable

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growth as set forth in our *First Annual Review*—a combination of levels of tax rates and expenditure programmes, taking all levels of government together, which would yield a rough balance on a national accounts basis (before allowance for the net accumulation of funds in the government-administered universal pension plans) if the economy were operating at potential output. This implies four things:

- A deficit on this basis would automatically be generated when actual output is below potential output; conversely, under conditions of very strong demand, accompanied by shortages and bottlenecks leading to inflationary pressures, a surplus would also automatically emerge.
- Since tax revenues increase significantly more than in proportion to the growth of income and output under the existing tax structure, growing surpluses would be generated by economic growth in the absence of tax reductions, new expenditure programmes or some combination of these over time.
- Particularly in view of the increasingly predominant dimensions of provincial and municipal expenditures in relation to those of the Federal Government, an adequate basis must be evolved for effective continuing consultation between the Federal and Provincial Governments in order that fiscal policy may be more effectively co-ordinated. The need for this co-ordination is much greater now than in the past.
- An appropriate mix of other strategic policies will be required, along with external conditions and relationships favourable to sustained and stable growth, if such a strategy of fiscal policy is to be consistently pursued.

Implied in our view of the appropriate general strategy for the use of fiscal policy to support stable long-term growth is the conclusion that this strategy should not be adjusted to deal with shorter-term cyclical instability. The present structure of federal taxes and expenditures already provides a significant offset to moderate instabilities. A basic adjustment of strategy towards greater restraint or towards greater stimulation, should depend on whether there are prospects for strong and persistent forces pressing the economy too rapidly or too hard against its potential or, conversely, prospects for the emergence of prolonged and significant economic slack.

During the past year, while the economy was still somewhat below its current potential output, the fiscal position on a national accounts basis has been one of moderate over-all surplus for all levels of government combined. If the average rate of growth required to attain

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potential output in 1970 were to prevail in 1966, and if government expenditures on goods and services were to continue to increase during the coming year approximately in line with the trends of the past year or two, without any modification in existing tax rates, there would be a continuing moderate over-all fiscal surplus in the above terms. Thus there has already been a degree of fiscal restraint during the past year which would continue under existing tax rates and existing rates of expenditure increases. This would be in addition to the significant accumulation in the government-administered universal pension funds which will come into operation at the beginning of 1966, and whose economic effects are likely to be only partially offset by contraction of existing pension plans. If general inflationary pressures should develop, this degree of fiscal restraint on demand would be automatically and powerfully strengthened.

(ii) Longer-Term Government Expenditure Programming

We wish to re-emphasize the recommendation made in our *First Annual Review* that projections of important government expenditure programmes over a period of five years ahead should be published each year. This is important for orderly and efficient longer-range business planning, and will contribute significantly to more stable and sustained economic growth.

(iii) Productivity-Oriented Tax and Expenditure Programmes

During much of the past decade, emphasis has tended to be placed on the demand-sustaining and employment-stimulating role of various aspects of tax and expenditure policies. Under current conditions, policies having a productivity-stimulating effect should be given increasing relative priority. To facilitate stable and sustained high levels of employment and growth, many aspects of expenditures at all levels of government, for example, should now be more carefully scrutinized in terms of their ultimate effects for promoting the growth of productive capacity and of real output and living standards, and for increasing competitiveness, specialization, flexibility and efficiency of use of productive resources. Elements of the present tax structure also warrant closer appraisal in similar terms.

This requires, among other things, a considerable strengthening of governmental capabilities for analytical appraisal of the effects of policies.

More generally, there is an urgent need, especially in relation to the increasing complexity of the modern economy, for more and better

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statistics and other information as a basis for appropriate economic decisions and policies. With new sources of information and new tools for its compilation, and with a widening range of use of this information, the Federal and Provincial Governments should both be giving high priority to strengthening the basis of information and research in the social sciences for both public and private decision-making. In addition, it is desirable that government should encourage research in human problems and motivation as they relate to productivity in particular work environments. Increases in expenditures for these purposes, even if very substantial in relation to existing expenditures, would be trivial in relation to the potential benefits which could flow from them.

The Balance of Payments

While the current account payments deficit is tending to increase, Canada's over-all balance of payments is presently strong, as reflected in the recently high and rising level of exchange reserves. A viable balance of payments must be preserved as a basis for stable longer-term growth. This requires, among other things, correction of certain recent trends—particularly, the lagging advance in productivity in Canada in relation to the United States, and the partial erosion of the competitive advantages which had been provided by devaluation of the Canadian dollar.

It was anticipated in our *First Annual Review* that there would be an increased current account payments deficit and an accompanying increased net capital inflow as the economy moved towards potential output in 1970. This would basically reflect a more rapid growth in total real income and output in Canada than in most of the world's other industrially advanced nations. This, in turn, would be primarily attributable to a much higher rate of potential employment growth in Canada than in other countries. In contrast, our calculations postulated, on the basis of past performance, a smaller growth in productivity in Canada than in virtually all other industrial nations. During 1963-65, with a narrowing of the gap between actual and potential output, under conditions of exceptionally rapid growth in employment, income and output, there has in fact been an accompanying rise in the levels of both the current account deficit and the net capital inflow.

The appropriate expansion in the current account deficit to 1970 could, of course, be reduced if the rate of growth in real income and output in Canada were held down to, say, the rate of growth in the

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United States or in other industrial countries as a group. But it should be clearly recognized that this would almost certainly involve a cost in terms of slower growth in employment and incomes. Indeed, in these circumstances, the ultimate main effect of a restraint on growth over the medium-term future, in order to narrow the current account deficit, would be rising unemployment (especially in view of the unprecedented growth of the labour force) and a slower rise in the Canadian standard of living. Moreover, it would undoubtedly also imply a still slower productivity growth which would eventually have adverse effects on the competitive capabilities of Canadian industry, and would tend to widen the existing gap in average living standards between Canada and the United States. Such a widening gap would tend to result in an increased flow of skilled and educated people out of Canada to the United States, thus retarding Canada's national development.

The higher net capital inflow which we considered appropriate, under conditions of strong economic growth and the closing of the gap between actual and potential output, is also needed. Indeed, adequate capital inflows are required in these circumstances, if a balance of payments crisis is to be avoided, and if a large amount of forced savings—for example, through taxation or inflation—is not to be resorted to in order to provide adequate levels of domestic savings to finance the large investment programme necessary. We recognize, of course, that a substantial net capital inflow implies a degree of possible vulnerability in the balance of payments. We also recognize that such vulnerability can be accentuated, especially by United States measures to limit capital outflows from the United States, which do not take adequate account of the possible implications for Canada in the context of the very close and complex financial interrelations between the two countries. But we do not believe that concern about such possible vulnerability automatically necessitates a defensive or restrictive posture in Canadian balance of payments policy which would very probably have the effect of frustrating the attainment of our goals of high employment and sustained growth. What is really needed, in the circumstances of uncertainties in the current international monetary situation, and in the light of the determination of the United States to strengthen its balance of payments, is very careful attention to means for minimizing such vulnerabilities through close international financial co-operation. In the longer run, a fundamental improvement in the international competitive posture of the Canadian economy, by means of a much stronger productivity growth and the increased domestic savings which such growth would help to generate, is the appropriate

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route to a balance of payments position involving a lower current account deficit and net capital inflow.

We have emphasized these balance of payments matters not because we are complacent about the ease of maintaining over-all payments balance (especially under a fixed exchange rate), nor because we are unconcerned about the need for continuing and careful attention to the level and composition of both the current account payments deficit and the net capital inflow. The maintenance of external economic balance, particularly during periods of strong economic growth and under rapidly changing economic conditions, has always posed difficult challenges for Canada. This will continue to be so. We believe that it is vitally important, however, that these external economic relations and influences always be viewed in the context of their over-all relevance for the consistent achievement of stable and sustained high levels of employment and growth.

John J. Deutsch,
Chairman

Louis Couillard,
Vice-Chairman and Director

Arthur J. R. Smith,
Director

W. J. Bennett
Roger Charbonneau
Philip A. Chester

François E. Cleyn
H. George DeYoung

Yves Dubé
J. B. Estey
Robert M. Fowler
A. R. Gibbons
Fernand Girouard
Claude Jodoin
David L. Kirk
Walter C. Koerner

W. Ladyman
Stanley A. Little
Ian M. MacKeigan
Maxwell W. Mackenzie
William Mahoney
Hugh A. Martin
Marcel Pepin
Mrs. A. F. W. Plumptre
William O. Twaits
Francis G. Winspear

R. J. Lachapelle
Secretary

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The following studies and reports have been prepared as background papers for the *Second Annual Review* of the Economic Council of Canada. They will be published separately and available from the Queen's Printer, Ottawa. Although they are being published under the auspices of the Economic Council, the views expressed in them are those of the authors themselves.

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OTHER STUDIES AND REPORTS

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