Two Cheers for the Eighties

Sixteenth Annual Review

1979

Economic Council of Canada

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**Although their terms officially expired in June, Messrs. Blair and Dion kindly participated in the preparation of this Review.*

A Preface

Whatever else may be said of the Eighties, the new decade is sure to open with a refreshing degree of Canadian unanimity about our economic prospects and problems. That alone will be a welcome reduction in uncertainty.

We all know — or should know by now — that our economic expectations must be lowered to fit the new national and international realities. The error to be avoided, however, is the assumption that projections of slower growth in incomes imply some kind of chronic dissipation of our basic economic strength and vitality. They do not. Ours is a maturing industrial society, remarkably favoured by opportunity and relative advantage, and capable of solid achievement and greater stability in the years ahead. In large degree the constraints we face are those imposed from abroad, and those we have brought upon ourselves — all of us, and all of our governments — through exaggerated notions of the economy's potential to produce real gains.

The Seventies are ending with a better understanding of that potential, and a clearer definition of some major structural problems in our economy. These are the subject of this *Review*.

The resources and prospects with which we enter the 1980s warrant at least two cheers.

1 The Canadian Economy in the Seventies

In 1978 and 1979 the performance of the Canadian economy has been uneven. Employment has increased very strongly, even in manufacturing, and unemployment rates have come down a little. The country's trade balance has become more positive. The volume of business investment has increased. Real expenditure by households is up. Canadian production costs have not risen as rapidly as those in the United States, a trend that helps to preserve the competitive advantage we gained through dollar depreciation.

But there have been a number of disquieting elements. Productivity increases have been small, and there are signs that this situation may be more enduring than transitory. The size and growth of foreign and domestic private demand for Canadian output are smaller than necessary for a healthy economy. The recovery of business investment in Canada is still weak. The improvement in Canada's trade balance has not been as strong as might have been expected, given our improved competitive position. Consumers appear to be doubtful about future prosperity, and therefore hesitant to make major commitments; consumer expenditure has recently increased only modestly.

The most serious concerns relate to the continued high levels and possible acceleration of inflation, and these concerns have been heightened by the latest increases in world oil prices, and the prospect of further escalation. Attempts by all levels of government to deal with inflation in the 1970s had somewhat disappointing results. This has led to doubts and uncertainties about what governments might now do to improve our capacity to cope better with current and emerging problems.

It is worth looking back over our experience of the past decade to gain a perspective on our present position and to attempt to discern the principal lessons for policy. We shall consider, in turn, inflation, the balance of payments and the exchange rate, real incomes, output, investment and productivity, unemployment, and productive potential.

Before turning to these features, how can the broad sweep of Canadian economic performance and policies in the 1970s be characterized? Canada had significant economic opportunities in the first half of the 1970s, but some of these, in retrospect, proved to be temporary or fleeting. In the early 1970s, developments in the world economy along with the behaviour of Canadian governments, businesses and households led to excessive demands on the economy relative to its potential for meeting them. In the mid-1970s Canada, with some success, made an effort to sustain output and employment in the face of a deteriorating world economy. But excessive expectations conditioned by this experience, combined with a series of inflationary price shocks, have resulted in high and seemingly intractable inflation, government deficits, and balance of payments deficits. Price and income controls and changes in fiscal and monetary policy worked towards containment of inflationary pressures and, along with a drop in the external value of the dollar, brought expectations of Canadians more in line with realities and restored our international competitive position. Quite a lot has been accomplished by these changes, but the record has been uneven and the momentum toward favourable outcomes is far from assured.

The Inflation Experience

For a long time prior to 1965 Canada had relatively stable prices, the Consumer Price Index (CPI) rising at about two per cent a year. With sustained strong growth in aggregate demand, however, inflation began to climb, and the decade of the Sixties closed with the CPI running at more than twice its earlier rate of increase, tempered only by the growth slowdown in 1970.

As the new decade began, Canada and most other industrialized countries were at a low cyclical ebb, and each country responded with expansionary monetary and fiscal policies. As economies expanded in

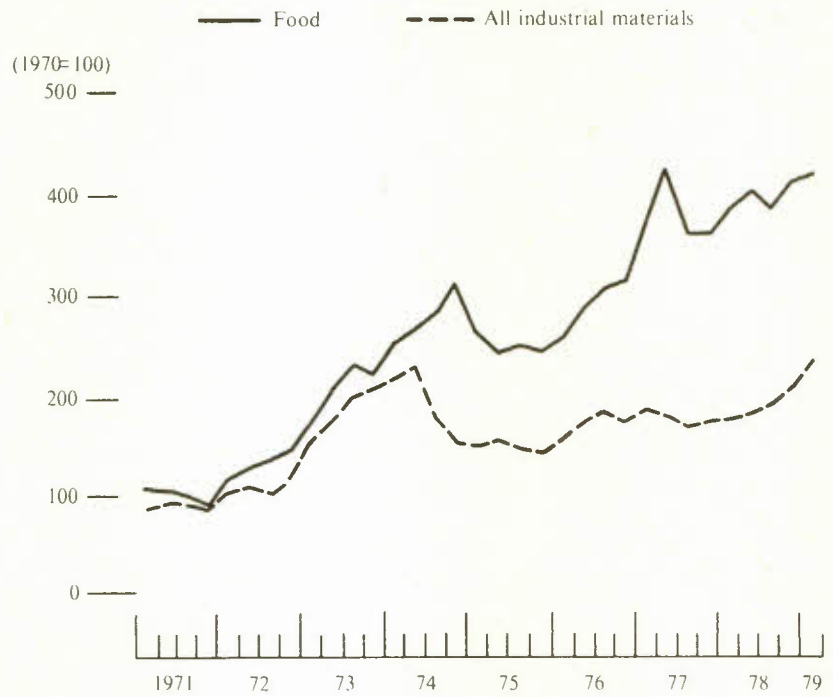
Table 1-1

Changes in Selected Components of the Consumer Price Index, 1972-78

	Food	Housing	Clothing	Trans-portation	Energy	All Items
	(Percentage change from previous year)					
1972	7.6	4.6	2.6	2.7	2.8	4.8
1973	14.6	6.5	5.0	2.6	9.0	7.6
1974	16.3	8.7	9.6	9.9	15.2	10.9
1975	12.9	10.0	6.0	11.7	13.5	10.8
1976	2.7	11.1	5.6	10.8	15.4	7.5
1977	8.3	9.4	6.8	7.0	12.1	8.0
1978	15.5	7.5	3.9	5.8	9.3	8.9

Chart 1-1

Commodity Price Indicators, 1971-79



step, pressure was put on stocks of raw materials. Supplies could not be increased quickly enough to satisfy demand, and the stage was set for the "commodity price boom" of 1973-74. World prices were shocked further by the effects of bad weather on 1972-73 crops of grain and other staples and of adverse movement in livestock production cycles (Chart 1-1). Then the Organization of Petroleum Exporting Countries announced its large increase in oil prices. As a result of these several factors, prices at the retail level accelerated sharply (Table 1-1). Inflation quickly became more broadly based as wage and income demands responded to the price increases.

Up to the mid-1970s, Canadian price performance was not out of line by international standards (Table 1-2). The difference was that Canada as a major producer and exporter of resources benefited greatly from the commodity price boom. Between 1972 and 1974, we obtained the largest improvement in the terms of trade in our history (Table 1-3). These favourable developments induced policy-makers to try to avoid the recession that gripped the industrial world and to pursue an independent, gradualist policy on oil and gas prices. Real disposable incomes were protected, and policies were aimed at keeping the economy expanding.

Table 1-2

Consumer Price Indexes, Canada, United States, and Seven Major OECD Countries, 1971-78

	Canada	United States	Seven major OECD countries
	(Percentage change from previous year)		
1971	2.9	4.3	5.0
1972	4.8	3.3	4.4
1973	7.6	6.2	7.7
1974	10.9	11.0	13.4
1975	10.8	9.1	11.4
1976	7.5	5.8	8.3
1977	8.0	6.5	7.9
1978	8.9	7.7	7.0
Average growth 1970-78	7.6	6.7	8.1

Table 1-3

Merchandise Export and Import Volumes and Prices, and Terms of Trade, 1972-78

	Export		Import		Terms of trade
	Volume	Prices	Volume	Prices	
	(Percentage change from previous year)				
1972	9	3.4	11	2.3	1.1
1973	11	14.2	16	7.5	6.2
1974	–4	32.6	10	23.4	7.5
1975	–7	10.8	–5	15.8	–4.3
1976	12	2.3	7	0.5	1.8
1977	9	6.6	1	12.1	–4.9
1978	9	8.5	3	13.3	–4.2

Most OECD countries quickly absorbed the oil-price increase, incurring a sharp but relatively short-term increase in their inflation rates. Neither Canada nor the United States did so; but the United States experienced a sharp recession that reduced its inflation rate. As a result of expansionary policies and high expectations, Canada's inflation rate kept on accelerating into 1975.

In an attempt to reduce inflation and improve the competitive position of Canadian products in world markets, price and income controls were instituted in the Fall of 1975. Some initial abatement of inflation was realized in 1976 because of favourable food-price developments and continued strength of the Canadian dollar in foreign exchange markets. The depreciation of the dollar in 1977 and 1978 added substantially to price increases.[1] At the same time, food prices took a turn for the worse, and the gradual adjustment of domestic oil and gas prices to world price levels also added to the inflation rate. At the beginning of 1979 — a year of more bad news on the price front from OPEC, the United States, and food products — the inflation rate, at around 9 per cent, was not a great deal lower than the rates of 11 per cent of the mid-1970s. To sum up, inflation through the Seventies has not been steady nor has it derived from a single source. Rather, a series of shocks accelerated and decelerated the rate of change of the general price level in a very high range.

With hindsight it is possible to point to misperceptions that contributed to the formulation of policies. Paramount among these is an overestimation of the economy's productive potential. Policies contributed to an overheating of the economy in 1973 and 1974, and even since then tax policy has been geared to boosting personal income. The real benefits to Canada of the world economic boom proved to be temporary as world commodity markets weakened in the mid-1970s, and there was less oil and gas for exports than had been expected. Inflation might have abated in the last two years had it not been for the depreciation of the dollar, which was more drastic than had been expected. In short, the volatility of the external environment along with unrealistic policy settings were the main factors behind Canada's inflation experience.

The Balance of Payments and the Exchange Rate

As noted, Canada experienced large swings in its terms of trade over the Seventies. Due to the composition of its exports, Canada gained during the commodity price boom of the early Seventies. This advantage was partly undone when the industrial countries swung into recession in 1975, and further eroded as a result of the devaluation of the dollar during 1977 and 1978.

The volume of exports closely followed changes in economic activity in Canada's export markets, and the import volume reflects the path of growth in the Canadian economy. Changes in competitive position enhanced the fluctuations: around mid-decade, Canada's costs were out

Table 1-4

Average Annual Balance of Payments, 1973-78

	1973-74	1975-76	1977-78
	(Millions of dollars)		
Current Account			
Merchandise trade	2,210	470	3,060
Services	-3,340	-5,220	-8,090
Travel	- 290	- 960	-1,670
Interest and dividends	-1,410	-2,230	-4,020
Transfers	450	450	230
Total	- 650	-4,300	-4,800
Capital Account			
Net long-term capital flows	840	5,920	4,010
Net short-term capital flows	480	860	600
Errors and omissions	- 760	-2,420	-2,180
Net official monetary movements	- 220	60	-2,360

of line, and this contributed to growth in imports and a dampening of exports. By 1978 our cost position had greatly improved and opposite effects occurred. The result of price and volume changes was a strong merchandise trade balance in 1973-74 and again in 1977-78 (Tables 1-3 and 1-4).

The service account deteriorated steadily because of a growing deficit on tourism and travel, and higher payments of interest and dividends. The overall current account therefore showed a growing deficit. This deficit was financed largely by substantial net long-term capital flows. Foreign borrowing by provincial governments, partly on behalf of their electric utilities, was especially heavy in 1975 and 1976 (when it totalled $7.5 billion compared to $2.2 billion over 1973-74 and $4.3 billion in 1977-78); subsequently, however, official reserves had to be used to finance the deficit.

The external value of the Canadian dollar was, of course, closely related to these developments. The exchange rate was strong through 1976, under the influence of improved terms of trade, followed by heavy borrowing abroad. It seems that the realization that Canada's basic position had weakened came rather late. The dollar was overvalued in relation to the U.S. dollar during the mid-1970s. By the end of 1976 the dollar began its long slide, attended by much speculation, and eventually by extensive borrowing by the federal government.

It appears that the exchange rate does not automatically and smoothly adjust for differences in the rate of change of costs between Canada and its trading partners. Basic sources of instability — swings in the terms of trade, concentrated foreign borrowing — lead to perceptions and speculations that augment the fluctuations in the external value of the dollar. Although the destabilizing factors of the Seventies may not be as strong in future, the possibility of over- or under-valuation of the dollar, with all its consequences, remains.

Real Incomes

Income of Canadian households depends on the total amount of income generated by the Canadian economy and the share of this income going to households. The two are not unrelated, but by separating them and analyzing each, it is possible to point to the factors underlying the income experience of Canadians. This procedure offers a useful perspective even though it ignores the *dynamic process* of income generation and distribution.

Total real income per capita depends primarily on the output of goods and services of the Canadian economy. As shown in Table 1-5, it increased rapidly in the first half of the Seventies and very little thereafter. During the earlier years it was first gains in output per employee (labour productivity), then an increase in the number of employed relative to the population that provided a basis for growth of real income per capita. Also, in 1973 and 1974, total real income improved as the prices of exports increased more than the prices of imports, so that the country could import more goods and services for the amount earned on exports. These favourable changes in the terms of trade were undone in later years.

Table 1-5

Rate of Change in Real Income per Person over 15 Years, 1971-78

	1971-72	1973-74	1975-76	1977-78
	(Average percentage change from previous year)			
Change in total real income				
output per employee	3.0	1.5	1.0	1.0
Employment/population	0.4	2.1	–0.5	0.5
Terms-of-trade effect	–0.1	1.6	–0.3	–1.1
	3.3	*5.2*	*0.2*	*0.4*
Real disposable income/ total real income	3.2	0.1	3.1	0.7
Growth in real disposable income	6.5	5.3	3.3	1.1

Households gained a larger share of total real income, the gains being unevenly spread over the years. The share of personal income in total income increased from less than 80 per cent in 1971 to 82 per cent in 1978. The tax rate on personal income remained rather constant over the decade, as the tendency of taxes to rise relative to income during inflation was abated by the indexing of income taxes in 1974 and various tax reductions in later years. Disposable income was increased by these tax policies and by government transfers to persons, which in turn were a factor in the unusually large government deficits. When these nominal income shares are converted to real shares, it is found that households made further gains because the prices of consumer goods and services (as measured by the implicit deflator of consumer spending) increased less over the decade than the overall price level, a continuation of the trends prevailing in the Sixties. Such were the factors behind the real income experience of Canadians. Large gains were made in the first half of the decade, but the growth trend has recently come to a virtual halt.

How these real income gains have been distributed among Canadian households is a question which we do not address in this report. Much depends on how responsive income from various sources was to inflation. Indexing of government transfers to persons provided considerable real income protection, but problems remain for private pension income. We have addressed the distribution of income and wealth in the *Thirteenth Annual Review*[2], where we studied the period 1969-75. Since then, there have not been new developments of such a magnitude as to invalidate the findings reported there. Our study *One in Three: Pensions for Canadians to 2030*[3] deals at length with distributional aspects and protection against inflation of the value of retirement incomes.

Several of the factors contributing to real income growth have become less favourable over the course of the Seventies, and the scope for improvement in the future is limited. Productivity growth has slowed down, as has the growth of employment relative to the population. The share of personal income in total income is high. Expectations of real income growth should further be tempered in light of the current deficits of government and on the current account of the balance of payments, as well as the anticipated increases in the domestic prices of oil and gas. These issues are further discussed in later chapters.

Output, Investment and Productivity

The pattern of real output growth over the 1970s was similar to that of real income: a gradual slowdown. Prior to 1974 output growth was strong; capacity utilization rates increased. Even over the following three years, Canadian output growth compared favourably to that in other major industrial countries, for the reasons outlined above. In the last two years, output growth has faltered, particularly in comparison with that in the United States.

Chart 1-2

Average Annual Growth of Real GNP, Canada, United States, and Selected OECD Countries, 1971-78

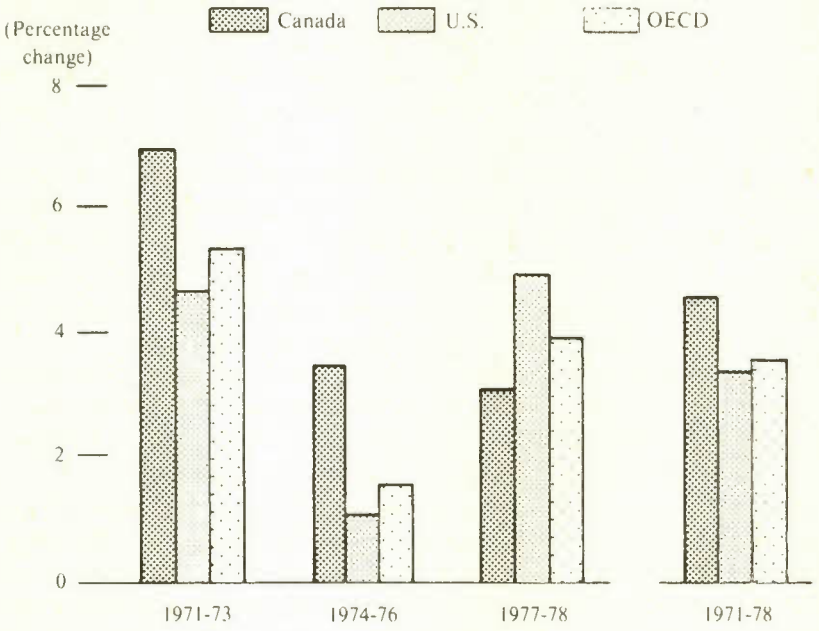


Table 1-6

Average Annual Employment Growth, Canada, United States, and Selected OECD Countries, 1974-78

	Average employment growth, 1974-78
Canada	2.7
United States	2.2
Britain	0.0
France	-0.1
Germany	-1.4
Italy	0.9
Japan	0.6

Since 1973 output growth has been attended by strong employment growth, in comparison both to other industrial countries (Table 1-6) and to past experience. One may welcome this development during a period of rapid growth of the labour force. At the same time, however, it implies a slowdown in the growth of output per employed person, or productivity.

Productivity growth since 1973 has been disappointing. This indicator is very volatile, and over the short run is dominated by cyclical changes in production, to which employment reacts only slowly. When the cyclical component is removed[4] it appears that labour productivity since 1973 has grown at only half the rate prevailing during the Sixties (Chart 1-3).

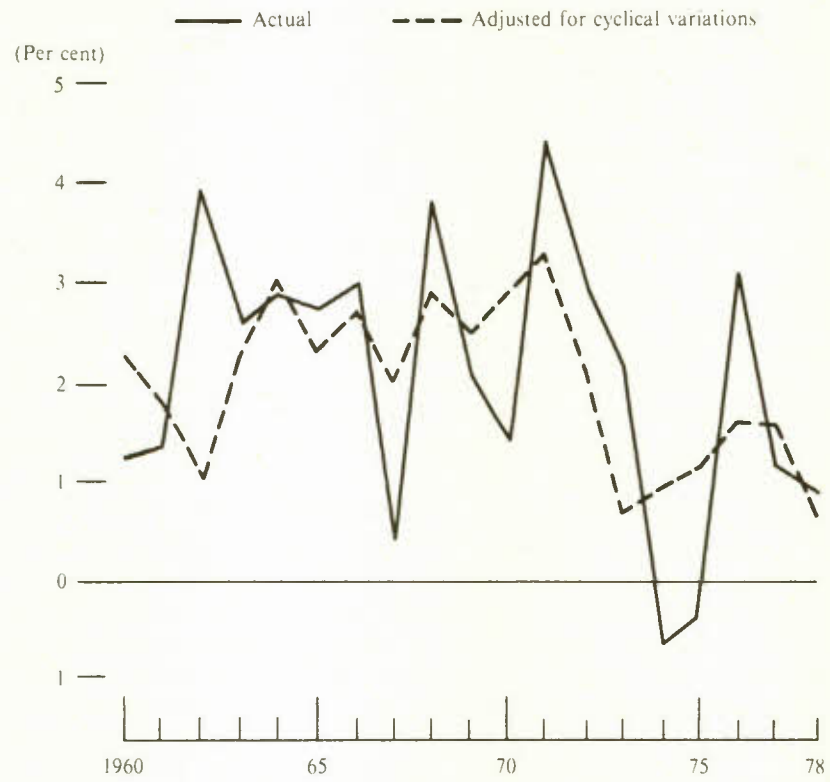
Both output and capital stock grew more slowly in the Seventies than in the Sixties, so that the relationship between the two remained the same. The growth rate of the capital stock was on average slightly higher than the growth rate of output, meaning that production continued to become gradually more capital intensive. But the relationship of labour to capital and output changed. Between 1970 and 1978, the ratio of capital to labour increased by an annual average of less than two per cent, compared with more than 2.5 per cent in the previous decade. This corresponds to a drop in the growth rate of productivity from more than two per cent per year in the Sixties to about 1.3 per cent in the 1970s.

The reduction in the growth of the capital stock is the key factor in this development. A slowdown in business investment reduces the potential for growth of output and causes relatively more labour to be used in production. Canada entered the 1970s with less excess capacity than it began the 1960s with, so that the potential for high rates of economic growth was lower. But the average share of business investment in Gross National Product was about the same in the 1970s as in the 1960s, whereas more was needed to keep capacity expanding at the same rate. Furthermore, when comparing the peak years in economic activity, 1966 and 1973, it appears that capacity utilization as well as unemployment were higher in the latter year. This indicates that availability of productive capital was a limiting factor.[5] (It also reflects changes in the labour market, discussed below.) From the perspective of economic growth, business investment during the 1970s has to be characterized as weak.

The portion of investment accounted for by the resource-based sectors[6] has increased. Capital formation in all resource sectors except non-fuel mining has been exceptionally strong in the 1970s. The volume of farm investment more than doubled between 1970 and 1976, and investment in exploration and development of oil and gas increased following the OPEC oil price increases and revisions in domestic energy policy. Electrical utilities, meanwhile, were investing huge sums on the basis of extrapolation of demand trends prevailing prior to the energy crisis and an assumed substitution away from oil and gas to electricity. In the last several years the rate of growth of demand for electricity has shrunk to less than half the earlier rate in the face of a sluggish economy and conservation induced by higher prices. While prospects vary among regions, some utilities have delayed planned investment in generating capacity.

Chart 1-3

Rate of Change of Real GNP per Employee, 1960-78



The strength of investment in the resource-based sectors masked weakness in other industries. The share of investment of non-resource sectors in GNP dropped from 8.3 per cent in the 1960s to 7.8 in the 1970s. Investment in the 1970s never reached the high share of GNP attained in the previous decade even though capacity utilization in manufacturing peaked at a higher level. We are inclined to attribute this weakness in investment to business conditions reviewed in Chapter 3 of this report: the deterioration of real return on capital, the confusion caused by inflation, and the increased uncertainty and risk. We shall see that these factors also have a deleterious effect on the quality of investment, which indicates that investment may have been less adequate than indicated by the data for aggregate investment performance.

Uncertainty about long-run prospects inhibits long-run investment projects. This uncertainty arises from several sources. Prospects for demand growth in domestic and foreign markets cannot be solid as long as the inflation outlook is dim, for governments will then continue to exercise restraint in one form or another. The relative price increase of traditional sources of energy makes it difficult to foresee which produc-

tion methods will be cost-efficient 10 years from now; some of these methods probably are yet to be developed. The depreciation of the dollar has opened up new markets for Canadian products, but whether these opportunities will last is difficult to predict. In these circumstances, firms will tend to avoid long-term commitments. Rising demand for products is likely to be met by more intensive use of available capacity and by hiring more employees. This view is in accordance with the changes in output, capital and labour discussed earlier, and it suggests that productivity growth is likely to remain modest, at least for some time.

Higher prices for energy have the effect of making the use of capital goods more expensive relative to labour, leading to a shift to lower capital-labour ratios in production, and thus smaller advances in labour productivity. As just noted, however, this process takes a long time, and in the Seventies it was probably not an important factor, partly because domestic prices of oil and gas were raised only gradually.

It has further been suggested that the large influx of new people with little or no work experience into the labour market may have temporarily reduced productivity growth. Our research indicates that the assumption may be valid, but the effect was small.[7]

Our analysis of the productivity slowdown remains tentative. It is difficult to determine the importance of each of the many factors that contribute to productivity growth. We are continuing our research of the question, and shall report on it in our Seventeenth Annual Review in 1980. However, it is clear that the productivity slowdown is more than a temporary cyclical deviation from a stable trend, and that changes in the level and quality of business investment are an important contributing factor. There is little doubt that the growth of Canada's productive potential has slowed down during the 1970s.

Unemployment

Our foregoing discussion of business capital investment in the 1970s raises the possibility that high unemployment rates may stem from the weakness in investment, which occurred when the labour force was expanding rapidly. However, indications are that high unemployment rates are to a large extent caused by other factors directly affecting the labour market. In our 1976 report *People and Jobs*, we concluded that the unemployment rate had shifted to persistently higher levels regardless of the cyclical phase of the economy.[8] In 1973 and 1974, even though the unemployment rate never dropped below five per cent of the labour force, the labour market was tight and this contributed to inflation. This is borne out by the fact that the unemployment rate for men in the 25-54 age group fell to a level that approached earlier lows (Chart 1-4). The high unemployment rates of the 1970s cannot be fully attributed to adverse cyclical conditions and a shortage of capital.

The growth in Canada's labour force has been very strong during the Seventies, with the members of the baby boom reaching working age, and women in increasing numbers choosing to work outside the home. Labour force growth averaged 3.1 per cent over the 1974-78 period.

It appears that the inexperience of some of the new labour force entrants, along with changing attitudes towards employment, facilitated by certain government policies and programs, have raised the unemployment rate irrespective of cyclical conditions or availability of capital. To the extent that the job structure, as regards various types of skills, is fixed in the short run, a mismatch between supply and demand of skills leads to shortages of some skills and unemployment among other groups — in this case, among the large groups of new entrants. With the great distances in Canada, skill shortages can arise in one region while there are surpluses in others. Minimum wage legislation limits the possibilities for productive employment of those with least experience and lowest skills. Furthermore, job attachment among the young and some women is less firm than for the adult male group because of differing priorities reflecting work and other activities, the family responsibilities of married women, and the phenomena of fewer children and more than one income-earner in the family. More people can regard employment as one among several options, and the relative penalty of temporary unemployment was

Chart 1-4

Unemployment Rate, 1954-78

reduced by changes in the unemployment insurance program in 1972, not to mention the growth of the "subterranean" economy.

Several researchers have in recent years attempted to make quantitative estimates of these changes in the labour market, with the purpose of obtaining a value for the unemployment rate that can be maintained without creating inflationary pressure in the labour market (the "equilibrium" unemployment rate).[9] Without exception, these estimates range between 5.5 per cent and 7.5 per cent for unemployment rates in the mid-1970s. Our own estimates are for about six per cent (Chart 1-5).[10] The figures obtained through estimation indicate a *range* of values, which cannot be precisely identified. If the unemployment rate is driven below 6.5 per cent, the risk of acceleration of inflation rises; at 5.5 per cent unemployment, acceleration of wage and price increases is highly likely.

The sharp increase in equilibrium unemployment rates in the early Seventies depicted in Chart 1-5 is a direct result of trends in the labour force and the effects of changes in the unemployment insurance program. This contrasts sharply with our estimates for the early and mid-Sixties, which are in the neighbourhood of (although somewhat higher than) the target of a three per cent unemployment rate advanced by this Council in its *First Annual Review* in 1964.

Potential Output and the Output Gap

Potential output is a measure of the productive potential of the Canadian economy. It indicates the level of production that can be maintained, without of itself leading to acceleration of inflation.[11] It thus measures the output that can be produced with the available capital stock and available labour, given the current productivity of both.

The growth rate of potential output is the sum of the growth rates of potential employment and potential labour productivity. Potential employment is the level of employment corresponding to the equilibrium unemployment rate, and its growth depends on the growth of the labour force and changes in the equilibrium rate. In the 1970s, the growth rate of the labour force increased; but since the equilibrium unemployment rate went up, the growth of potential employment was not as high as the growth of the labour force. Even so, potential employment increased more rapidly in the Seventies than before. On the other hand, potential labour productivity growth dropped substantially in the Seventies. This is related, as discussed above, to the inadequacy of business investment, among other things. The result was a significant slowdown of the growth of the productive potential of the Canadian economy (Table 1-7).

Because output and employment growth were below their potential rates over the past six years, a gap has opened up between actual and potential output and employment, following two years — 1973 and 1974 — of "excess" employment and production. Both the output and employ-

Chart 1-5

Equilibrium Unemployment Rate, 1954-78

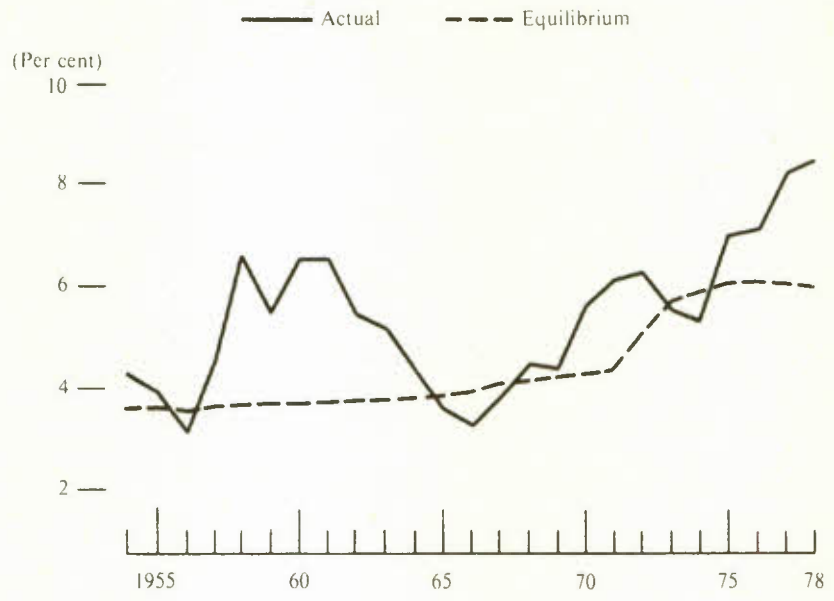


Table 1-7

Change in Actual and Potential Output and Employment, and Output and Employment Gaps, 1960-78

Period	Potential output	Actual output	Potential employment	Actual employment
	(Average Annual Percentage Change)			
1960-66	4.6	5.9	2.3	3.0
1967-72	5.5	5.0	2.8	2.4
1973-78	4.2	4.0	3.1	2.9

Year	Output Gap	Employment Gap	Year	Output Gap	Employment Gap
	(Percentage deviation from potential)			(Percentage deviation from potential)	
1960	5.3	3.2	1970	2.9	1.3
1961	6.2	3.6	1971	2.6	2.1
1962	2.4	2.5	1972	1.2	1.4
1963	1.4	1.8	1973	-1.9	- .2
1964	0.6	0.9	1974	-0.8	- .7
1965	-0.8	-0.1	1975	2.3	.8
1966	-1.7	-0.7	1976	1.4	1.4
1967	0.2	-0.4	1977	2.4	2.0
1968	-0.1	0.3	1978	3.1	2.5
1969	0.2	0.1			

ment gaps of 1978 are small in relation to those with which we began the Sixties, but they are larger than in any year since 1962 and this constitutes a considerable loss of output. The fluctuations in the output gap are the basis for our earlier comments on one of the important sources of inflation in the 1970s — that is, policies were based on an over-estimation of the economy's production potential.

Conclusions

Our reassessment of the potential growth of the Canadian economy during the past decade puts the performance of the economy and macro-economic policy into stark relief. Expansive policies of the early Seventies, in Canada and elsewhere, led to a period of excess demand which contributed to acceleration of the inflation rate. Since 1975 the economy has operated below its potential, but the fiscal setting, as measured by the government deficit, has remained stimulatory — and increasingly so, in the last two years.[12]

Domestic demand has not vigorously responded to this stimulus. Consumers spend less and save more than they used to. Business conditions were so weak that tax concessions had little effect on investment. Only recently did investment pick up following the depreciation of the dollar. We shall review household and business behaviour in the next two chapters, following which we shall return to the sources and consequences of the government deficits.

The lessons of our analysis of performance in the Seventies are straightforward. First, economic growth at the high rates prevailing in the Sixties can no longer be taken for granted. For demand management policies to be constructive, targets for demand growth and unemployment must be set in a manner that takes this new reality into account, or else the economy is bound to be excessively stimulated.

Secondly, the problems of inflation and unemployment cannot be adequately dealt with in a framework that assumes a direct trade-off between the two within an otherwise steadily growing economy. Inflation is not only a matter of excess demand; world prices, relative price changes, fluctuations in the exchange rate, declining productivity growth, and unrealistic income expectations have all contributed to inflation during the Seventies. The larger part of unemployment is *not* due to cyclical factors. Steady growth of the economy is far from assured, and appears to be subject to many influences which on the whole were far less favourable in the past decade than before.

These are significant changes that pose new challenges for policy. The situation is complex, and not amenable to simple remedies. Simplistic wisdom — "all that matters is money", "only the supply side matters", "Keynes is dead", "Phillips is dead" — will not be of much help.

2 Household Saving

The most important change in the behaviour of Canadian households during the 1970s was the increase in personal saving from a range of 5 to 6 per cent of personal disposable income to more than 10 per cent. The increase took place in a steady way during the first half of the decade, and no reversal has as yet occurred. The change is far larger and more persistent than the customary fluctuations that are related to variations in income growth.

All saving-related activity — purchases of real property and accumulation of financial assets, as well as borrowing — increased in relation to income during the Seventies (Table 2-1).[1] It appears that households have reduced the proportion of income spent on consumption in order to make real and financial investments, while also incurring more debt for the same purpose. Many people bought homes as an inflation hedge, saving more — and taking on more debt — to do so. Financial savings were encouraged by tax treatment of interest income and particular types of saving.

A comparison of saving in Canada and the United States demonstrates how it can be greatly influenced by inflation and tax policy. Such sensitivity — which had not been generally anticipated — is a new and potentially disruptive element on the macro-economic scene. This situation is discussed in the concluding sections of this chapter.

Real Estate as a Hedge Against Inflation

The 1970s were eventful years for the Canadian housing market. In the early Seventies, when the economy and the job market were generally buoyant and unusually large numbers of young people established households, vacancy rates dropped and prices began to rise sharply. Between 1972 and 1974 prices of houses sold through the multiple listing service increased by more than half. Prices of new dwellings soon followed. Construction costs jumped along with the general spurt in

Table 2-1

Disposition of Saving of Households and Unincorporated Business as a Share of Personal Disposable Income, 1962-78

	Net acquisition of physical assets (1)	Net increase in financial assets (2)	Net increase in liabilities (3)	Gross saving 1+2-3 (4)	Capital consumption allowances (5)	Net saving 4-5 (6)
			(Per cent)			
1962-64	7.4	12.3	8.6	11.1	5.8	5.3
1965-69	6.8	12.6	7.9	11.5	5.7	5.8
1970-74	6.2	18.4	11.8	12.8	5.1	7.7
1975-78	8.9	21.8	15.4	15.3	4.8	10.4

prices, and land cost for new properties almost doubled over two years. This took place while the economy swung into a recession and inflation accelerated. Housing starts dropped in 1974 and 1975, and vacancy rates remained low. Only since 1976 have price pressures eased (Table 2-2). Over the Seventies as a whole, dwelling prices increased by about 130 per cent, outpacing the Consumer Price Index which increased by 86 per cent.

The early Seventies witnessed the introduction of a number of federal and provincial government policies designed to maintain residential construction at a high level by keeping housing affordable. The policies aimed in particular at new housing for low- and middle-income groups. Governments reduced the financial burden caused by high interest rates. By keeping housing affordable, moreover, the risk of a spillover of high housing costs into income demands, leading to further inflationary pressures, was reduced. There was federal support both for owner-occupied dwellings (AHOP) and for rental dwellings (ARP). As a result of these and similar efforts by the provinces, housing starts have exceeded 220,000 in every year since 1970. These measures did not, however, prevent a tightening of the market and big increases in prices.

Many Canadians responded to this situation by buying homes; some cashed in on high prices. This activity has continued unabated to this day, in spite of the high prices and the high cost of mortgage financing.

The exemption of the principal residence from the capital gains taxes that came into effect in 1972 contributed to the shift to owner-occupancy. Rental property became less attractive as an investment because capital gains could not be fully collected; moreover, the high cost of financing and provincial rent controls reduced profit prospects. These factors encouraged developers to respond to the rising demand for owner-occupied housing by building more single dwellings and selling multiples as condominiums.

The condominium became a new form of tenure particularly suitable for the inflationary Seventies, as it brought home ownership within financial reach of many Canadians. To the household it offered a moderately priced residence and the potential for tax-free capital gains. Those who bought a condominium could ride with the tide of rising prices and might have a better chance of acquiring a larger property later, by "trading up." Many households decided to jump on the bandwagon before house prices were out of reach.

The proportion of dwellings owned by occupants, having declined from 66 per cent in 1961 to about 60 per cent in 1971, recovered to 62 per cent in 1976 and to more than 63 per cent in 1978. Households spent two per cent more of disposable income on real estate in the second half of the Seventies than they spent in the late Sixties.[2]

Home ownership increased among all age groups except those over 65, and especially among younger households. By 1976, 52 per cent of households in the 25-34 age group owned homes, compared with only 43

Table 2-2

Changes in the Housing Market, 1970-78

	Prices of existing homes sold through the multiple listing service	New NHA-Financed single-detached dwellings		Apartment vacancy rate	Average period of vacancy of new houses and duplexes	Apartment starts	All dwellings starts
		Land cost	Construction cost				
	(Percentage change from previous year)			(Per cent)	(Months)	(Thousands)	
1970	0.6	-0.2	2.0	3.8	5.0	91.9	190.5
1971	5.2	9.5	2.7	3.8	5.1	106.2	233.7
1972	8.2	6.5	6.7	2.7	4.1	103.7	249.9
1973	21.5	-4.4	14.5	2.2	3.1	106.5	268.5
1974	27.1	4.2	22.3	1.2	2.3	74.0	222.1
1975	11.7	48.9	11.8	1.2	4.1	70.4	231.5
1976	11.9	27.3	8.1	1.3	3.7	89.3	273.2
1977	4.9	11.3	4.9	2.3	4.7	92.3	245.7
1978	5.4	6.8	5.0	3.2	5.6	77.3	227.7

Table 2-3

Housing Sales and Mortgage Financing, 1962-78

	Multiple listing sales		New residential property		Net increase in mortgages	
	Value	Units	Value	Share of disposable income	Value	Share of disposable income
	($ Millions)	(Thousands)	($ Millions)	(Per cent)	($ Millions)	(Per cent)
1962-64	584	39.9	1,440.9	4.6	1,328	4.3
1965-69	1,259	63.9	1,916.8	4.4	1,586	3.7
1970-74	2,860	93.9	4,226.9	5.9	5,111	7.2
1975-78	8,112	155.3	8,729.4	6.6	12,745	9.6

per cent in 1971. Many of these dwellings were existing structures, some of them available because the older owners chose to "cash in" on high prices and move into condominiums, apartments, or other lower-cost or rental accommodation. Young people took out large mortgages to acquire these properties (Table 2-3).[3] This shift of funds to the previous homeowners accounts for part of the increase in financial assets shown in Table 2-1.

The sharp increase in mortgage borrowing is the more remarkable because of the dramatic effect of high interest rates on monthly carrying charges. Under the standard mortgage contract, interest charges and repayment of principal are blended into a constant dollar amount. The higher the interest rate, the higher the monthly payment. Hence the monthly payment on new and refinanced mortgages rises as a proportion of income during the initial years of the mortgage contract in an inflationary situation. As incomes rise with inflation the fixed monthly payment becomes a smaller proportion of income (Table 2-4).

That many people took on this burden on income indicates that they expected inflation to continue at high rates. They must have expected that the burden would be only temporary as their incomes would keep rising, and that the home in which they invested would increase in value. As a result of their decision they forced themselves to reduce their spending on consumer goods and services for a number of years.

As for the broader economic implications of these developments, it seems clear that housing contributed to inflationary pressures. Not only did the housing cost index increase more than the overall CPI, the high prices of houses and high cost of mortgages probably boosted income demands as large numbers of Canadians prepared for purchase of a house.

The relationship between purchase of a home and saving is complex. The act of purchasing a home does not itself affect saving. But since it is a major investment, and in most cases involves a heavy financial commitment in the form of mortgage borrowing, people usually try to put together as large a downpayment as possible. Hence saving probably increased as people prepared to buy homes, and it was further stimulated by tax deductibility of saving in Registered Home Ownership Savings Plans. Following the purchase, people save automatically to the extent that they repay the principal on their mortgage. Available estimates of saving through first mortgages indicate that this effect was small — in the order of 0.2 to 0.3 percentage points of the saving rate — but second mortgages tend to be repaid faster so that the total effect on the saving rate is larger.[4] On the other hand, mortgage borrowers may be forced to reduce other saving so they can meet their mortgage payments, equip and decorate their homes, and make other necessary expenditures. The net effect of greater homeownership on total household saving rates is therefore difficult to estimate. The contrast in saving behaviour between Canada and the United States, discussed below, suggests that it has been positive.

Table 2-4

Costs of a Mortgage as a Share of Income over Time, During Price Stability and During Inflation

	Year	Annual payment on $40,000 principal	Total income rising at 2% annually (real)	Payment as a share of income
				(Per cent)
Case I with 0% inflation,	1	$2,602	$20,000	13.01
5% nominal interest	5	2,602	22,081	11.78
and 5% real interest	15	2,602	26,917	9.67
	25	2,602	32,812	7.93
	30	2,602	36,227	7.18
Case II with 6% inflation,	1	4,601	20,000	23.01
11% nominal interest	5	4,601	29,386	15.66
and 5% real interest	15	4,601	63,443	7.25
	25	4,601	136,970	3.36
	30	4,601	201,253	2.29

Table 2-5

Net Acquisition of Financial Assets of Households and Unincorporated Businesses as a Share of Personal Disposable Income, 1962-78

Average over period	Currency and deposits	Bonds	Life insurance and pensions	Stocks	Other	Total
			(Per cent)			
1962-64	5.0	2.6	4.2	–0.1	0.6	12.3
1965-69	7.6	0.4	3.7	–0.4	1.2	12.6
1970-74	10.7	2.5	4.1	–1.9	3.0	18.4
1975-78	12.5	1.6	5.0	–0.4	3.0	21.8

Financial Assets and Saving

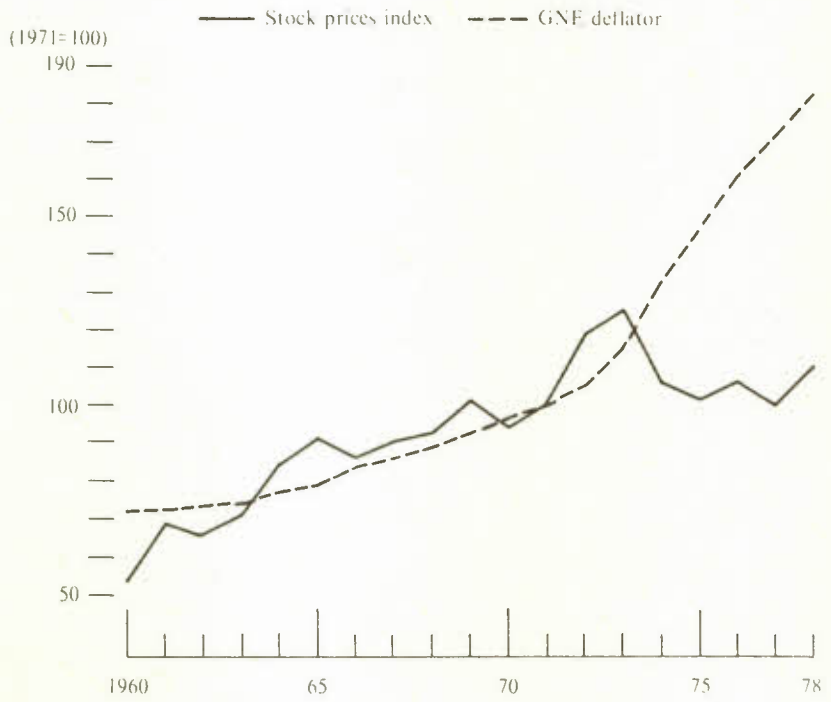
During the Seventies Canadian households so greatly increased the rate at which they acquired financial assets that their financial wealth virtually kept pace with the increasing value of their real property holdings. There is no evidence of a major shift away from bank deposits, marketable and other securities, pension funds and life insurance, to physical assets (Table 2-5).

Contrary to expectations, equities — especially common stocks — were not significantly used as a hedge against inflation. During the creeping inflation and sustained levels of economic activity of the Sixties, common stocks provided adequate security against the erosion of the real value of money (even though the Canadian public reduced its holdings of publicly traded equities during that period). During the early Seventies stock prices went up strongly; but they dropped in 1974 and remained depressed until very recently (Chart 2-1). During this period the public increased its net sales of stock holdings. The weak demand for equities probably contributed to their poor showing.[5]

The data in Table 2-5 are consistent with the belief that Canadian households have been attaching increasing importance to liquidity,

Chart 2-1

Stock Prices and the General Price Level, 1960-78



mainly in the form of saving deposits of various kinds. These trends were present throughout the Sixties, when inflation was relatively insignificant, but there was a quantum jump in these investments in the mid-1970s and this new high level persisted throughout the decade. These trends resemble those in the United States over the same period.

Three factors are responsible: uncertainty, high interest rates, and tax treatment of interest income. Households may have wished to keep their options open and have a financial reserve at hand during a period when rapidly rising inflation and unemployment posed immediate threats to their economic security. That this behaviour should have persisted throughout the decade indicates a persistent uncertainty about not only the levels of inflation and unemployment, but also about their variability, and about the apparent inability of governments to deal effectively with the situation and restore confidence. In these circumstances it appears that households sought to avoid tying up funds in illiquid assets or in assets, such as equities, whose market propects seem dubious (thereby rendering the prospects even more dubious).

The general rise of interest rates, in response to expectations of sustained inflation, made the holding of liquid assets financially more rewarding. Even if they do not guarantee a positive real return, high interest rates look attractive. Variable interest rates on saving accounts, and the possibility of rolling over Canada Savings Bonds into new issues offering higher interest, offered some assurance that the saver would not be left behind if interest rates were to increase even more. The fairly high and responsive interest earnings combined with the liquidity of saving deposits has made this form of financial investment particularly attractive during the Seventies.

The increase in financial saving is to a certain extent no more than a trick played upon the observer by inflation. The real value of financial assets declines as prices rise; higher interest income compensates the saver for this loss. It may well be that many savers are aware that their interest income is not fully available for current consumption but should be saved if they wish to keep the real value of their savings intact for future use.

A personal tax exemption for the first $1,000 of investment income, effective in 1974, made the investment income of many families wholly or largely tax-free. In 1977, Canadian taxpayers claimed $2.6 billion in income tax deductions from declared investment income of more than $8.5 billion. The small saver could just keep up with inflation by adding tax-free interest income to his saving accounts. Had interest income been taxed, he would have lost out against inflation, and might have chosen to spend his savings.

Tax treatment of retirement savings also has a powerful effect on saving decisions. Contractual savings in the form of pension funds have long been tax-deductible. During the Seventies, saving through these plans increased somewhat as a proportion of disposable income. More spectacular was the response of the Canadian public to the increase in the

maximum deduction for Registered Retirement Savings Plans (RRSP) and to the new Registered Home Ownership Savings Plans (RHOSP). In the second half of the Seventies, Canadians saved between 1.5 and 2.0 per cent of disposable income through deposits in these plans, four-fifths of it in RRSPs.

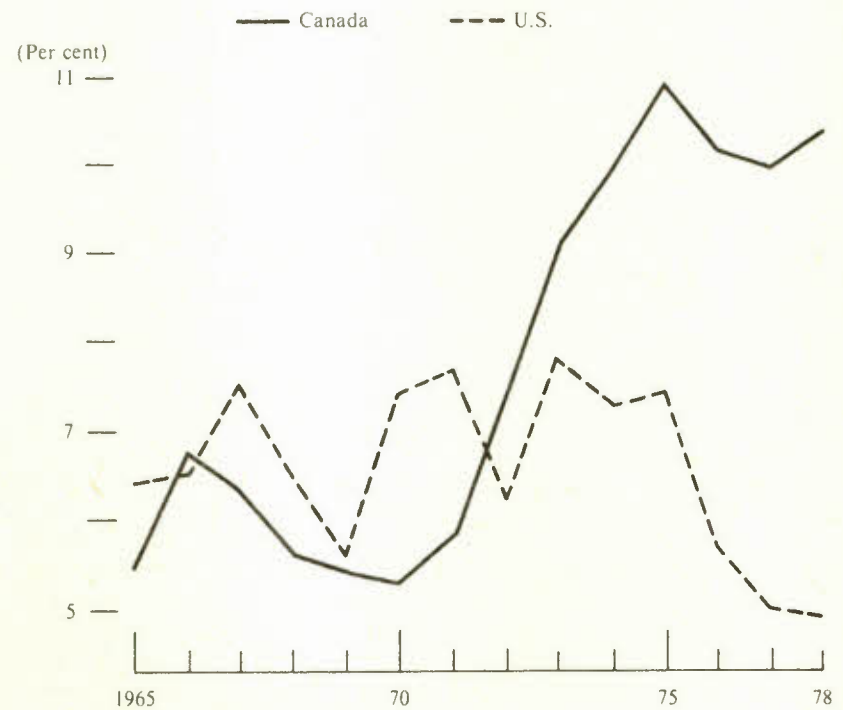
Saving under these plans is not contractual; one may deposit any amount up to the maximum. It seems that many people, seeking to reduce their tax burden, transfer savings to their RRSPs in the last few months that they are allowed to do so. This suggests that they do not really save more. Even so, personal saving increases by the amount of taxes saved. In the future, when many pensioners draw down their balances, the effect of the plans on the saving rate will diminish.

The Personal Saving Rate in the United States and Canada

A comparison of Canadian saving behaviour with that in the United States confirms the importance of tax treatment of saving and interest during inflation. Whereas the Canadian saving rate stayed on a high plateau of more than 10 per cent after the mid-1970s, the American rate dropped to unusually low values during the last three years (Chart 2-2). The contrast is particularly striking in view of the similarities in other aspects of consumer behaviour.

Chart 2-2

Personal Savings as a Share of Personal Disposable Income, Canada and United States, 1965-78



The income experience of Canadians has been far more favourable over the Seventies than that of U.S. households. Between 1971 and 1975, when the Canadian saving rate moved to a new plateau, real disposable income per employee increased by 18 per cent, versus less than 4 per cent in the United States. Since then the change in both countries has been very small. Growth in Canadian incomes may have contributed to the increase in the Canadian rate.

As regards demographic changes, the relative decrease in the 35-64 age group may have depressed total saving as people save most during the middle years of life; but in Canada, saving related to home buying has increased, especially among the young. The rapid increase in labour force participation, in particular among older women, and the concurrent increase in multiple-earner families, has probably contributed to the changes in saving in Canada. Whereas differences of this kind may account for some part of the discrepancy in saving behaviour, they cannot — nor can the income experience of Americans — explain the sharp decline of the U.S. saving rate.

In the United States, interest earnings are taxed as income and interest expenses are tax-deductible. This means that there is, for the average taxpaying household, a severe penalty to financial savings and a big subsidy on the cost of borrowing. Moreover, interest rates are generally lower in the United States than in Canada, and this is especially so for the small saver and the mortgagee, due to a variety of legal restrictions such as usury laws. In the United States, mortgage interest rates were kept in the range of 8½ to 9½ per cent, compared with 11 to 12 per cent in Canada. Interest on U.S. saving deposits was held below a ceiling of 5¼ per cent until very recently. Taking account of income taxes on interest income, it is clear that in the United States it was impossible for the small saver to earn enough interest to keep up with inflation, which was persistently in the area of 8 per cent over much of the period (though it is higher now). The borrower, by contrast, faced a negative real cost. In the United States, the real return on saving as well as the real cost of borrowing have been negative since the mid-1970s.

In Canada, on the other hand, it was possible for the average household to keep the real value of its financial assets intact by adding substantially tax-free, high-interest earnings to its saving deposits. One could certainly not get rich this way, but one could "make do". Furthermore, Canadians could obtain large tax subsidies on amounts set aside in RRSPs and RHOSPs. Borrowing was discouraged by high interest rates.

In brief, the American structure of personal taxation, coupled with restrictions on interest rates, strongly encourages spending. The Canadian tax system strongly encourages saving. It is not surprising that American households should have adopted a mentality of buy now, pay later, because otherwise they could only lose in the race against inflation.[6]

Whether the American behavioural pattern will persist over the longer haul is to be doubted. People will wish to save for retirement income and some may actually save more to compensate for the tax penalty. There

are limits to the amounts people can afford to borrow for acquisition of durables and homes. The high level of the Canadian saving rate, however, may well be sustained if inflation remains steady, the interest rate high, and tax treatment of interest unaltered.

It was, of course, inflation which caused the institutional differences to become very important to the individual consumer. During periods of price stability and low interest rates the differences in after-tax return on investment and net cost of borrowing would be much smaller. This is why the striking contrast only developed in the mid-1970s.

Consequences for the Economy

The above description is an excellent example of the manner in which "the institutional setting" can have a great bearing on the course of the economy. The Canadian economy stayed in the doldrums of stagflation, while the American economy experienced a consumer-led expansion of demand that was sustained over three years. At the end of this period, the American economy approached its limits of capacity, and has recently shown signs of excess demand. It is not surprising that American economists recently have worried about insufficient saving, given consumer behaviour and the continuing sizeable deficit in the federal budget.

What about Canada? Have we missed out on a good thing because of an inappropriate institutional setting? And should we change policy in the future? The answer is not obvious. It is evident that with lower personal saving the economy would have been more vigorous. We would, however, have had more inflation and the balance of payments deficit would have been greater; the adjustment of the exchange rate might have been far more disruptive than it was.

During the Seventies, the federal government encouraged personal saving by favourable tax treatment. The government also took steps to stimulate consumer spending by reducing taxes on incomes and consumer goods. These tax concessions boosted growth of personal disposable income; but consumer spending did not increase in step because of high saving, and the federal government suffered substantial revenue losses that added to the budget deficit.

The Canadian public thus paid lower federal taxes and, through the financial institutions, acquired more federal debt than it would have without these policies. Those in a position to take advantage of tax concessions for saving have increased their own wealth; but this increase in individual wealth is largely offset, for Canadian society as a whole, by a large claim of the federal government on future incomes. We will return to this matter in Chapter 4 when discussing the federal deficit.

The conclusion that the level of personal saving is very sensitive to taxation policy during inflation has direct implications for policy. If on top of the recent move toward tax deductibility of mortgage interest, tax incentives for saving are removed to compensate for the loss in tax

revenues caused by the interest deduction, Canadians might in short order turn from saving to spending, and this would no doubt be disruptive. It seems clear that any changes in the tax treatment of interest should be gradual, not abrupt.

Moreover, in spite of our observations regarding the protection of the real value of assets that has been achieved over the last five or so years, Canadian consumers may temporarily behave more like American consumers. The public has accumulated vast amounts of highly liquid spending power. Indeed, it would not be surprising if the Canadian saving rate were to decline as a result of the current expectations of more rapid price hikes based on the recent path of industrial and U.S. prices and the inflationary effects of anticipated increases in the domestic oil prices. A modest, temporary decline in savings would be welcome as a countervailing force to the effects of the recession in the United States, but there is no guarantee that the size and timing of consumer reactions will be appropriate. When the consumer is nervous, the time is not right for tinkering with the tax treatment of savings.

We foresee substantial business investment activity in the first half of the Eighties. It would not be wise to severely discourage personal saving during this period, for doing so might lead to excess demand, more inflation, and balance of payments problems, especially if the government deficit were to remain as large as it is.

3 Business Performance

It is well known that inflation affects the real incomes and cash flows of firms, as well as their real assets and liabilities. Given current Canadian accounting practice, it also creates gaps between these *real* values and the *nominal* values reported in financial statements. Under existing Canadian tax rules, moreover, inflation results in the imposition of additional tax burdens. These effects were very substantial during the inflationary Seventies, and may have contributed to the inadequate level of investment of that decade. Our major concern now is that if the tax rules and accounting practices remain unchanged, they may similarly inhibit the ability and willingness of firms to invest during the Eighties.

The most widely recognized effect of inflation is the change in the unit of account due to the general decline in the purchasing power of the dollar. A second effect — with which this chapter is particularly concerned — is perhaps more subtle. It arises from the fact that, before an enterprise can report a net return on its capital, it must first provide out of earnings for all of the costs of maintaining that capital. Inflation affects these costs in a number of ways. One of these involves depreciation expense.

Depreciation Expense

The main purpose which annual depreciation charges serve is to amortize systematically against profits the cost of depreciable assets over the course of their useful lives. Although no specific assets are earmarked, this facilitates the sheltering within the firm of sufficient resources to replace those depreciable assets when their useful lives have ended. Conventional accounting practice and income tax rules differ in their treatment of depreciation, but both require that it be calculated on the basis of historical rather than replacement cost. Chronic inflation creates an increasing gap between these cost bases, especially with

respect to the more durable assets. This has a number of adverse consequences for the firm:

- The firm sustains additional tax burdens because it may only charge against taxable income capital cost allowances that have become increasingly inadequate.
- The sheltering effect of the depreciation charges tends to be severely jeopardized; the stronger and more prolonged the inflationary trend, the more insufficient — in relation to ultimate replacement costs — will the firm's accumulated depreciation become.
- If the consequently overstated distributable earnings should contribute to the payment of excessive dividends, the firm's financial position may be impaired.

Historical cost depreciation therefore has, during inflation, negative effects on the firm's investment behaviour. The higher the rate of inflation the lower the optimal level of investment will tend to be. In addition, the firm will tend to prefer durable assets with a shorter life, and may choose to delay the replacement of depreciated assets.[1] Consequently, the ratio of capital to labour in the firm will tend to decline.

In 1972, the Minister of Finance introduced a provision for the two-year write-off of new machinery and equipment by manufacturing and processing firms, a move designed to stimulate their capital investment. Although it mitigated the problems arising from historical cost depreciation, it did not eradicate them. Indeed, it would be more accurate to suggest that the inherent unsuitability of historical cost depreciation under inflationary conditions had the effect of undermining the purpose of this provision.

Inventories

The valuation of inventories is another area in which inflation imposes excess tax burdens and other distortions. The inventory valuation methods accepted for tax purposes in Canada imply that a firm puts raw materials into production in the approximate sequence in which they were acquired. Under inflationary conditions its taxable profits will therefore be overstated because its cost of sales have been understated, since the latter reflects acquistion costs rather than current costs. Since the taxing of the inflation-induced increase in nominal inventory values necessarily increases the implicit cost of holding inventories, there is an incentive for firms to reduce their inventories. In 1977, in recognition of this problem, the Minister of Finance introduced an inventory deduction of 3 per cent of opening inventories. This modification has undoubtedly given many firms significant, if incomplete, relief from the taxation of spurious inventory profits.

Debt and Working Capital Effects

Inflation also has important implications for business borrowing and lending, and the use of working capital. The extent to which inflation is anticipated is reflected in contractual loan arrangements. Nominal interest rates rise to enable the lender to maintain his required real yield on the loan, and to preserve — when the debt is retired — the same command over goods and services that the loan commanded when it was extended. Complications arise, however, because the inflation premium contained in the nominal interest rate represents an additional cash transfer from borrower to lender, and also because of the manner in which this transfer is treated in standard accounting practice and by taxation. The nominal annual interest payment is a deductible expense to the borrower and is taxable income to the lender. Thus, to the borrower, the inflation premium constitutes a reduction in both his reported income and cash flow, partly offset by the fact that it is deductible from his taxable income. The effect on the lender is the opposite. But the financial statements of the borrower do not reflect his real gain on debt outstanding; nor do those of the lender reflect his corresponding loss. As a result, shareholders and financial markets receive potentially misleading pictures of the real performances and financial health of both.

Although no cash transfer takes place between borrower and lender when inflation is unanticipated, and there is no additional tax burden or benefit, a real gain accrues to the borrower and a real loss to the lender. As discussed below, real transfers of considerable magnitudes have taken place between various parts of the Canadian business sector since the mid-1960s.[2] Conventional accounting practice gives no recognition to these real gains and losses. Here, too, shareholders and financial markets receive potentially misleading information.

Moreover, due to inflation, firms experience similarly unreported real gains on their trade liabilities and real losses on their cash balances and other working capital. Finally, inflation forces firms to hold increasing amounts of cash for transactional purposes. The difficulty of predicting actual cash requirements, together with the attempt to avoid getting locked into high long-term interest rates, may increase the financial risk assumed by the firm.

Stock Market Behaviour

If unanimity as to the best solution to the probem has not yet emerged, there now is wide recognition within the accounting professions and among financial analysts that reported profits are badly distorted by inflation. In particular, there is little serious dispute as to whether depreciation expense and cost of sales computed by conventional methods overstate reported profits. Acceptance of the idea that distortions also

occur due to the inflation-induced debt and working capital effects outlined above is less widespread but still considerable.[3] We are disturbed that Canadian reporting practices have not yet evolved in more realistic directions, as has occurred in many other industrialized countries; and we will return to this problem in the final chapter. The immediate question is whether financial markets in general, and the stock market in particular, have, during recent inflationary years, penetrated accurately the veils thrown up by conventional financial reporting.

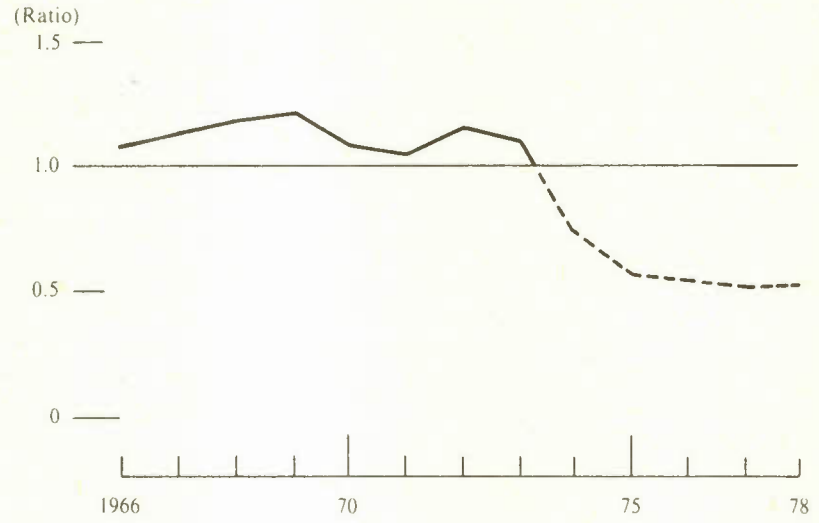
Concerning the stock market informed opinion is divided. There is a well-established "efficient markets" school of thought which holds that financial markets are not deceived by inflated nominal profits, and discount properly the book values of shares. A sharply opposing view has been articulated very recently which contends that, although financial markets make the necessary deductions from nominal profits for depreciation and cost of sales, they do not make the upward adjustments called for by real gains on outstanding debt.[4] How to adjust reported profits for inflation is a highly controversial question. It is discussed in detail in research undertaken by the Economic Council of Canada for this *Annual Review*.[5] Moreover, the stock market is always extremely sensitive to a wide variety of expectational factors. During the Seventies these factors were particularly acute, ranging from the uncertainties inherent in an unstable world energy situation to doubts as to the effectiveness of monetary and fiscal policies. On balance, however, the possibility cannot be excluded that financial markets have not achieved complete efficiency during recent years, and that stock market values have deviated from real values, in at least some cases. Whatever their directions, such deviations — exacerbated by the uncertainties of chronic inflation — could only have contributed to less productive allocations of investment funds.

Corporate Take-overs

A related phenomenon that deserves brief mention is the recent corporate take-over trend that Canada has been experiencing. As Chart 3-1 shows, the average ratio of market values of shares to the replacement values of net assets has declined sharply. In such circumstances firms in what appears to be a highly liquid position — a not uncommon situation during inflation — and seeking to expand their productive capacities, may well choose to do so by buying the productive capacities of other firms instead of undertaking new investment. While it cannot be ascertained from available evidence whether, and to what degree, take-overs thus prompted have had the effect of reducing total investment, this is another possibility that cannot be excluded. In any event, these take-overs have hardly improved the competitive character of the Canadian economy.

Chart 3-1

Ratio of Market Value of Corporate Shares to Replacement Value of Net Assets, 1966-78



Profit Margins

Another consequence of the chronic, and high, rates of inflation of the Seventies was the downward pressure that they exerted frequently on profit margins, at least in some sectors.

It used to be thought that inflation initially benefits firms because increased aggregate demand raises their output prices almost immediately, while the prices of their inputs rise proportionately only after a time. Hence profit margins increase, at least until costs catch up. This view is now being questioned, especially as regards firms in the manufacturing and processing sectors. There is a growing recognition of the importance of the adjustment lags of producers and workers.[6] These lags imply a quite different sequence of events from that envisaged by the traditional view.

Many manufacturing and processing firms — particularly in industries dominated by a few producers — generally set prices by adding a predetermined markup to standard unit costs of production.[7] This means that their prices go up after — not before — increases in costs. The rising demand of the early Seventies therefore caused initially an expansion of output rather than an increase in prices. Because the expanded production absorbed existing excess capacity and was often accompanied by lower unit costs, average profit margins rose rather sharply. Soon, however, the higher demand for inputs raised material prices and also wages, as collective agreements came to reflect past and expected infla-

tion. Even though output prices went up as well, within the limits of a generally unfavourable international competitive situation, there was a subsequent dampening of profit margins.

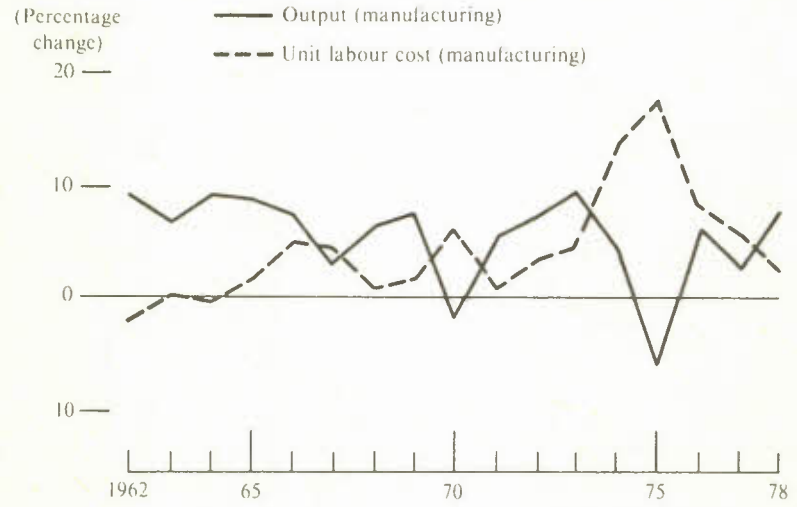
At the same time matters became more difficult still, as fiscal and monetary policy responded to inflation — always higher than anticipated — by restricting aggregate demand. This also contributed to the dampening of profit margins, especially since producers tended to curtail output before they benefited from reduced increases in input costs. The end result was a seemingly paradoxical situation. Weaker demand and increasing excess capacity were accompanied by continuing inflation, as cost increases caused by previous demand pressure and anticipated inflation worked their way through the economy. This broad train of events is indicated in the trends depicted in Charts 3-2 and 3-3.

Real and Reported Rates of Return, Effective Tax Rates, and Dividend Payout Ratios Since 1965

Having discussed how, during recent inflation, existing tax rules reduced real business income while accounting practice distorted reality, we now present evidence pertaining to the real profitability of Canadian business since 1965, as well as to real effective tax burdens and real dividend payout ratios. These are contrasted with their nominal counterparts. Available data permit us to report on the aggregate non-financial

Chart 3-2

Changes in Output and Unit Labour Cost, 1962-78



and manufacturing corporate sectors only to 1976. Other data, however, derived from a sample of large corporations, enable us to comment on the performance of the non-financial sector in 1977 and 1978.

Chart 3-4 presents reported and real rates of return on capital employed, and Chart 3-5 presents reported and real rates of return on net worth. The essential conceptual differences between the real rates of return on capital employed and those on net worth is that the latter reflects the real gains or losses on debt outstanding accruing to shareholders (debtors) whenever actual inflation differed from anticipated inflation. These data confirm that shareholders made consistent gains at the expense of creditors due to unanticipated inflation. But much the most important fact that emerges is the relatively low real rates of return that have characterized the most recent years. A third important implication is, of course, the continuous and wide gaps between the reported rates of return and the real ones.

These rates of return extend to 1976. Our sample data for 1977 and 1978 indicate that, while debtors continued to gain at the expense of creditors, real rates of return remained low.[8]

Chart 3-3

Changes in Unit Profits and Price Indexes, 1962-78

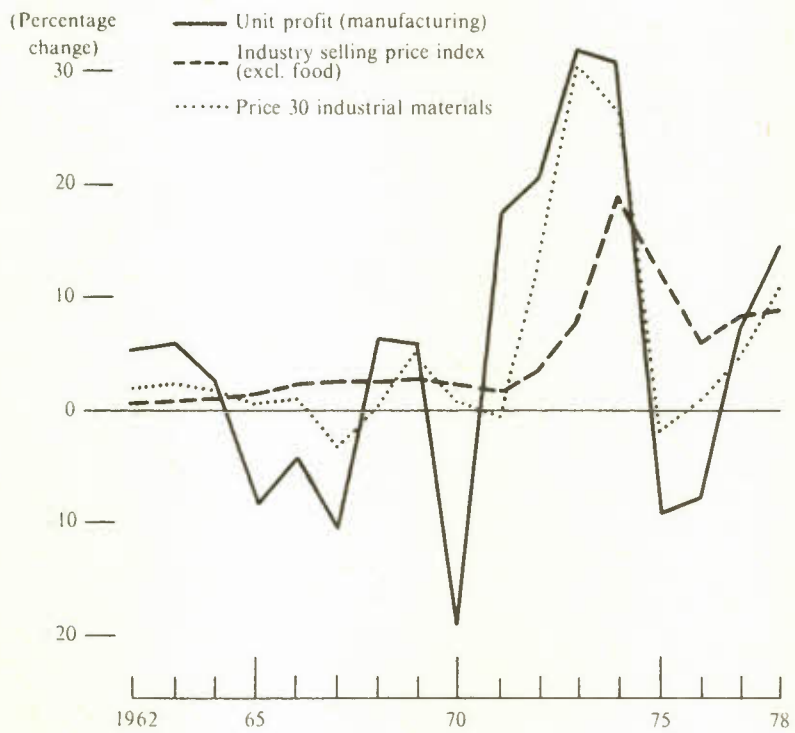


Chart 3-4

Nominal and Real Rates of Return on Capital Employed, 1965-76

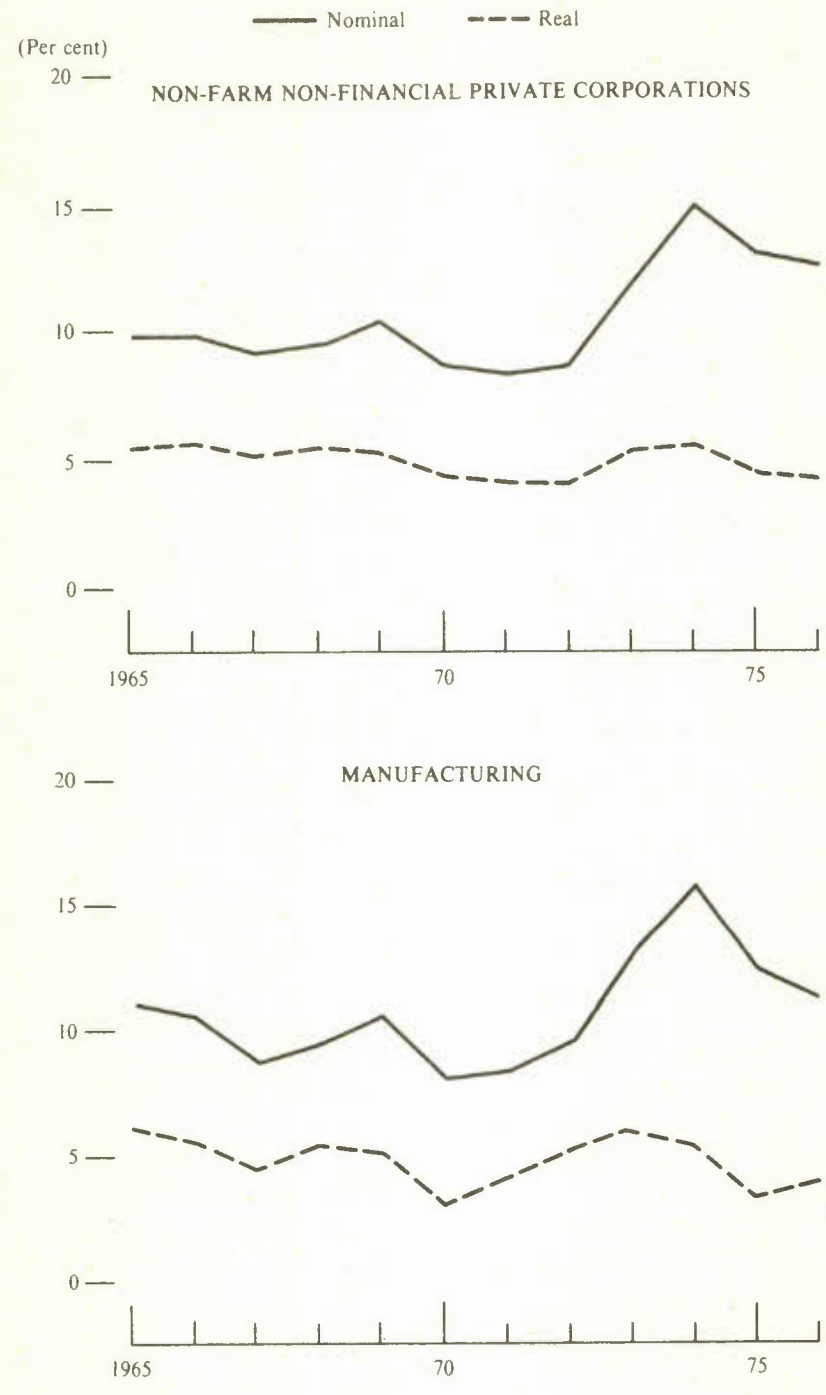


Chart 3-5

Nominal and Real Rates of Return on Net Worth, 1965-76

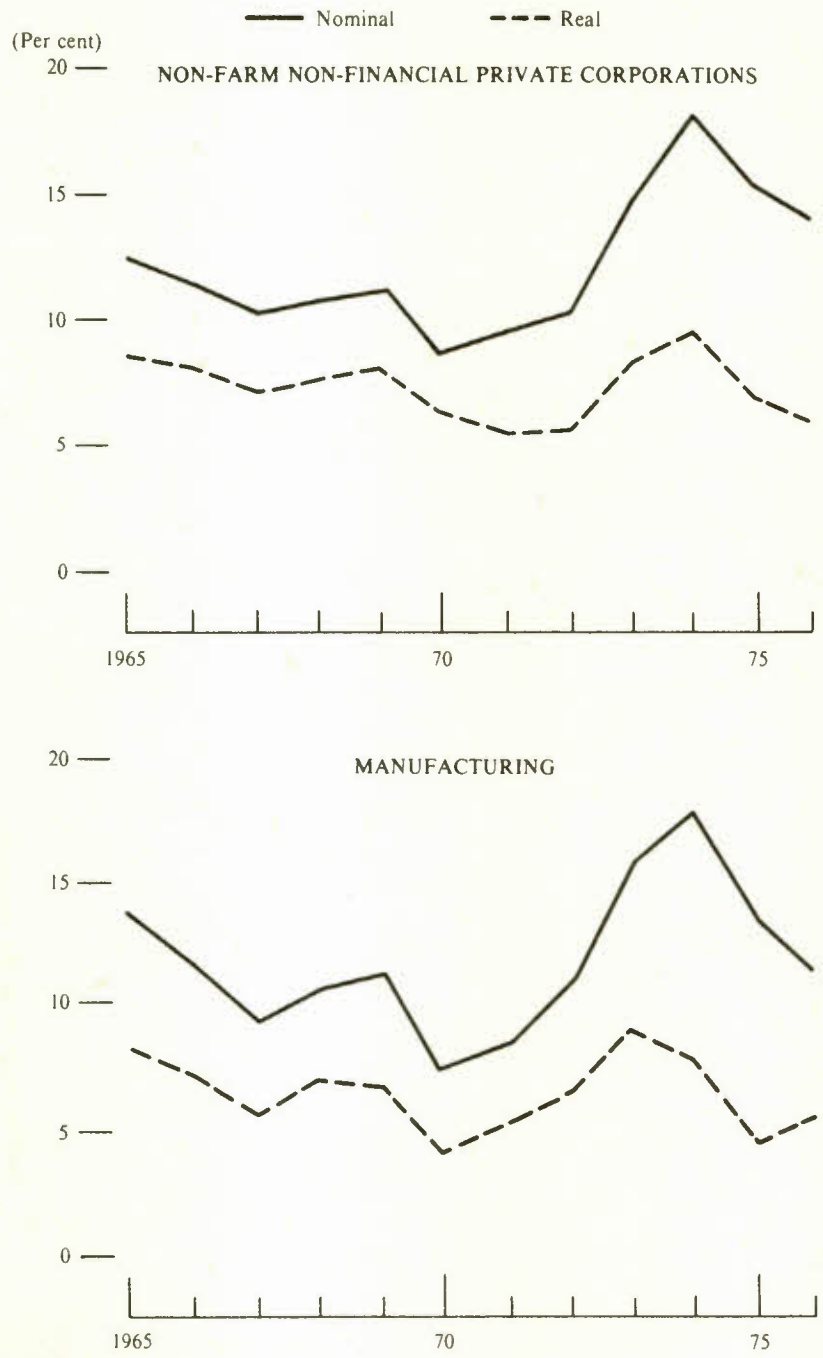


Table 3-1 gives the various requisite inflation adjustments to 1976 as a percentage of reported profits before taxes. While the other inflation-induced deductions from nominal profits were not insignificant, this table shows that, generally, the most important one was the adjustment for insufficient depreciation. Our data suggest that this was also the case in 1977 and 1978. Chart 3-6 gives the nominal and real effective tax rates paid to 1976. It shows that effective tax rates remained continually higher than nominal tax rates. It also confirms that the stimulative potential of such measures as the two-year write-off was largely offset by inflation. Again, our data for 1977 and 1978 tell a similar story.

Yet another disturbing dimension emerges from Table 3-2, which gives nominal and real dividend payout ratios to 1976. It indicates clearly that many manufacturing firms, whether their managements realized it or not, have been paying very high real rates of dividends, often out of capital.[9] Once again, our data imply a similar situation in 1977 and 1978. Why this should have happened is not entirely clear. Possibly the explanation concerns the stock market, at least in part. Management may have felt compelled to maintain nominal dividend payout ratios in order to prevent further deterioration in the market values of their firms' shares. Nor can simple error, arising from a misunderstanding of the real situation, by management and shareholders alike, be ruled out.

Inevitably, the environment for new investment activity deteriorated under such conditions. The relatively lower real rates of return and continuing uncertainty about the future must have made the acquisition of new durable assets rather less attractive. At least some firms may therefore have been inclined to delay investment projects of longer duration or of larger magnitude in favour of less ambitious ones with shorter horizons. Marginal projects may well have been postponed indefinitely. These adverse effects may well have contributed to recent levels of investment that were inadequate in relation to what was needed to achieve productivity growth and help prevent unacceptable levels of unemployment.

There are, of course, no adequate data yet for 1979. Hence we can do no more than infer, very tentatively, from general trends what may be happening currently with respect to profits. There has been much discussion in the financial press and elsewhere about the high levels of profits now being earned in various business sectors. Most of this discussion is couched in terms of nominal, reported profits, the very measure that we have demonstrated to be so very misleading. It is nevertheless true that real profits have been increasing, especially in those sectors that were in a position to benefit from the lower exchange rates on the Canadian dollar.

Table 3-1

Inflation Adjustments as a Percentage of Reported Net Profits before Taxes, 1965-76

	Depreciation and depletion adjustment	Inventory valuation adjustment	Loss or gain on other working capital	Gain on net long-term debt	Total inflation adjustments
			Non-farm, non-financial private corporations		
1965	-13.0	- 6.0	-0.4	7.2	-12.2
1966	-13.4	- 5.5	0.5	6.9	-11.5
1967	-13.2	- 5.6	0.7	7.1	-11.0
1968	-10.7	- 5.8	0.6	5.9	-10.0
1969	-12.2	- 8.3	1.0	7.6	-11.9
1970	-16.1	- 3.2	1.7	9.7	- 7.9
1971	-16.4	- 9.3	1.2	5.5	-19.0
1972	-16.5	-13.5	1.8	8.0	-20.2
1973	-13.9	-20.2	2.7	10.3	-21.1
1974	-15.9	-25.5	6.8	12.8	-21.8
1975	-23.7	-19.6	7.1	11.5	-24.7
1976	-28.0	-14.1	6.5	12.2	-23.4
			Manufacturing		
1965	-13.1	- 2.8	-1.0	2.0	-14.9
1966	-12.1	- 6.5	-0.2	2.1	-16.7
1967	-13.0	- 6.0	0.2	3.2	-15.6
1968	- 9.9	- 5.8	0.2	3.0	-12.5
1969	-10.7	-10.0	0.3	3.4	-17.0
1970	-16.0	- 8.3	1.2	4.7	-18.4
1971	-14.5	- 5.5	0.8	2.7	-16.5
1972	-12.6	-10.7	0.5	3.9	-18.9
1973	- 9.5	-19.5	0.5	5.2	-23.3
1974	-12.8	-29.4	3.9	6.5	-31.8
1975	-19.6	-27.3	5.2	6.2	-35.5
1976	-24.4	-14.3	4.4	7.1	-27.3

Chart 3-6

Nominal and Real Effective Tax Rates, 1965-76

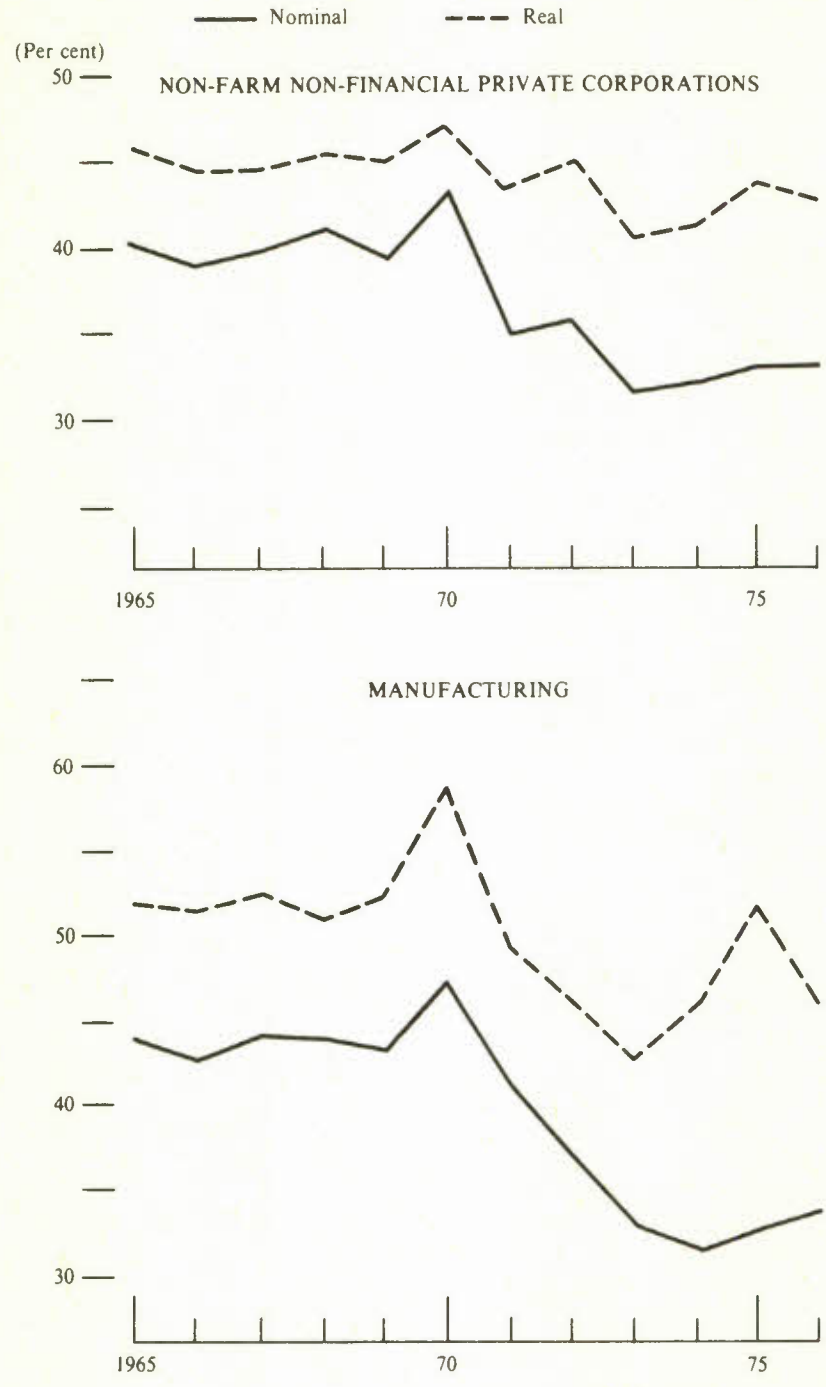


Table 3-2

Nominal and Real Dividend Payout Ratios, 1965-76

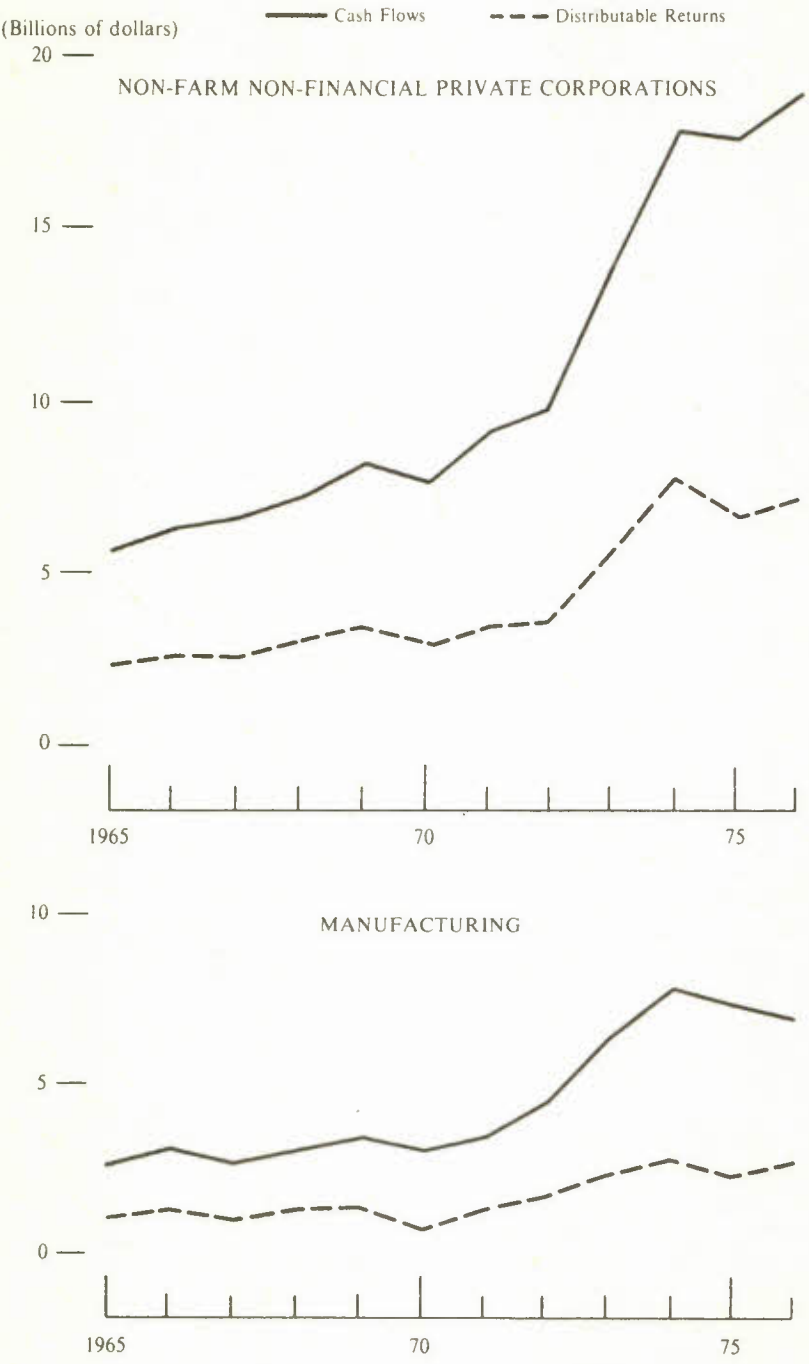
	Nominal	Real
	Non-farm, non-financial private corporations	
	(Per cent)	
1965	53.5	67.4
1966	56.0	69.1
1967	60.4	73.9
1968	53.5	65.5
1969	47.7	59.9
1970	64.6	75.0
1971	51.4	72.0
1972	49.9	72.8
1973	39.3	57.1
1974	36.9	54.3
1975	38.9	61.6
1976	38.6	59.3
	Manufacturing	
	(Per cent)	
1965	57.7	78.6
1966	63.1	89.5
1967	69.2	96.3
1968	60.6	78.2
1969	46.8	66.9
1970	74.9	117.8
1971	57.0	79.3
1972	46.8	67.1
1973	38.7	59.3
1974	34.9	65.3
1975	39.9	86.7
1976	46.7	79.7

Implications for Future Investment

It is extremely difficult to say what the profit performance reviewed above portends for the investment levels of the Eighties. The task of determining which factors enter into the investment decisions of management, and in what proportions, is not an easy one under the best of circumstances. Expected profits are, of course, of central importance, as are expected cash flows, and both of these are related to past profits and cash flows. When prices are stable, profits and cash flows tend to move together reasonably closely, but under inflationary conditions that are both prolonged and fluctuating they are capable of parting company

Chart 3-7

Cash Flows and Distributable Returns to Net Worth, 1965-76



quite sharply. Chart 3-7 illustrates that this is precisely what often occurred during the years since 1965, with the widest deviations taking place during the Seventies. Given what we have said about the combined effects of inflation and taxation this is hardly surprising; but the question remains as to which of these or other criteria management will rely upon in making its investment decisions during the years ahead.

It is probable that management is already relying upon the real returns rather than the apparent cash flows of recent years in estimating expected benefits from future investment. The recent past may therefore cloud the immediate future. Whether this potentially negative effect will be discounted, and to what extent, will depend upon the degree to which past rates of inflation are thought to have contained transitory elements unlikely to recur in the future. Given the strong probability that businessmen expect that high rates of inflation will continue for at least some years, it is unlikely that there will be much discounting of recent experience.

While the foregoing is significant it should not be exaggerated. Although real rates of return have been relatively low during the last few years, 1973 and 1974 were very good years, owing to a high level of economic activity and favourable trading conditions as described in Chapter 1. A major distinction between the Sixties and Seventies is, of course, the chronic and high rates of inflation that characterized the latter decade. But this, too, should be kept in perspective. It is highly probable that many firms have modified their financial planning, if not their formal accounting, to provide more realistically for the effects of inflation. Those firms, however, whose managements continue to think in traditional terms may encounter liquidity problems during the Eighties. If, for example, such firms base dividend policies on nominal rather than real profits, they risk distributing not only all their real earnings but part of their capital as well. In order to maintain productive capacity they may therefore be forced to turn increasingly to financial markets. Should equity markets prove relatively inhospitable, these firms will probably find themselves relying ever more heavily on debt financing. Because of the continuing high interest rates that must be expected, this will have negative effects on their cash flows and, possibly, on their debt-equity ratios.

Another source of potential difficulty is inherent in existing tax rules regarding inventory valuation and depreciation expense.[10] For at least some firms, circumstances may develop, due to their effective tax burdens, where they will be faced by a growing inability to maintain their physical assets by means of retained earnings.[11] This, too, will force them to depend more and more heavily upon financial markets with, again, potentially adverse effects upon their cash flows and debt-equity ratios.

The foregoing discussion substantiates some of the widely recognized potentially insidious effects of inflation. It explains how surface appearances, maintained by conventional accounting practice, can be very

misleading. It is now apparent how a seemingly abundant current stream of profits and cash flow may — depending upon the firm's capital asset, inventory and debt structures — conceal a real situation which, if it persisted, might ultimately cause serious problems. It is also apparent that certain tax rules will, if they remain unchanged, impose inadvertent tax burdens on some firms. Perhaps more importantly, they may continue to prevent recent tax incentives from achieving fully their intended effects on investment.[12] We will return to this problem in the final chapter.

4 Issues in Government Finance

The Seventies were eventful years for government finance. Following a period of rapid growth of expenditure financed by equally fast-rising revenues, the combined government sector swung into deficit in the recession of 1975 and has not recovered since. The problem is particularly acute at the federal level, where the deficit increased to the unprecedented peace-time level of $11.4 billion, or 5.0 per cent of Gross National Expenditures, as reported in the National Accounts for 1978.

Respective roles of provincial and federal governments and the distribution of revenue and expenditure commitments have changed to the point that they provide a new context for economic management and federal-provincial relations. The federal government, which enjoyed buoyant revenues up to the early Seventies, now finds its finances strained to the limit. Among the provinces, imbalances have developed as a result of uneven distribution of revenue from exploitation of natural resources. The main lesson we derive from our projections into the years ahead is that these are not temporary aberrations from a well-balanced structure; on the contrary, they are likely to persist and will require political resolution. Without such action, the government's management of the economy will become increasingly powerless, to the peril of the country as a whole and the welfare of every Canadian.

The following pages review the evolution of the Canadian public sector since the Second World War, and especially during the Seventies, in order to explain how revenue, expenditure and deficits were influenced by institutional trends, economic conditions, and recent government decisions. We shall explore how the public sector is likely to evolve in the future, and conclude with a discussion of the structure of intergovernmental finance now and in the next few years.

The Changing Nature of the Government Sector

Over the post-war period the public sector has grown faster than the rest of the economy.[1] That trend has emerged in all industrialized

countries, but has been particularly pronounced in Canada, where governments grew from around 20 per cent of GNP to current levels of 42 per cent. Even this does not tell the whole story, because of so much public participation in commercial activity through Crown corporations, utilities, and joint ventures of various kinds.[2]

This expansion was facilitated by strong economic growth. The progressive income tax yielded rapidly rising revenues, especially when inflation began to add substantially to growth of nominal incomes in the late Sixties and early Seventies. In addition, governments increased many indirect tax rates and collected more social security contributions. Widespread advances in real income softened the higher tax bite and governments had no problem financing escalating demands for public goods and services.

But all this growth of government produced a mutation in the public sector. A problem of "fiscal imbalance" developed, with demands for incremental services being directed towards one level of government while the money needed to meet those claims was in the hands of the other level of government. For example, during the 1960s the federal government enjoyed the lion's share of direct taxes while the emphasis was on education, health care, welfare, and the provision of social capital, domains which are mostly provincial.

Under federal leadership, governments co-operated to rearrange finances and responsibilities. The role of the federal government in social security transfers for the elderly and unemployed was greatly expanded. The federal government also set national standards in health care in exchange for cost-sharing on a 50-50 basis of provincial spending for hospital and medical care. Post-secondary education and social welfare expenditures were shared in the same manner.

In addition, the federal government has developed over the years a complex and comprehensive program of equalization to permit provinces with a less-than-average tax base to finance their services without excessive taxation. Furthermore, money collected through the Canada Pension Plan was loaned to the provinces.[3] The provinces, for their part, increased their transfers to local governments, especially for education, enabling municipalities to reduce their reliance on property taxes. The provinces also increased their holdings of municipal debt.

The net result of these changes was that provincial and local government expenditures rose in 20 years from less than 10 per cent of GNP to about 25 per cent by 1975. Meanwhile, the federal-expenditure share of GNP remained roughly constant at around 15 per cent. In 1978, provincial, local and hospital expenditures at $56.8 billion were about 1½ times those of the federal government.[4]

Besides this shift in relative size, roles and functions have changed as well. The share of federal expenditure devoted to transfers grew from one-quarter to more than one-half between 1955 and 1975. The federal government's role as a direct purchaser of goods and services in the

economy is now relatively minor, at least in comparison with provincial and local governments. But it has become the driving force of a massive income-transfer mechanism, with respect both to other levels of governments and to individuals.

With the recession and explosion of inflation of the mid-1970s, a comfortable budget surplus turned overnight into a big deficit. Some of the national concern about inflation centred on growth in government spending and the budget deficit. New watchwords such as "fiscal responsibility" and "expenditure restraint" were quickly adopted. But governments found that many of the social programs they had embarked upon led to lasting spending commitments, with costs dictated by the demand for services of a growing population and by the combination of persistent inflation and unemployment. It was also found that the structure of fiscal relationships made control over revenue and expenditure difficult. Federal expenditures under cost-shared programs were largely determined by decisions made by provincial governments. The latter, although enjoying the 50-cent dollars they spent under these programs, felt that they were led by the conditions of federal grants into decisions they would not make had they full responsibility for raising tax revenue to finance the programs. They also became concerned about rapidly rising grants to local governments.

Due to their own fiscal growth and the expanding scope of economic policy, the provinces became increasingly more important actors on the national economic scene. It was found, for example, that combined provincial borrowings on foreign markets could sustain the exchange rate at levels higher than warranted by the underlying production costs and the true competitive position of the Canadian economy. This situation arose in the mid-1970s with respect to the financing abroad of massive investments in provincial utilities. When controls on prices and wages were imposed, provincial jurisdiction over labour relations and intra-provincial trade, and their control over provincial payrolls, had to be considered. Economic policies that could be implemented as a matter of course in most industrial nations required in Canada either the federal invocation of an emergency or parallel federal and provincial legislation. Moreover, provincial ownership of natural resources made their co-operation essential to the formulation of national energy and industrial policies.

In brief, the centre of gravity of the public sector has drifted progressively towards the provinces, not only because of the change in the relative size of federal and provincial governments but also because areas within provincial jurisdiction have become essential ingredients in most national economic policies.

The Deficit

In 1975, as the economy moved into a recession, the federal and most provincial government accounts swung heavily into deficit. This by itself

was nothing new, nor was it particularly alarming. Recessions always have the effect of reducing the tax base and increasing government spending, and this automatic response does much to protect incomes and cushion the blow. However, the deficit has persisted to this day, and for the last two years has been substantially higher than in 1975 (Table 4-1).

In the past, as the economy pulled out of a recession, the deficit closed and turned into a surplus during the next peak in economic activity. This did not happen after 1975, and the continuing poor performance of the economy is much to blame. Also of great significance is the fact that the federal government initiated a series of major tax concessions to stimulate the economy and ease the burden of inflation.

The direct effect of poor economic growth on government revenues and expenditures is quite straightforward. Revenues depend on the level of incomes and the value of goods and services produced in the economy; if the economy is depressed, so are government revenues. Because of the macro-economic responsibilities of governments, increasing tax rates during such a period is poor form; the opposite has in fact been done. As for expenditures, poor growth and high unemployment imply large transfer payments through unemployment insurance and social assistance. Assistance to business and spending on direct employment creation also tend to increase, whereas other expenditures are little influenced in the short run by the level of economic activity.

Inflation changes this relationship between government finance and the economy in some respects. Under current circumstances, it could be said that most government expenditures are tied in, or "indexed", to the rate of inflation in one way or the other. Government purchases of goods and services, and government employees' wages, fees, and fringe benefits, all have to reflect price movements in the economy. Limits on loans or subsidies have to be adjusted upwards periodically, and most transfers to persons have been indexed by statute to the Consumer Price Index or linked to a wage index. Conditional transfers to provinces, such as grants for post-secondary education, hospital insurance and Medicare, have also been indexed by statute to nominal GNP, which reflects inflation. As the cost of provincial programs and prices for basic necessities of life were going up very fast, transfer payments have risen faster than nominal GNP.

During a period of rapid inflation a deficit has self-perpetuating properties. New public debt to finance the deficit is borrowed at high interest rates, causing a cash-flow drain; governments then have to borrow more to meet debt-servicing charges.[5] Existing debt is refinanced at high interest rates rather than being paid off, and this aggravates the situation. For example, the public rolled over its holdings of Canada Saving Bonds into new issues offering higher rates. In the long run, governments redeem their debt in dollars that are worth less and are therefore easier to raise through taxation. In this way the real debt burden declines during inflation. If this were taken into account, the

Table 4-1

Rate of Growth of Government Expenditures and Revenues and as a Share of GNP, 1966-78

	Growth rate			Share of GNP		
	Expenditure	Revenue	GNP	Expenditure	Revenue	Surplus or deficit
	(Percentage Change)			(Per cent)		
1966-73 (average)	13.3	13.5	10.6	34.9	35.7	0.8
1974	24.2	26.9	19.4	37.9	39.8	1.9
1975	22.0	9.3	12.1	41.3	38.9	-2.4
1976	12.9	14.6	15.6	40.3	38.5	-1.8
1977	12.3	9.4	9.5	41.4	38.5	-2.9
1978	11.7	9.0	10.0	42.0	38.1	-3.9

government deficit would not appear to be as large as it is. Meanwhile, however, the cash-flow drain from higher interest payments is very real.[6]

If expenditures are influenced by the rate of inflation, so are tax revenues through the increase in nominal tax bases and the reduction in the real value of fixed exemptions. If the rates are progressive, as in the case of personal income tax, and if deductions are not adjusted upwards, tax revenues grow faster than nominal income.

A significant move was made in 1974 to reduce the tax-revenue windfall from inflation when the federal government decided to index to the CPI personal exemptions and the limits of tax brackets applicable to personal income tax. If more revenues were to be raised from this source, it would have to be explicitly announced as a tax increase instead of coming automatically to the government as a tax dividend from inflation. The direct tax revenue losses attributable to this decision are very significant: they have fluctuated between $0.8 and $1.1 billion a year since 1975, and in 1978 the cumulative revenue loss was $4.8 billion, an overall reduction of close to 30 per cent in federal income tax.

The influence of inflation on government finance goes beyond these direct effects on income tax collection and on the cost of expenditure programs. As inflation contributed to poor economic growth, it induced the federal government to stimulate the economy through additional tax cuts, and this added to the persistent imbalance in government accounts.

The tax cuts have been substantial. The major measures, with their estimated effect on federal revenues in 1978, are listed in Table 4-2. They ranged from income tax cuts to corporate tax concessions and reductions in indirect taxes. Their estimated effect on federal revenues is $3.4 billion.[7] Furthermore, only the reduction in provincial retail sales taxes, of 1978, which was largely financed by the federal government, was introduced as a temporary measure. All other measures, including the indexing of income taxes, will remain part of the fiscal structure until they are repealed.

In this account of what happened in the Sixties and the Seventies, we have seen how the federal position within the public sector has declined over the years, as the government "boxed" a good half of its expenditure into statutes and then indexed its transfers to individuals and the provinces. The net result has been a significant reduction in the discretionary power of the federal government over its budget position.

Throughout the Seventies, the federal government has taken measures to protect and boost personal disposable incomes. It has also taken some steps to reduce the tax burden on corporate profits, and given some relief in indirect taxation to achieve immediate, short-run reduction of price pressures. Tax policy, to be sure, has been stimulative throughout the decade. Spending by all governments has been increasingly restrained since 1975, but without a reduction in the relative size of government spending (Table 4-1).

As Chapter 1 observed, the Canadian economy operated below its potential after 1975. Excess demand did not occur, and there was no

Table 4-2

Impact of Recent Changes in Federal Taxation on Total Federal Revenues, 1978

Measure	Budget	1978 impact
		($ Million)
Increase in minimum tax cut to $200 from $150 and increase in tax cut rate (as modified in June 1975)	November 1974/ June 1975	–610
Pension income deduction, extension of $1,000 interest income deduction to include dividends and transferability of deductions	November 1974	–135
Reduction of federal sales tax on building materials to 5 per cent	November 1974	–600
Exemption of transportation equipment from federal sales tax	November 1974	–150
Gasoline excise tax (as modified in August 1978)	June 1975/ August 1978	+565
Investment tax credit (as extended and enriched in March 1977)	June 1975/ March 1977	–430
Child tax credit	March 1977	–275
Increase in employment expense deduction	March 1977	–120
Tax relief in respect of business inventories	March 1977	–350
Increase in minimum federal personal income tax credit for 1978	October 1977	–700
Federal compensation for provincial sales tax reduction	April 1978	–760
Increase in unemployment insurance general contribution rate from $1.40 per $100 in earnings in 1974 to $1.50 in 1978	April 1978	+190

problem in financing the large federal deficit. Since 1975, the money supply has been led along a steady path independent of the financial requirements of governments. However, in view of the relatively modest size of the output gap, the fiscal stance over the second half of the Seventies must be regarded as fairly stimulatory.

Those who attach great priority to the fight against inflation by fiscal restraint would have preferred more drastic expenditure cuts and less tax support for disposable income. In any event, the current fiscal stance is not without its risks. Consumers could suddenly start spending the vast amounts of purchasing power they have accumulated. There are signs that they have begun to do so in 1979, perhaps in anticipation of acceleration of inflation. Investment by the trading sectors is picking up, and the unemployment rate dropped sharply by mid-year. The situation bears close watching. Strong private domestic demand, fueled by speculation, could make for inflationary pressures precisely when accelerating inflation is spilling over from the United States and the move towards world oil prices is speeded up.

Fiscal Relations Between Governments

In 1975, when the overall government deficit first appeared, the federal government accounted for the largest part: $3.8 billion, compared with $2.2 billion for the combined provincial, local and hospital sector. Slight improvement in the federal deficit occurred in 1976, but in 1977 it more than doubled while the other aggregate deficit virtually disappeared. In 1978, the federal deficit on a National Accounts basis was $11.4 billion, or 5 per cent of GNE. The government sector as a whole recorded a smaller deficit of $8.9 billion, as the Canada and Quebec Pension Plans generated a surplus of $2.4 billion. The overall government deficit has clearly been concentrated at the federal level.

It appears that the federal government brought this situation on itself through the above-mentioned tax reductions and generous refinancing of transfers to provincial governments. Federal revenues are overcommitted to supporting expenditures that are statutory, governed by federal-provincial agreements, and almost completely indexed upwards.

There is no evidence that the situation improved in 1977, when new financial arrangements with the provinces on health and education programs came into effect. They involved a transfer of personal income tax to the provinces, leading to a net reduction of $1.8 billion in federal tax collections for the 1977-78 fiscal year. Yet, partly because of payments under the earlier agreement, and partly because of new transfers under a program for extended health care, transfers to the provinces increased by 16 per cent; in 1978 there was a further increase of 9 per cent. The current agreements are such that substantial increases, roughly in line with nominal GNP growth, are expected until the agreement on Established Program Financing expires in 1982.

In this way, the federal government has assumed virtually sole responsibility for the management and financing of the deficit of the public sector. This situation is not likely to change unless the federal government increases its own taxes or renegotiates agreements with the provincial governments on a much different basis for the period after 1982. Given the current fiscal structure, assuming that expenditure will be restrained drastically, and assuming that the domestic price of oil will be raised to the world level by about 1985, the combined government sector may attain a balanced-budget position in the medium term.[8] But great imbalances will persist; the federal deficit will continue to be in excess of $10 billion. This constitutes a decreasing percentage of GNP, but the deficit is nonetheless sizeable and the prospect for reduction must be considered in the light of an economy operating close to its potential (Table 4-3; see also Chapter 5).

More recently, another source of imbalance has emerged in the growing revenues from non-renewable resources. The government of Alberta has been enjoying large surpluses due to oil and gas revenues. British Columbia and Saskatchewan have benefited to a lesser extent. The other provinces are running deficits on their accounts that are small compared to the federal deficit, and in the years ahead a small surplus appears likely for this group. But the annual revenues from oil and gas production, the bulk of which accrue to Alberta, will be of the same order of magnitude as the entire federal deficit. If Alberta keeps on with its current practice of using only one-half of its oil and gas revenues for its own spending, it will enjoy a budget surplus of the order of $4 billion to $5 billion a year up to 1985 (the limit of our projections, in Chapter 5).

These results are predicated on faster increases in the domestic price of oil and continuation of current rules for distribution of additional royalty revenues. Under these arrangements, more than 50 cents out of every dollar-per-barrel increase goes to the government of Alberta, if royalties are combined with the provincial share of corporate tax. Of the remainder, a maximum of 27 cents could accrue to the federal government in the form of additional corporate taxes. But since various exploration and development expenditures can be written off against these tax liabilities, an average federal take of approximately 15 cents is probably closer to the actual outcome in most cases. In addition, federal equalization payments increase by approximately $80 million each time the domestic price of oil is increased by one dollar a barrel.[9]

This is not a future, possible issue; it is immediate and acute. Acceleration of the adjustment of domestic oil and gas prices towards the world price level would have economic repercussions and exacerbate the existing major imbalances in the intergovernmental fiscal structure, the federal deficit, and the Alberta surplus.

For the federal government, the depressing effect of higher energy prices on the state of the economy will mean lower revenues, and higher transfer payments to provincial governments and individuals. At the same

Table 4-3

Projected Government Surpluses and Deficits and as a Share of GNP, 1979-85

	Surplus or deficit					Share of GNP			
		Provincial, local and hospital							
	Federal	All provinces	Excluding Alberta	CPP/ QPP	Total	Federal	Provincial, local, and hospital	CPP/ QPP	Total
	(Billions of dollars)					(Per cent)			
1979	–10.8	0.2	–1.0	2.6	–8.0	–4.2	0.1	1.0	–3.1
1980	–12.5	2.5	–0.6	2.8	–7.1	–4.3	0.9	1.0	–2.5
1981	–11.9	4.5	0.5	3.1	–4.3	–3.7	1.4	1.0	–1.3
1982	–10.8	5.8	1.2	3.4	–1.6	–3.0	1.6	0.9	–0.4
1983	–10.8	7.7	3.1	3.7	0.6	–2.7	1.9	0.9	0.1
1984	–10.6	7.8	3.3	3.9	1.1	–2.4	1.7	0.9	0.2
1985	–10.5	8.5	4.2	4.2	2.2	–2.1	1.7	0.8	0.4

time, the higher rate of inflation will also add to these payments and to other expenditures in nominal terms. In the longer run, the larger deficit will be more difficult to reduce because of higher debt charges. Because the federal government bears a disproportionate share of the burden of higher oil and gas prices, it is in a poor position to cushion the depressing economic effect of higher oil prices and to divert resources into energy production.

As for the province of Alberta, it will obtain revenues far in excess of its financial requirements, and will divert these funds temporarily or permanently into financial markets. Hence these revenues are not likely to result in additional spending quickly or fully, and this also will have a depressing effect on economic activity.

Projections of surpluses and deficits are extremely sensitive to the projected path of the economy and assumptions about government actions. But the persistence of the federal deficit and the Alberta surplus are very clear consequences of the current fiscal structure. This situation stands in marked contrast to the one that prevailed up to 1974, when the revenue-generating powers of the federal government made possible a central distribution system to finance nation-wide policies and to supplement revenues of the provinces with a relatively low revenue base, while leaving the federal government enough room for fiscal management of the economy and programs for economic development.

The issues this development raises are political rather than economic, although the way in which they are resolved will have a bearing on the nature of economic management in the country. The federal government is in a poor position to continue to play its major role in economic management, equalization of provincial revenues, and the conduct of major national policies. In most areas of economic policy, achieving national objectives will require extensive provincial participation, or these objectives may never be met. There is an urgent need for more co-operation. In the longer run, the fiscal structure of the federation will have to be re-balanced and better institutional arrangements will have to be developed to cope with the challenge of interdependence between the federal and provincial governments.

5 Canada's Medium-Term Prospects

Having considered recent economic performance, potential growth, and the factors affecting saving, investment, and government finance, we turn now to an assessment of the policy environment during the next several years, to 1985.

In doing so, we make use of simulations from the Council's new econometric model, CANDIDE 2.0[1], which we have employed in two ways:

- First we have examined the effect of the recent increases in the world price of oil and implications of different rates of adjustment in domestic oil prices to the world level. To do this, we assume that other policies remain unchanged from the present.
- Second, we have "tested" some mixtures of policy that might be adopted by the federal government in an attempt to influence economic performance over the next few years.

Stage one of the exercise presents three oil-price alternatives. Most of the underlying assumptions are identical for all three, but they differ in regard to future increases in the world price and the Canadian domestic price of oil. They enable us to assess the significant effects on the Canadian economy of the recent OPEC price increases and different policies regarding the domestic price of oil.

General Assumptions

Before describing these alternative oil-price assumptions we will set forth the general assumptions that are common to our three scenarios: they fall broadly under the headings "external environment", "energy-related investment", and "fiscal and monetary policy".

External Environment

The consensus of economists in the United States is that conditions there will remain quite weak over the balance of 1979 and through 1980,

before recovering in 1981. This prognosis arises mainly from the tough stance taken by U.S. monetary authorities in an effort to contain inflation. Our perception is that these steps will help to bring about a deceleration of inflation eventually, but at the cost of curtailing growth. Added to the inhibiting effects of inflation itself on certain kinds of expenditure, they clearly suggest something close to stagnation in the U.S. economy over the short term. Consumer purchasing will be seriously down and residential construction will be somewhat sluggish.

The only sources of real U.S. strength we see for 1980 are business capital spending on plant and equipment, and export trade. In the following year, it is expected that the rate of inflation (as measured by the GNP price index) will decline from a 1979 and 1980 pace of some 9 per cent annually, so that for 1981 as a whole it might average perhaps 7.5 per cent. While at the same time economic activity will start to pick up, the real rate of expansion of the U.S. economy foreseen for the period 1982-85 is still only 2.9 per cent annually, compared with the average 3.5 per cent recorded over the decade and a half of generally favourable economic conditions from 1956 to 1973. This drop in the long-run growth rate can be traced to a decline in the rate of growth of productivity. Nevertheless, the expansion of the economy will be sufficient, in conjunction with demographic trends reducing the annual increment to the work force, to lower unemployment steadily throughout the 1980s. As to inflation, the persistence of high energy prices and the ensuing wage-price spiral are likely to keep it at about 6.5 to 7.5 per cent a year.

The picture in other countries that are important to Canada as trading partners is for the most part not much different from that for the United States, although in detail it varies substantially from place to place. Just recently the OECD Secretariat published a series of projections for its member nations, suggesting even poorer growth in 1980 than we have here assumed. If those figures prove to be correct, the rate of expansion in Canada's Gross National Product, as calculated in our own work, will probably not be reached; we would estimate the shortfall at something of the order of two-tenths of a percent from the GNP growth rate shown for 1980 in the projections described later in this chapter.

Energy-Related Investment

After the external environment, the influence on Canadian economic conditions in the early 1980s that is likely to be most powerful is the investment in new and expanded capacity for energy generation. Most of this will be related to exploitation and distribution of oil and natural gas, although the development of some other sources of energy will serve to increase these effects to some extent.

We assume that there will be extensions, over the period being discussed, in the Syncrude plant in Alberta and important capital expenditures in the recently approved Alsands operation in the same region, the two together providing an investment worth some $4.7 billion in 1971

dollars over the period 1979-85; we also assume additional improvements in the Great Canadian Oil Sands plant. (It may be noted, though, that no additional production from these projects will actually appear until 1986, which is beyond our time horizon.) Ongoing investment in established pipeline systems is estimated in our projections at $2.1 billion (1971 dollars) over the years to 1985, and we include some expenditures for the Alaska Highway Pipeline whose peak construction is due to occur around 1983-84.

We estimate the annual increase in capital spending by electric utilities at 2.0 per cent in real terms in 1980 and at 2.5 per cent from then until 1985, down considerably from the average of 7.8 per cent a year over the 1964-77 period. No slackening is envisaged in the high rate of growth of electric power exports over the period of our projections.

Fiscal and Monetary Policy

The general expectation about government fiscal policy underlying our projections is that restraint will remain the watchword over the period to 1985. It is assumed that the growth in government spending on goods and services will be limited to 1.5 per cent a year in real terms, that no new federal initiatives will be taken in respect of personal, corporate, or indirect taxation, and that income maintenance programs at all levels of government will continue in their present form. Further, we assume that the indexation of personal taxes and transfer payments will be retained, and the federal-provincial agreements associated with established programs (health care and education) will go forward along approximately the same lines as at present following their expiry in 1982.

Not included in these projections is the new mortgage interest and property tax credit. Because it is only part of a number of policies being developed by the recently elected government (whose overall attitude on fiscal matters stresses budgetary restraint), one cannot properly take its stimulus as intrinsic to the forthcoming environment. We therefore consider the measure later in examining various policy packages with more or less stimulatory effects.

Monetary policy over the period to 1985 is assumed to accommodate the adjustments necessary in the economy as a result of rising oil prices. Although, as we shall note in discussing this factor, there are different implications for such an accommodation depending on the pace of the oil-price increase, we have taken as reasonable a growth of 9 per cent annually in the money supply, narrowly defined. It is assumed that the exchange rate will be left free to float.[2]

The Oil-Price Assumptions

These, then, being the general assumptions for the economic setting over the next five years, what of the oil- price changes? They are clearly one of the most crucial aspects of the outlook. Petroleum and natural gas

are important inputs in the production process, and increases in their prices are transmitted through each stage of industrial activity to the retail level. Moreover, they affect the consumer directly through rising costs of heating homes and operating vehicles. Naturally, wage demands are sparked by the climbing price of goods and services, caused in part by more expensive energy, and the spiral of wages and prices is thus encouraged. It is hard to exaggerate the fundamental significance of a view about energy prices to any realistic projection for the economy.

During 1979, increases in the price of crude petroleum by the OPEC nations have again become a concern to all oil-consuming countries. World crude oil prices are now (October 1979) some 45 per cent higher than they were in January 1979, at which time the world price of crude petroleum was 20 per cent above the domestic price. By the middle of this year the gap had widened to 60 per cent of the domestic price, posing a heightened challenge to the federal government in its desire to encourage conservation and avoid the serious economic distortions that could be expected if there were continuing large differences between the domestic and the international prices of oil.

Because of the controversy concerning the best way of responding to this challenge, we have undertaken our estimations for the medium-term prospect on the basis of three alternatives. They should be interpreted with a good deal of caution, since we cannot know what the future evolution of the world oil price may be and it is therefore exceedingly difficult to form a judgment about all eventualities. In particular, we should warn against any attempt to draw conclusions about the direction of events based on one of the simulated oil-price developments in isolation. We believe the value of this exercise lies in what all three, examined together, tell us about the path before us.

The trio of projections used in our analysis comprises, then:

Projection 1[3] That world oil prices rise at 8 per cent a year from 1978 until 1985, and that domestic crude petroleum prices increase at the same pace (approaching $2 a barrel by 1985), so that there is no real gain in the world price — allowing for inflation of at least that rate — and no change in the ratio of Canadian to international prices;

Projection 2 That the world price increases by 40 per cent in 1979, by 25 per cent in 1980,[4] and by 7 per cent thereafter, while the domestic price is raised in equal annual instalments of around $4.00 a barrel to bring the rate for Canadian crude up to the world level by 1986;

Projection 3 That the world price follows the path indicated in projection 2 but that the Canadian price is moved up much more rapidly — by about $5 a barrel in 1980 and $7 in 1981 — to the projected world price in January 1982.

For simplicity we will refer to these alternatives as the "two-dollar", "four-dollar", and "seven-dollar" projections. The two-dollar projection is not realistic, of course, since the world oil price has already moved ahead of what is assumed in that alternative. However, it is included because it shows, when compared with the other two projections, the effect of the 1979 OPEC price increase and of moving the domestic price to the world level. The four-dollar and seven-dollar projections show the effects of differing rates of adjustment in the domestic price toward the world price.

In each of the alternatives, natural gas is priced at 85 per cent of its crude petroleum BTU equivalent. Import and export prices for oil and gas reflect the path taken by world prices. In all cases, royalties to the producing provinces, equalization payments, import subsidies, and revenues from the oil export tax are calculated on the basis of the indicated price behaviour and assuming a continuation of current policies.

The Effect of Bringing Canadian Oil Prices into Line with the World Price of Crude Oil

The economic landscape of the early and mid-1980s is dominated by the shadow cast by the OPEC cartel. The difficulties of steering the Canadian economy are intensified as we reduce the time span in which domestic prices adjust to world crude petroleum prices. The way in which the major economic indicators will be affected by the adjustment is discussed below, and detailed information is given in Tables 5-1 and 5-2, and Appendix Table 1.

Inflation and the Real Wage

If there were to be no increase in the real price of crude petroleum (the "artificial", $2 projection), the annual inflation rate, as measured by the Consumer Price Index, would follow a slightly downward path from more than nine per cent in 1979 to about seven per cent by mid-decade (Chart 5-1). According to our simulations, a move to world oil prices would raise the level of the Consumer Price Index by 1985 by eight to ten per cent, regardless of how quickly the adjustment were made (Table 5-1). A decision to move to the world price of crude petroleum therefore implies that inflationary pressure will be injected into the Canadian economy. For each dollar-per-barrel increase, the level of the CPI would be raised by 0.5 to 0.6 per cent.

The shorter the period of time for the adjustment to world prices, the sooner this effect would be felt. Moving to the world oil price by 1982 (the seven-dollar projection) would mean an inflation rate of about 9.4 per cent for the next three years, but a lower rate of increase in the CPI, averaging about 7.8 per cent a year, for the period between 1982 and 1985. A slower adjustment to world prices (the four-dollar projection) would mean an average inflation rate of about 8.5 per cent a year from now until the end of 1985.

Chart 5-1

Rate of Change in Consumer Price Index, 1979-85

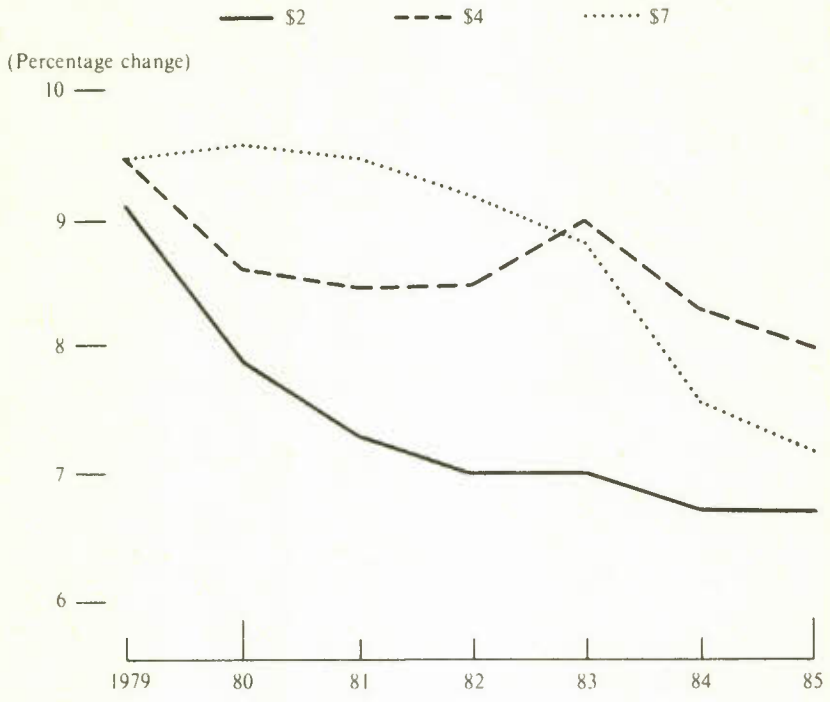
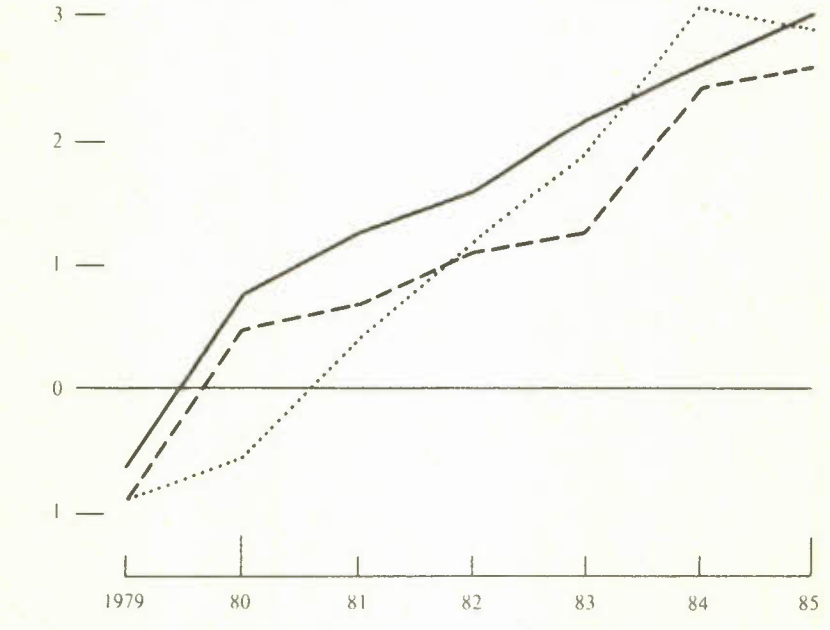


Chart 5-2

Rate of Change in Real Wages, 1979-85



Adjustment to world prices would also depress the growth rate and level of real wages (Chart 5-2). Even without an increase in the real price of crude petroleum, we would expect the recent slow growth in real wages to continue throughout the early 1980s, but we would expect to see some improvement by the middle of the decade. The faster Canada approaches the world price, the more the growth in real incomes is going to be depressed in the early part of the decade. A movement to world prices by January 1982 could bring the growth of real income per worker in Canada to a standstill in 1980-1981 (Appendix Table 1). Slower adjustment to world prices would lead to somewhat higher rates of change of the real wage in the early part of the decade, and lower rates later.

Table 5-1

Effect of Three Projections of Oil Price Increases on Major Economic Indicators

	1976-78	1978-79	1979-82	1982-85	Cumulative change 1978-85
	(Average percentage change from previous year)				(Per cent)
Consumer price index					
$2 projection	8.3	9.1	7.4	6.8	65
$4 projection	8.3	9.5	8.5	8.4	79
$7 projection	8.3	9.5	9.4	7.9	80
Real wage					
$2 projection	-0.7	-0.6	1.2	2.7	12
$4 projection	-0.7	-0.9	0.8	2.2	8
$7 projection	-0.7	-0.9	0.4	2.6	8
Gross national product					
$2 projection	2.8	2.8	4.1	3.5	29
$4 projection	2.8	2.9	3.9	3.1	27
$7 projection	2.8	3.0	3.7	3.2	26
Employment					
$2 projection	1.9	2.2	2.6	2.2	18
$4 projection	1.9	2.3	2.6	2.0	17
$7 projection	1.9	2.3	2.5	1.9	17
Productivity					
$2 projection	1.0	0.7	1.7	1.7	11
$4 projection	1.0	0.7	1.4	1.4	10
$7 projection	1.0	0.7	1.2	1.7	10
			1979	1982	1985
			(Per cent)		
Unemployment					
$2 projection			7.9	6.3	5.4
$4 projection			7.7	5.9	5.3
$7 projection			7.7	5.8	5.7

Output, Employment and Productivity

Slower growth in real wages is bound to dampen consumer spending and consequently reduce investment and inventory accumulation. The result would be a rate of growth in the Gross National Product lower by the middle of the decade than if there had been no adjustment in domestic oil prices. But this effect would be offset to some extent by the strength of investment in domestic energy projects and the recovery of export markets. As a result, real growth would exceed four per cent a year in 1981 and 1982, regardless of how quickly the adjustment to world prices were made.

The growth of employment is shown as following a pattern consistent with GNP. Higher priced energy and lower real wages make labour more attractive as a production factor and therefore partly counteract the depressing effect of slower output growth on employment. Faster adjustment to world prices (the seven-dollar projection) results in slower growth in labour productivity over the next three years, but higher productivity growth from 1982 to 1985 (Table 5-1). It is worth noting that downward pressure on productivity growth caused by oil price adjustments would contribute to higher unit labour costs and inflation.

The growth of potential output in the Eighties is likely to remain slow, as productivity trends prevailing in the Seventies are expected to continue and labour force growth will slow. But the easing of demographic pressures and changes in government programs affecting the labour market will lower the equilibrium rate of unemployment. By 1985 it may be possible to attain five per cent unemployment without making the labour market too tight. At present, equilibrium is reached at an unemployment rate of about six per cent. Adverse economic conditions in 1980 will keep actual output growth below potential, but the gap should narrow in the following two years when a stronger performance is expected.

The Unemployment Rate

Moving Canadian oil prices to the world price would depress real incomes and reduce activity levels and labour market opportunities. There is evidence that labour force participation rates, especially those associated with the secondary labour force, are sensitive to income opportunity, so that discouraged workers would leave the labour force (or fewer people would enter the labour market seeking jobs).

Although the reduction in real incomes might attract some workers into the labour force in an attempt to protect personal or family income, we believe that these workers would be outnumbered by the discouraged workers induced not to participate in the labour force. Thus higher energy prices resulting in fewer jobs would not necessarily mean an increase in the unemployment rate.

These results make it clear that one must be extremely cautious in using the measured unemployment rate to judge the success or failure of

any given policy. The energy story, translated to labour markets, indicates that higher energy prices would depress entry into the labour force so that, although there would be reduced activity levels and therefore less employment opportunity, it does not follow that the unemployment rate would rise.

The conclusion must be that, where inflation is increased as a result of a special policy initiative such as an increase in domestic oil prices, and where it is not the result of conditions in product and factor markets, then the rate of inflation bears no relationship to the unemployment rate. Our simulations show very little difference in the unemployment rate regardless of how quickly the adjustment to world prices is made. Higher priced energy might, in fact, reduce the unemployment rate.

Federal and Provincial Budget Balance

A decision to move to world oil prices, increasing the rate of inflation and depressing economic activity, would exacerbate the already poor budget position of the federal government. But at the provincial level quite large surpluses would materialize, equivalent to 2.1 per cent of Gross National Expenditure. Under current arrangements the oil-producing provinces would be the recipients of large rents, and these would be even higher if oil prices changed rapidly. Thus the move to world oil prices would increase the fiscal imbalance between the federal and provincial governments.

Provincial and local governments and the Canada and Quebec Pension Plans would offset the federal deficit with their combined surplus. Whatever decision is made on domestic oil prices, then, our projections show a progressive improvement in the combined deficit of all levels of government to a balanced position by mid-decade.

It should be recalled that we have assumed the renegotiation of federal-provincial agreements in 1982 along the same lines that currently exist, allowing these arrangements to remain in force through the mid-1980s. We have further assumed strict fiscal restraint, by all levels of government, and absence of new initiatives in the area of tax policy or intergovernmental transfers.

Balance of Payments

We expect continued pressure on the balance of payments as a result of growing deficits on travel and the servicing of foreign-held debt. The balance on non-energy merchandise trade is, however, likely to remain positive.

The adjustment of oil prices to world levels, which could bring growth in real incomes to a standstill and slow economic activity, would probably reduce imports, so that the current account balance would improve slightly in the early 1980s. The balance of payments would also be favourably affected by the increase in provincial royalty revenues that the adjustment would bring, because it would reduce the foreign borrowing of the provinces and lessen the future burden of servicing foreign debts.

Table 5-2

Government and Balance of Payments Surpluses and Deficits According to Various Projections of Oil Price Increases

	Value			Share of GNE		
	1979	1982	1985	1979	1982	1985
	(Billions of dollars)			(Per cent)		
All governments, including CPP/QPP						
$2 projection	- 8	- 3	1	-3.1	-0.8	0.3
$4 projection	- 8	- 2	2	-3.1	-0.4	0.4
$7 projection	- 8	0	1	-3.1	0.0	0.2
Federal government, excluding CPP/QPP						
$2 projection	-11	- 9	- 7	-4.2	-2.5	-1.5
$4 projection	-11	-11	-11	-4.2	-3.0	-2.1
$7 projection	-11	-11	-12	-4.2	-3.0	-2.3
Provincial governments, excluding CPP/QPP						
$2 projection	1	3	3	0.2	0.7	0.7
$4 projection	1	6	8	0.2	1.6	1.5
$7 projection	1	8	8	0.2	2.1	1.5
Current account of the balance of payments						
$2 projection	- 6	- 8	-12	-2.4	-2.3	-2.6
$4 projection	- 6	- 8	-13	-2.5	-2.2	-2.7
$7 projection	- 6	- 8	-13	-2.5	-2.0	-2.6

On the other hand, higher world prices for oil must make the import bill higher. An increase in investment activity in the fossil-fuel industries due to higher domestic oil prices would be unlikely to result in an appreciable increase in supplies from domestic sources in the relatively short time to 1985. The volume of oil imports would therefore increase to 1985, and the energy trade balance would deteriorate from a surplus position next year to a deficit position by 1985. The deficit on current account by the mid-1980s is indicated at about the same in all three projections, but in the projections with higher world and domestic petroleum prices the oil import bill is shown as larger and the non-energy trade balance more positive.

A Summary of the Economic Environment

In sum, we anticipate poor performance in real economic growth at the beginning of the decade, with a return to more acceptable levels in the early 1980s, if a move to world prices were achieved gradually. Rapid

adjustment to world prices would distort the recovery path, depressing real income growth in the early part of the decade, risking the eruption of a wage-price spiral, and delaying the recovery. The impact of domestic oil price adjustment on prices, wages, and labour market dynamics would again reinforce the notion that the rate of inflation and the rate of unemployment are unrelated under these conditions, leaving the unemployment rate as a doubtful indicator to use in judging the success of economic policy. We anticipate a weak recovery in the rate of growth of productivity in the early part of the decade, with an approach to more reasonable rates by mid-decade. However, rapid domestic price adjustment to world crude petroleum price levels would delay this recovery.

Federal and provincial governments face a number of important issues during this period. The federal government will remain in a difficult budget position throughout the mid-1980s — and its problem would be exacerbated by a movement to the world crude petroleum price.

Given the current fiscal arrangements between the federal and provincial governments, a rapid movement toward world price would introduce pressures which would shift the burden of the deficit even more to the federal government, while oil-producing provinces received large oil rents. The balance of payments projections suggest there would be a need for large capital inflows as Canada's energy trade balance deteriorated.

Policy in an Environment of Risk and Uncertainty

The economic problems Canadians face over the next few years are not amenable to an "easy policy fix". Indeed, one of the major difficulties for governments is the suspected ineffectiveness of traditional macro-policy tools. The discussion that follows explores, through the use of CANDIDE, a selection of four alternative "policy packages" in order to illuminate these issues. Unlike the first three, these simulations are intended to determine not how economic conditions may develop on the assumption of present trends and attitudes, but how they might be induced to evolve through the amendment of these factors as a matter of deliberate policy design.

Before describing this work, however, we should issue another caveat. Inflationary pressures resulting from energy-price increases, persistent federal government deficits, repeated trade deficits, lower-than-trend productivity growth, and a reduced rate of growth of output, form a background to policy formulation which is demanding in the extreme. The demands are sharpened both by risk in terms of assessing policy outcomes and by an unusual degree of uncertainty in the economic environment.

Thus, for example, if labour force participation did not react to reduced income growth as suggested, the unemployment rate would be higher than projected — in the 6.0 per cent range rather than the 5.0 per

cent range by mid-decade. Again, consumer behaviour might be more volatile than anticipated. Continued inflation and uncertainty about world economic conditions might cause consumers to launch a "spending spree" and reduce the personal saving rate by more than we have projected. Another highly sensitive area, as we have noted, is that of wage behaviour. Vigorous bargaining for higher money wages in the face of higher energy prices could have a serious impact on the inflation rate.[5]

In each of these examples it is the behaviour of individuals, in response to changing economic circumstances, that is the key issue. While our simulations are based on careful analysis of such behavioural responses, economists are not soothsayers, and predicting human behaviour often defies the most complex and sophisticated econometric modelling. None the less, the prospectives presented below have been assessed against alternative analyses designed to test the consequences of alternative behavioural responses by workers and consumers. What is worthy of note is that, while the results do differ in some respects, the *overall story is essentially the same*. The large federal deficits, chronic trade imbalance, persistent inflation, sluggish productivity, and poor growth performance are consistent landmarks of the economic terrain in all cases.[6]

The "Reference Base"

In developing the simulations of our policy packages it becomes necessary, as a practical matter, to choose one of the foregoing scenarios as what, in the jargon, is described as the "reference base". Obviously, if we tested each of the four packages on each of the three projections about oil prices we would obtain a range of outcomes so unwieldy as to make for very great complexity (not to say confusion) in the exposition. While the previous section did not single out any one of the three alternatives as the most likely, we have chosen in what follows to make the "four-dollar" projection our basis — that is, the one that assumes that world crude oil prices rise by 40 per cent in 1979, by 25 per cent in 1980, and by 7 per cent a year after that, and that the domestic oil price increases to parity with this world price by 1986. This is — let us stress once again — in no way a forecast, but only a means of simplifying the presentation. It is not difficult to revise the projected results of the policy packages we will describe in order to conform with other assumptions about oil prices.

Another element we have drawn into the "reference base" is the new mortgage interest and property tax credit, mentioned earlier. It is worth observing, in this connection, that the consequences of this measure can be seen by comparing the reference projections noted in Tables 5-4 and 5-5 with the earlier "four-dollar" projection presented in Tables 5-1 and 5-2. Its stimulative effect, increasing over three years as a result of the planned gradual implementation, enhances the growth rate of real Gross National Product by 0.2 to 0.3 per cent annually during the period and brings unemployment down half a percentage point by mid-decade. On the other hand, it raises the rate of inflation by small amounts, reaching

0.5 percentage points by 1985, and it enlarges the deficit on the current account of the balance of payments. The program generates additional tax revenues because it stimulates economic activity, but as usual these additional revenues do not compensate fully for the cost of the program.[7] Since the federal government finances the program, its deficit increases. The provinces gain from the extra tax revenues. Hence the fiscal imbalance is worsened.

The Policy Packages

The full set of simulations as outlined in the foregoing is catalogued in Table 5-3, while Tables 5-4 and 5-5 and Appendix Table 2 set forth the simulation results for the four policy packages, against the reference base of the four-dollar projection including the mortgage interest credit. Their effects can be seen as the following.

The "highly stimulative" package and the "restraint" package are polar opposites. The "highly stimulative" package encourages investment via the introduction of business tax incentives, encourages consumption via a personal tax cut, and targets the rate of growth of money supply at the high end of the range that the Bank of Canada is currently pursuing.

The "stimulative" package is more moderate than the "highly stimulative" package. The difference is that it excludes the additional personal income tax cut.

The "investment stimulus plus offset" package is more moderate than either the "highly stimulative" or the "stimulative" package. Here we have introduced a personal tax increase the size of which roughly compensates for the loss of federal tax revenues associated with the business tax incentives (increase in the investment tax credit and decrease in the corporate profits tax rate). In this package, tax policy penalizes consumption and encourages investment but leaves the revenue loss to the federal treasury unchanged from the reference base projection. It increases the share of investment and decreases the share of consumption in GNE.

The "restraint" package does away with the business tax incentives but keeps the personal tax increase. Further, the rate of growth of money supply is targeted at six per cent instead of nine per cent (beginning in 1979). This is really a "cold shower".

In short, as we move from "highly stimulative" to "restraint" there is downward fiscal and monetary pressure placed on the economy. (However, it should be kept in mind that the mortgage interest and property tax credit has been included in all of the policy packages and the reference projection.)

In terms of results the highly stimulative package shows growth rates in GNE (in 1971 dollars) above five per cent during the period 1981-1982, whereas "restraint" shows growth rates in GNE (1971 dollars) that

average four per cent during this period. The spread in the growth rates diminishes by mid-decade, yet by 1985 the difference in the *level* of GNE is 6.5 per cent (Table 5-4).

Comparing the performance of the Consumer Price Index across these policy packages, it is apparent that the more stimulative the policy the higher the rates of inflation by mid-decade. For the "highly stimulative" package we see a return of inflation rates to the nine per cent range during the period 1983-1985, whereas "restraint" produces a gradual decrease of inflation rates below the eight per cent mark by the end of the period. The difference in the price *level* by 1985 is in the order of 3.5 per cent.

Table 5-3

Policy Content of the Alternatives

Package	Measures included
$2 projection	8 per cent increase in foreign and domestic crude petroleum prices, neutral fiscal and monetary policy
$4 projection	Parity with world petroleum price by 1986, neutral fiscal and monetary policy
$7 projection	Parity with world petroleum price by 1982, neutral fiscal and monetary policy
Reference projection	Parity with world petroleum price by 1986; mortgage interest and property tax credit; 9 per cent target for growth of money supply
Highly stimulative	Reference projection plus: increased investment tax credit and reduction of corporate tax rate, 1980-85 ($3 billion tax revenue loss); personal income tax cut, 1981-85 ($2 billion tax revenue loss)
Stimulative	Reference projection plus: increased investment tax credit and reduction of corporate tax rate, 1980-85 ($3 billion revenue loss)
Investment stimulus plus offset	Reference projection plus: increased investment tax credit and reduction of corporate tax rate, 1980-85 ($3 billion tax revenue loss); personal income tax increase, 1981-85 ($4.5 billion tax revenue gain)
Restraint	Reference projection plus: personal income tax increase, 1981-85 ($4.5 billion tax revenue gain); 6 per cent target for growth of money supply (*vs* 9 per cent in reference projection)

Table 5-4

Rates of Change in Selected Indicators According to Policy Packages

	1979-82	1982-85	Cumulative increase 1978-85
	(Average percentage increase over previous year)		(Per cent)
Gross national product ($1971)			
Reference base	4.2	3.3	28
Highly stimulative	4.8	3.7	32
Stimulative	4.7	3.5	31
Investment stimulus plus offset	4.2	3.2	28
Restraint	3.4	2.9	24
Consumer price index			
Reference base	8.6	8.8	81
Highly stimulative	8.4	9.3	82
Stimulative	8.4	9.1	81
Investment stimulus plus offset	8.3	8.6	78
Restraint	8.5	8.1	76
Productivity			
Reference base	1.5	1.5	10
Highly stimulative	1.9	1.7	12
Stimulative	1.8	1.7	12
Investment stimulus plus offset	1.6	1.5	11
Restraint	1.1	1.2	8
Real wage			
Reference base	0.8	2.4	9
Highly stimulative	0.9	3.0	11
Stimulative	0.9	2.8	11
Investment stimulus plus offset	0.9	2.3	9
Restraint	0.4	1.5	5
	1982	1985	
	(Per cent)		
Unemployment			
Reference base	5.6	4.8	
Highly stimulative	5.1	4.0	
Stimulative	5.2	4.2	
Investment stimulus plus offset	5.6	4.9	
Restraint	6.1	5.3	

Table 5-5

Government and Balance of Payments Surpluses and Deficits According to Policy Packages

	Value		Share of GNE	
	1982	1985	1982	1985
	(Billions of dollars)		(Per cent)	
All governments, including CPP/QPP				
Reference base	– 2	2	–0.6	0.3
Highly stimulative	– 6	– 4	–1.7	–0.7
Stimulative	– 5	– 2	–1.3	–0.4
Investment stimulus plus offset	– 2	2	–0.5	0.4
Restraint	– 2	2	–0.5	0.5
Federal government, excluding CPP/QPP				
Reference base	–12	–12	–3.2	–2.4
Highly stimulative	–17	–21	–4.6	–3.9
Stimulative	–15	–18	–4.2	–3.4
Investment stimulus plus offset	–11	–12	–3.1	–2.3
Restraint	–11	–11	–2.9	–2.2
Provincial governments, excluding CPP/QPP				
Reference base	6	9	1.7	1.7
Highly stimulative	8	12	2.1	2.2
Stimulative	7	11	1.9	2.0
Investment stimulus plus offset	6	8	1.7	1.6
Restraint	5	7	1.5	1.5
Current account of the balance of payments				
Reference base	– 9	–16	–2.5	–3.1
Highly stimulative	–12	–21	–3.2	–4.0
Stimulative	–11	–19	–3.0	–3.7
Investment stimulus plus offset	– 9	–15	–2.5	–2.9
Restraint	– 8	–12	–2.3	–2.5

The spread in real growth rates is also reflected in the ranges of unemployment rates between the two extreme policy packages. As we progress from stimulus to restraint, a 1.3 per cent difference in the unemployment rate unfolds by mid-decade. Interesting results are similarly obtained for productivity. The more stimulative the economic policy, or the more tilted toward investment incentives, the higher the rate of growth in productivity. The investment incentives (present in all but the "restraint" package) give rise to an increase in the rate of change of output per manhour during the early 1980s. The restraint package has a serious effect in depressing productivity growth.

By 1985 the federal deficit will be a lower percentage of GNE than it is now, under any of the policy packages (Table 5-5). However, important differences are observed when we compare the results across packages. In the most stimulative case, the deficit remains high to 1985 in relation to GNE and increases significantly in terms of dollars. In the "investment stimulus plus offset" the results are much the same as in the reference base (except in 1980 when no offset is provided). It is worthy of note that even a "cold shower" provides for only a small reduction in the absolute size of the federal deficit by the end of the period.

Attempts by the federal government to stimulate the economy substantially increase the size of the provincial surplus as a percentage of GNE. Some of the fiscal dividend resulting from federal stimulus accrues to the provinces.

So far as the balance of payments is concerned, the projections indicate that a stimulative fiscal policy will seriously increase the payments deficit and only tight fiscal and monetary policy can bring about any improvement.

Implications of the Policy Choices

Our simulations demonstrate that policies which stimulate investment and encourage consumption will lead to higher rates of inflation, larger trade deficits, and larger government deficits. But these policies would reduce the unemployment rate and improve productivity and real wages. Restrictive policies result in lower rates of inflation and a stronger balance of payments position, but they bring higher unemployment rates and lower rates of growth in productivity and in GNP. Restraint does not offer much improvement in the government deficit.

There is no indicated policy package that brings improvement in all the key policy targets. The most attractive combination is probably one that stimulates business investment, offsetting this with increases in personal taxes. However, apart from not being particularly appealing to those whose personal income taxes would rise by about one fifth, this policy package offers very modest improvement in the rate of inflation, the federal fiscal position, and the balance of payments, without deterioration in the other indicators, when compared to the reference projection.

The momentum of the economy is such that relatively minor changes in direction require quite substantial policy initiatives. Policy is constrained by considerations such as the indexing of incomes, transfer payments and taxes, the fiscal imbalance between the provinces and the federal government, the responsiveness of labour supply to changes in the economic environment, and the overwhelming impact of the international economic situation. All of these factors present obstacles to the effective application of policies to deal with a move to higher oil prices.

While the federal deficit can be reduced in both absolute and relative terms by very tough and sustained fiscal and monetary restraint, there is no sign of a balanced budget by mid-decade: indeed, even under this policy scenario the federal deficit would be $10.5 billion by 1985. The same story applies to the balance of payments and to inflation. Tight fiscal and monetary policy applied throughout the medium term leave us with an inflation rate running at just under eight per cent and a balance of payments deficit somewhat larger in absolute terms than at present. The message is clear: the federal deficit, the state of the balance of payments, and the inflation rate reflect deep-seated structural difficulties of the Canadian economy. Structural problems must be tackled by a co-ordinated medium-term policy strategy. That is the subject of the final chapter of this Review.

6 Conclusions and Recommendations

The Canadian and international economies have been altered considerably by the economic disruptions and policy decisions of the Seventies. These changes and the lessons of this period indicate a need for governments to approach policy from a new perspective.

In Canada we have persistent inflation, energy-related problems, a poor federal fiscal position, apparent slowdown in the rate of potential economic growth, a weak but inflationary international environment, and relatively low levels of capital investment. These factors suggest that the preferred government policy position now is one that strives for steady improvement over the next several years. If we know better what lies ahead, avoid adding to uncertainty and instability, prepare for future problems, and improve government's capacity to manage the economy, we can view the new decade as deserving modest optimism — and at least two cheers.

A major objective of this strategy should be the reduction of uncertainty. The roots of existing uncertainty are in a volatile world economy, high and unpredictable rates of inflation, uncertain growth prospects, and lack of predictability of policy in such areas as government spending, tax policy, and regulations. Such uncertainty weighs against risk-taking and private economic initiative, hampering economic growth. It appears to us that improvement and openness of information — including assessment of medium-term economic prospects and planning by governments — is an important first element of such a strategy.

The second element of this strategy recognizes that while we cannot control many of the forces that the world economy will impose on us, *we can limit the shocks that we impose on ourselves.* There is an analogy in Florence Nightingale's Rule: "Whatever else hospitals do, they ought not spread disease". Where a Canadian choice can be made to avoid a policy-induced shock to the economic system, it will be wise to do so. A clear, determined, gradual adjustment over several years in fiscal and monetary policy, in energy pricing, in trade and industrial policy, and in manpower and social policy, should be a main feature of the strategy. We

propose that governments follow a steady policy course and make it well understood.

A third element of the strategy concerns the structural nature of many of the adjustments required in Canada, and a recognition of the costs of procrastination in dealing with them. Among the most important structural problems of the Canadian economy are the government fiscal imbalances, the balance of payments deficit, the structure of business taxation, the inflation response and control mechanisms, the imbalance in manpower skills, and the pricing, supply and use of energy. Our strategy calls for an early start and persistent effort in tackling these structural problems. Such problems evolve slowly over time; so does their resolution. Delay would entrench them, and make them more difficult to resolve without disrupting the economy.

A fourth element of the strategy is to improve our capacity to deal with problems and shocks. While it may not be possible to make improvements quickly, considerable scope exists over the medium term. The structure of taxation, manpower and social policies, federal-provincial fiscal arrangements, business income measurement, foreign trade and tourist policies, industrial development policies — these all offer opportunities over the medium term for improvement in our capacity to cope with problems, and to extend governments' room for manoeuver.

The policy strategy we propose is in many ways similar to the strategies recently proposed by the International Monetary Fund and the Secretariat of the Organization for Economic Cooperation and Development.[1] It is a strategy based on fuller appreciation of the changes in the international economic environment, of the nature of the inflationary process, and of the impediments to economic growth. Canada, along with most of the OECD countries, has now to choose a strategy that is less ambitious for economic growth in the medium term than would have been chosen a few years ago. In the words of the OECD Secretariat:

> The evidence suggests that restrictive demand management can help reduce high inflation and that, in suitable circumstances, expansionary policy has its desired effect on real demand and output.[2]

The problem is, however, that persistent high inflation, and the risk of ratcheting the rate up, along with an already large government deficit, has reduced the scope for stimulative policy.

The Energy Situation

The essence of our strategy is steadiness on a well plotted, well posted course. Yet we all recognize that one of the potential deviations ahead will arise from the energy situation.

Policies on the pricing of oil and gas in Canada will shape much of Canadian energy and economic strategy for years to come. This issue has many aspects, and the first we should address is the economic rationale for moving oil and gas prices to world levels. Clearly in the short term Canada has some choice in the matter. There are already examples (automobiles, electricity, agricultural products) of Canada choosing to have domestic commodity prices that are different from world prices, and there is some argument that Canada is in a position to derive competitive advantages from keeping crude oil prices below world levels.

In our view, this strategy cannot be accepted for two very basic reasons. First, at present, Canadian petroleum supplies are derived from conventional sources developed at relatively low cost. However, these resources are being rapidly depleted at current rates of consumption, and the sources of petroleum that could replace them are available *only* at much higher costs, costs more in line with the prices on world markets. In brief, the need to eventually pay much higher prices for either Canadian or international petroleum products is almost certain. The transition is better carried out now, while we still enjoy the luxury of choice, rather than later when the shock of a rapid transition would result in much higher economic costs and potentially great economic disruption.

The second reason for taking this position is that there are obvious benefits if Canadians begin now both to develop other sources of energy, which we will need in the future, and to reduce the use and wastage of the energy we now consume. We believe that both of these goals, conservation and development, can be promoted through the adoption of higher energy prices in Canada.

The move to higher oil prices should not, however, be made too rapidly. The adjustment of consumption and production of energy to higher prices is bound to be spread out over years, perhaps decades; it involves new technologies, replacement of equipment, and development of new supplies. The transition to higher prices also has economic impacts in the short run that are roughly proportional to the speed of the increase. Higher prices will contribute to inflation, and reduce real disposable income. There is a risk that they would unleash a serious wage-price spiral with effects on activity levels and unemployment that are unlikely to be fully offset by rapid recycling of oil revenues.[3] Furthermore, more rapid increases than in the United States would, through their effect on competitive positions, disturb our trade. The disadvantage of a gradual rather than fast increase in the domestic price of oil is the possible delay in inducing the adjustments that consumers and producers will have to make in any event. This disadvantage can be minimized if a firm commitment is made by the government on medium-term pricing policy. Therefore,

> *We recommend that the federal government announce a commitment to increase the domestic price of oil gradually by*

around $4 per barrel a year, so as to reach world prices that are expected to prevail around 1985 or 1986, having due regard to increases in average U.S. oil prices.[4]

The situation with respect to natural gas is different. Conventional gas reserves from Alberta and British Columbia are still substantial in comparison with the size of the market they serve. Recent exploration results have been encouraging and surpluses have developed. It has become possible to license additional exports, or use natural gas to reduce domestic consumption of oil. The latter option would likely require an extension of the pipeline network east of Montreal. It would also require a review of the current practice of pricing natural gas in Canada at 85 per cent of its oil BTU equivalent (at city-gate in Toronto) so that the "burner tip" price to consumers would be brought into line with current energy supply and cost developments in Canada. Therefore,

We recommend that the policy of pricing natural gas consumed in Canada at 85 per cent of its oil BTU equivalent be reviewed, taking into account national objectives and the difference between the medium-term availability of natural gas and crude petroleum.

Producers and Energy Supply

Exploration and development of oil and gas has been encouraged in Canada in recent years in two main ways: by increased actual and expected revenue to producers from higher energy prices, and by tax incentives for exploration and development. These two ways are somewhat interrelated; the more generous the tax incentives, the less need be the increased revenue to support a given level of exploration and development.

Tax incentives for oil and gas exploration have been greatly increased in recent years, for both conventional and particularly for frontier and non-conventional sources. The incentives have encouraged exploration and development, though at considerable cost to government treasuries and to most Canadian taxpayers.[5] Since the producers will get revenue increases from higher petroleum prices, and given that Canada has now had several years of experience with the tax incentives, a review of the incentive structure is timely.

We recommend that the federal and provincial governments thoroughly scrutinize tax allowances for petroleum exploration and development, with a view to ensuring their cost-effectiveness.

Obviously large opportunities exist for better conservation of energy in Canada, particularly of fossil fuels. The principal responsibilities for such

conservation will be private rather than governmental. However, for some situations governments already provide incentives for energy conservation, and these should be examined further, particularly as they apply to large energy-using industries. The Council suggests that, parallel with the study of exploration and development incentives, consideration be given to incentives — including tax allowances — for conservation in industry and households. Substitution of other forms of energy for fossil fuels might be given special emphasis.

Raising the domestic price of oil by $4 a barrel per year would result in incremental gross oil revenue of about $15 billion for the period 1980 to 1985, compared with the effects of continual $2 increases. Comparable increases in natural gas prices, based on the 85 per cent BTU equivalency rule, would place an additional $11 billion burden on energy users in Canada. The way these huge incremental revenues are distributed between industry and governments depends on a set of arrangements involving royalties, lease fees, taxes and other charges. Under the existing regime, approximately 35 to 40 per cent of a dollar's increase accrues to the producers, the balance going to governments — the great bulk of it to the producing provinces. Similar proportions apply in the case of natural gas.

While it is possible that governments could change the regime so as to take virtually all of the revenues from higher prices it is more likely and desirable that some significant share will continue to be channeled through oil and gas producers. However, there is a considerable public interest in using these funds for energy conservation and development in Canada. There is also a major issue with respect to the transfer of income and wealth to non-resident owners of multinational energy companies. These non-resident owners can decide to recycle their share of the rents for further exploration and development in the energy industry in Canada; diversify into unrelated industries in Canada; or repatriate funds to parents outside the country for investment or payment of dividends.

Given the complexity of these issues, several alternative approaches to the public interest in private funds from oil and gas are possible. At the very least governments should require disclosure of the use of the funds. Governments could combine incentives and suasion, indicating that royalties or taxes will increase if the revenues do not flow adequately to energy development *in Canada*. Governments could impose excise taxes on the revenues or surtaxes on the windfalls, offering relief for funds devoted to energy exploration and development in Canada. Alternatively, governments could require that these extra revenues be held in escrow, to be used only for investment in energy development and conservation of one kind or other in Canada. While a choice among these alternatives is beyond the purview of the Council,

We recommend that the size and disposition of the producers' share of increased oil and gas revenues be reviewed, and that

policies be implemented to promote the public interest in the use of these revenues in energy development and conservation in Canada.

Energy and the Fiscal Balance

The distribution of governmental revenue from non-renewable resources is based on the provincial ownership of these resources, as provided in the Constitution as amended in 1930. This principle will unquestionably continue to be a cornerstone of future arrangements for distribution of the proceeds. However, the very uneven regional distribution of oil and gas resources across Canada combines with fiscal arrangements to create a particularly complex situation.

As Canada moves faster towards world prices, the immediate effects on the governments of consuming provinces and the federal government will be a loss of general revenues, as Canadians will have less to spend on other taxable products, and as economic activity is dampened. Moreover, to the extent that governments undertake to protect disposable incomes, mitigate the hardship imposed upon those individuals least able to bear the higher energy costs, and encourage conservation, their expenditures will rise, and their fiscal situation may deteriorate even more. The burden would fall especially on the federal government because of the nature of its revenue base and its responsibility for national economic policies. Our calculations show that the impact of higher oil and gas prices could increase the federal deficit throughout the first half of the 1980s. For example, using the $4 path for oil and gas prices (as compared to the $2 one), the annual federal deficit would run as much as $3 billion higher in 1985, while by the same time Alberta's royalty revenues would be higher by around $4 billion a year. The federal government, already in a serious fiscal bind, would thus experience more of the kind of imbalance we have discussed.

Under current arrangements, higher oil and gas prices imply a large transfer of wealth from consuming to producing provinces. Surely one of the basic facts of the history of Canadian federalism is that many of the great shocks and trends of good fortune and adversity among people of different regions have been shared among regions — not always perfectly, but with a fairly good record. The federal government has always played a paramount role in this, through taxation, transfer payments to persons, federal-provincial transfers, and policies in many other areas. Interprovincial co-operation has been part of the mechanism, and has become increasingly important with the growing role of provincial governments. This spirit of co-operation will be called upon to ensure that the tradition of pragmatic sharing be continued.

The transfer of wealth to producing provinces brings in its wake a series of practical difficulties which are now threatening the program of equalization payments, the cornerstone of our inter-regional sharing

mechanism. Equalization payments were introduced in the late 1950s as a means of compensating the provinces that have lower-than- average tax bases. Initially, only personal and corporate income taxes plus succession duties were included, but the formula was changed in the 1960s to cover other sources of provincial taxes, and also revenue from natural resources. By adding the latter, Ottawa undertook, in effect, to equalize revenues that are entirely under provincial control. But the program was meant to be financed entirely out of ordinary federal revenues.

The problem arose in 1974, when Canadian oil and gas prices were raised as the result of international price developments. Then the exceptional revenue accruing to oil and gas producing provinces had to be "equalized" by the federal government. Since the specific "tax base" from which provincial oil and gas revenue are being drawn — the resources currently exploited — is very unevenly distributed among the provinces, federal payments of equalization associated with them escalated to the point of being a major cash drain on the federal treasury.

Various modifications have been made to the formula to deal with these unforeseen difficulties. Right now, only half of the revenue from non-renewable resources enters into the calculation of equalization payments. In addition, a ceiling has been imposed, the effect of which is to "cap" total payments attributable to non-renewable resources at one-third of overall payments of equalization. The ceiling is expected to be operative in the very near future. Until then, each time the price of oil goes up one dollar, the federal government pays out in equalization to the seven "have not" provinces an amount roughly comparable to the additional revenue it gets from taxes on producing companies.

A further complication arises from the possibility of Ontario becoming a "have not" province as a result of oil price increases. The situation appears to be rather unsettled. On the one hand the equalization mechanism seems to be restricted so that little additional revenue can be made available to the oil consuming provinces; on the other hand, if these restrictions are removed, there will be large additional demands on the federal treasury. If Ontario were to become a recipient province, the rationale for the whole program would be put into question.

It appears then that current formula is increasingly inappropriate and arbitrary in its treatment of non-renewable resources revenue. This issue deserves top priority on the agenda for federal-provincial relations.[6]

Recycling

A recycling problem arises from the increased transfer of funds from oil and gas consumers to producers and producing provinces. Recycling pertains to the question of how these funds are put back into the income stream, as well as to the real adjustment processes that result. The nature of the problem depends much on the speed of the increases in oil and gas prices and the distribution of the increased revenues. We have already dealt with the questions of price increases and the producers' share of the incremental revenues. We stress that there is an important international

aspect of the recycling and transfer problem which arises from the multinational nature of the industry in Canada.[7] In the following brief comments we will concentrate on the revenues accruing to governments of producing provinces, in particular Alberta.

Recycling will not be satisfactory if Alberta lends to others who merely consume the proceeds of the loans. While such an arrangement would ease the short-run problems (arising from short-term reduction in aggregate demand) it would merely postpone the real adjustment. Successful recycling will involve not only a financing of the short-term financial reinvestment of the funds and cushioning of the deflationary impact but also the creation of real-income streams which can be used to make the real transfers that will ultimately have to be made. In the course of effecting these transfers major adjustment processes will be required, both within and among regions. Such adjustments include the transfer of capital from energy intensive to less energy intensive industries, and manpower re-training and relocation efforts to mitigate the unemployment effects of the shifts resulting from the higher energy prices.

The adjustment process will create investment needs in all regions. The larger part of investment in energy conservation, for example, can be expected to arise in regions where population and industrial concentrations are large. Similarly, emphasis on other energy resources such as nuclear, tidal, geothermal and coal liquification, presumably would lead to large investment requirements in regions not favoured with oil and gas resources, conventional or not. Hence, the real adjustment process might be facilitated by recycling some of the oil and gas revenues through lending to other regions for these purposes.

The government of Alberta can decide to lend money to other Canadian governments or to enterprises. It can also acquire financial instruments in the capital markets, letting these markets direct the flows. Recycling can be done through joint efforts of Alberta and other provincial governments, or Alberta and the federal government, or some set of private and government institutions.

The Council does not wish to offer a precise institutional setting from among the many alternative methods that can be chosen. However,

> *We recommend that the federal and provincial governments take measures to facilitate the recycling of oil and gas revenues, recognizing that large investment requirements in energy conservation and development will arise in those regions facing reduced real incomes as a result of the movement of domestic oil and gas prices toward world levels.*

External Trade and the Balance of Payments

The main body of our projections suggests a continued current account deficit into the middle 1980s. Under some possible circumstances, and particularly if Canada follows a strong policy of demand stimulus in the

face of a soft world economy, the current account deficit could increase significantly. Such developments would imply a large continuing, even expanding, reliance by Canada on the use of foreign savings, and an increased debt-service burden for the future.

The assumptions underlying our projections indicate a large deficit. One of the principal factors in this is a shift, in the order of $6 billion, from a net energy-exporting to a net energy-importing position by the mid-1980s. However, this assumes that there will be little production of oil and gas from new sources over the next six years, which may be pessimistic. Furthermore, the improvement in the non-energy trade balance and the tourist account deficit as a result of improvement in Canada's competitive position may be larger than we have allowed for.

Even so, the prospective size and persistence of Canada's current account deficit and use of foreign capital remains a major concern. That concern has been heightened by the indications of substantial direct capital outflows from Canada in recent years, and by the size of the external borrowing that has been required from time to time for exchange-market stabilization. While Canada has high credit ratings and large untapped sources of external finance, and therefore does not appear to have a significant short-run balance of payments problem, we feel that limiting or reducing the current account deficit over the medium term should be an element in general Canadian economic policy management.

While recognizing that balance of payments adjustments are primarily matters of general monetary, fiscal, debt and exchange rate management, it must be noted that certain structural adjustments have potentially large balance of payments effects. On the basis of current trends and policies, a substantial part of the deficit on the current account will be due to a large swing from an energy-export to an energy-import balance in the mid-1980s. Canadian energy policy, particularly through increased exports of electricity and natural gas in the medium term,[8] could reduce that import balance — perhaps even eliminate or reverse it. It should be possible too, by strengthened Canadian competitive efforts, to slow the growth, and perhaps even to reduce the size of the country's deficit on tourist and travel account. By some further switching of debt financing from external to domestic markets, it may also be possible to slow the growth of Canadian external debt service. More generally, the country's balance of payments position will depend on continued efforts to maintain Canada's competitive position, and exploit the new market opportunities presented by the GATT agreements.[9] None of these approaches to balance of payments policy can be realized with ease. But all of them offer a promise, over the medium term, of reduced current account deficits for Canada, and reduced reliance on foreign capital.

Business Income and Taxes

One of the lessons of the Seventies has been that business investment is a relatively fragile component of our economic outlook. It can be deeply

influenced by developments in international and domestic markets, inflation, financial market developments, economic uncertainty, and in general by any government or non-government actions that improve or worsen the overall economic outlook. There are, however, some steps that can be taken that would help clarify the real financial condition of enterprises, improve corporate financial management and remove certain tax inequities which have developed as a result of sustained inflation. The problems were discussed in Chapter 3.

Business has made substantial progress in recognizing and interpreting the effects of inflation, and we acknowledge that some ameliorative tax policy responses have been made in this regard. However, we believe that further action is possible and desirable.

> *We recommend that accounting bodies, such as the Canadian Institute of Chartered Accountants, expedite their efforts to develop and implement methods of financial reporting better able to reflect the effects of inflation on the corporate financial position.*

In making this recommendation we do not necessarily endorse any one of the alternative methods of inflation accounting — such as General Price Level Accounting or Replacement Cost Accounting — that have been developed. None of these methods fully and objectively reflects all of the effects of inflation on business enterprise. This, no doubt, is why the accounting changes implemented in other countries have often involved *supplementing the traditional financial statements,* based on historical costs, with additional information reflecting various effects of inflation on profits and the general financial condition of firms. Canadian thinking seems to be developing along similar lines. Although we share the general view that historical-cost accounting cannot adequately meet the informational needs of an era of chronic inflation, we would not favour a precipitous break with the past. We therefore support an evolutionary approach. By *augmenting* rather than *supplanting* traditional financial reporting mechanisms, it will make them more realistic and acceptable — and hence more useful — while preserving their continuity.

The critical problem for corporations, however, goes beyond their accounting procedures to the provisions of the corporate tax legislation that have to do with the valuation of their capital assets and inventories, and the measurement of earned income. What is needed is a more appropriate tax base — one that more closely approximates real profits — and greater certainty about taxes than now exists with frequently changing special allowances and incentives. If the tax base is thus altered, the need for the various tax incentives for investment, such as fast write-offs and investment tax credits, as well as the inventory deduction, will be reduced. A revision of the principles underlying corporate taxation therefore should include a reassessment of these special measures.

We recommend that corporate tax legislation be re-examined by governments with a view to ensuring that taxes are based on real rather than nominal profits, and that existing corporate tax incentives be reviewed in the light of such a change.

The federal and provincial governments have greatly expanded their array of programs of financial aid, other than through the tax mechanism, to business. The objectives of these programs are varied, and include regional development, promotion of small business, and employment creation. The changes in corporate taxation we have proposed affect both the need for and the effectiveness of these programs. Questions have also been raised about the overall efficacy of these proliferating and frequently changing programs, since they often involve overlapping and conflicting efforts by different jurisdictions, as well as possible windfall gains to beneficiaries. Our preliminary research indicates a need for thorough review of these programs by both levels of government[10], but it does not enable us to propose specific changes at this time. We shall continue to study this area of policy.[11]

Labour Market Policies

In Chapter 2 we discussed changes in the nature of unemployment. In brief, the largest part of Canadian unemployment is structural; it arises from changes in the composition of the labour force, and social and economic policies such as unemployment insurance and minimum wages. For at least some people on the threshold of the labour market, the gap between what they can earn through gainful employment and that which they can obtain while not employed is just too small; the financial incentive to work has declined. We are aware that this issue is being reviewed by both levels of government. But action can also be taken to reduce the mismatching of skills and jobs, and enhance the effectiveness of job-creation programs.[12]

It is apparent that as we enter the 1980s, skill shortages — already appearing in a number of industries — will get worse. This has major implications for occupational forecasting and training programs. Clearly, appropriate treatment of labour market imbalances depends crucially on accurate and timely diagnosis. A critical review is needed of the capabilities of Canadian government and industry in forecasting the demand and supply of occupational skills, translating these into skill training requirements, and mounting effective training programs. Such a review is currently under way at the Council. What is needed, however, is a thoroughgoing reappraisal by the principal parties themselves.

We recommend that the federal government, in conjunction with the provinces, unions, and employers, reassess the present array of labour market and manpower programs with a view to

tailoring them more efficiently to the labour market needs of the 1980s including, in particular, the identification and treatment of skill shortages.

Not only must retraining programs be reshaped for the 1980s, there must also be less of a shotgun approach to job-creation programs with their bewildering array of acronyms.

We recommend that the federal government, in conjunction with the provinces, unions and employers, review the federal job-creation programs now in effect, with the objective of making them more selectively targeted to the changing needs of business, and that proper evaluations of the programs be carried out and made public.

Government and General Economic Policy

Openness

A number of encouraging developments have taken place during the last few years with respect to public information in government fiscal affairs. These include the reports of the Auditor General, the reports and activities of the Comptroller General, the recommendations of systematic presentation and discussion of the fiscal prospects by the Lambert Commission, and the presentation by the new government of a medium-term fiscal outlook. The government has indicated that it intends to adopt the main lines of the Lambert Commission recommendation. In support of the decision,

We recommend that the federal government adopt the practice of presenting annually a comprehensive, integrated, medium-term fiscal outlook to the public and for Parliamentary deliberation — an outlook that would clearly identify the nation's economic potential consistent with the relatively full employment of its resources, along with the expected federal surplus or deficit position.[13]

Such a statement should include anticipated expenditures, revenues, debts, and loans and advances of the federal government and of its agencies, along with summary analytical information relating these developments to other elements of the Canadian economy. The statement should include an explicit statement of the basis of the projections, including the inflation assumptions. It should clearly indicate the government's assessment of potential as well as projected actual performance of the economy. Moreover, bearing in mind the size and persistence of the deficit on Canada's current account in the balance of payments, and the

adjustments Canada will have to make in response to the new regime of tariffs and trade codes following completion of the Geneva GATT accords, the annual statement should take account of conditions and policies which will affect Canada's international financial and trading position. Also,

> *We recommend that the Government of Canada discuss with provincial First Ministers the possibility of matching presentations by provincial governments and their agencies, to provide a mutually consistent integration of the provincial and federal government presentations. Such presentations might review growth and inflation performance and expectations, and as well the prospects, procedures and forms of foreign borrowing anticipated by governments in the subsequent year.*

In making this recommendation we recognize that there exists an extensive network of federal-provincial discussions of both financial and non-financial matters. We believe that these discussions can be improved by the addition of an open, consistent presentation of medium-term federal and provincial fiscal prospects.

Federal-Provincial Imbalance

The analysis in Chapter 4, together with the projections in Chapter 5, indicates that fundamental problems of imbalance in federal-provincial fiscal arrangements would arise for Canada for the first half of the 1980s, even if there were no significant increases in the prices of oil and gas. The problems will be worsened by the energy developments, even if reasonable success is realized in distributing and recycling the petro-dollars. The problems arise partly from changes in the economic environment, particularly in inflation, growth and unemployment. But they arise also from institutional and policy changes in federal-provincial fiscal arrangements in Canada — a situation which can be seen clearly by contrasting the limited and conditional nature of the economic responsibility and power of states in the American federation, with the large and entrenched nature of economic responsibility and power of the provinces in the Canadian federation.

By continued evolution, augmented by big changes in the 1970s, the fiscal structure with which Canada enters the 1980s is very different from that of the 1960s. Governments collectively now have larger and more persistent deficits in relation to GNP and to their own expenditures. But the deficits in Canada are heavily concentrated in the central government. The 1977 federal-provincial agreements on fiscal arrangements, particularly those relating to established program financing, have contributed much more than had been anticipated to relative concentration of the fiscal burden of social programs on the federal treasury. The fiscal burden from a recession falls more heavily on the federal government

than the provinces, and exchange market stabilization is a federal responsibility. Thus, even if there were no major changes in federal-provincial constitutional arrangements, and even without increases in oil and gas prices, the federal-provincial fiscal balance and machinery in Canada would urgently require re-examination. Constitutional rearrangements may ease or worsen the problems, but they will certainly add to the complexity of the re-examination of the federal-provincial fiscal situation.

Bearing in mind the size and persistence of the fundamental problems of imbalance in the federal-provincial fiscal situation in Canada, and the 1982 termination dates of the main federal-provincial fiscal arrangements,

> *We recommend that First Ministers carry out, as a matter of urgent priority, a medium-term analysis of the federal-provincial fiscal problems with a view to accelerating the renegotiation of the agreements which terminate in 1982.*

Macro-Economic Management

In our judgment, the appropriate setting for macro-economic policy is a steady and fairly neutral medium-term approach, rather than an activist, discretionary, fine-tuning approach. As noted, the problems facing the Canadian economy are structural in nature, and their resolution will take time. Short-term approaches toward reduction of inflation or stimulation of growth are likely to be unproductive and to contribute to instability, and may therefore retard progress toward a more balanced economic setting.

In the previous chapter we analysed restrictive and stimulatory settings for fiscal and monetary policy. We showed that persistent restrictive policy could reduce inflation and the government and external deficits, but at the expense of unattractive results for growth and unemployment. Expansionary policies, by contrast, would enlarge the deficits and increase the risk of inflation getting out of hand. Neither policy offers good prospects for a more favourable economic setting several years from now.

The neutral, steady setting for macro-economic policy we envisage has as a main objective the gradual winding down of inflation. Without achieving a better performance with respect to inflation the constraint on the use of fiscal tools for stabilization purposes remains. Hence we favour continued restraint of government expenditures, and a continuation by the Bank of Canada of a setting of medium-term targets for monetary growth that are consistent with progress towards lower rates of inflation.

Government deficits in Canada, even adjusted for the shortfall from potential economic growth, have been rather high in recent years. Bearing in mind the risks to confidence and inflation, and the burdens such deficits place on public treasuries, smaller rather than larger government deficits for Canada appear to be the preferable medium-term course. At

the same time, policy should give considerable emphasis to investment and productivity improvement and to the reduction of the external deficit, as against stimulating government and household consumption.

In using whatever scope for changes in fiscal policy may exist over the next few years, governments will face difficult balancing acts. In addition to concern for investment, productivity and deficits, considerations of fairness in the structure of government expenditure and taxation programs have to be reviewed continually. Also, increases in petroleum prices in Canada will raise particular problems of *offsets*. These increases generally depress output and increase inflation. The impact of such increases will fall more heavily on some households than others (falling particularly heavily on those which spend a large proportion of their income on household heat and essential transportation). Offsets to these effects, for example, by reductions of certain sales taxes, would be desirable, if they could be financed and managed.[14]

Our studies have shown that personal savings rates continue to be rather high in Canada, in part in response to a number of policies that have encouraged savings. The suggestion has been made by some Canadian observers that savings incentives in Canada might be reduced, thereby stimulating private demand, and reducing the support for the economy by governments. *We do not recommend such a course at this time. The needs for investment in Canada are large, and less reliance on foreign saving may be called for. A continued high rate of personal saving can contribute to meeting those needs.*

A steady "setting" for macro-economic policy does not preclude discretionary action. Policy will have to remain responsive to conditions as they emerge. The key difference is in recognizing many problems as structural in nature and not amenable to resolution through short-term action. Discretionary policies, when required, should be explicit, limited, and embodied into a general strategy of medium-term macro-economic management.

The next few years are best regarded as a continuation of the period of adjustment that began a few years ago with the devaluation of the dollar and shifts in policy. This adjustment process should be guided in order that it not be too disruptive; but it is most important that steady progress be made in attacking the structural problems. By so doing, Canada can improve its prospects of realizing a strong, productive, self-reliant economy — probably not with as rapid an economic growth as in the last twenty-five years, but good by comparison with most other countries and most of our history.

Appendix Table 1

Selected Indicators, Oil Price Alternatives

	1979	1980	1981	1982	1983	1984	1985
	(Percentage Increase)						
Gross National Product (1971$)							
$2 projection	2.8	2.6	4.9	4.9	3.5	3.8	3.3
$4 projection	2.9	2.7	4.6	4.5	3.0	3.3	3.0
$7 projection	3.0	2.5	4.3	4.3	3.0	3.4	3.0
Consumer Price Index							
$2 projection	9.1	7.9	7.3	7.0	7.0	6.7	6.7
$4 projection	9.5	8.6	8.5	8.5	9.0	8.3	8.0
$7 projection	9.5	9.6	9.5	9.2	8.8	7.6	7.2
Unemployment rate (level)							
$2 projection	7.9	8.2	7.4	6.3	5.8	5.4	5.4
$4 projection	7.7	7.8	6.9	5.9	5.4	5.3	5.3
$7 projection	7.7	7.6	6.7	5.8	5.6	5.5	5.7
Labour force							
$2 projection	1.8	2.2	2.0	1.9	1.9	1.9	1.9
$4 projection	1.7	2.1	1.8	1.7	1.7	1.8	1.8
$7 projection	1.7	2.0	1.7	1.6	1.8	1.9	1.9
Employment							
$2 projection	2.2	1.9	2.9	3.0	2.4	2.4	1.9
$4 projection	2.3	2.1	2.8	2.8	2.2	2.0	1.8
$7 projection	2.3	2.1	2.7	2.7	2.0	2.0	1.7
Productivity							
$2 projection	0.7	1.0	2.2	1.9	1.3	1.8	1.9
$4 projection	0.7	0.8	1.8	1.7	0.9	1.8	1.6
$7 projection	0.7	0.4	1.6	1.7	1.2	2.0	1.8
Real wage rate							
$2 projection	–0.6	0.8	1.3	1.6	2.2	2.7	3.0
$4 projection	–0.9	0.5	0.7	1.1	1.3	2.5	2.6
$7 projection	–0.9	–0.5	0.4	1.2	1.9	3.1	2.9
	(Per cent of GNE)						
Federal deficit							
$2 projection	–4.2	–4.0	–3.3	–2.5	–2.1	–1.7	–1.5
$4 projection	–4.2	–4.3	–3.7	–3.0	–2.7	–2.4	–2.1
$7 projection	–4.2	–4.2	–3.6	–3.0	–2.7	–2.5	–2.3
Provincial deficit							
$2 projection	0.2	0.4	0.6	0.7	1.0	0.7	0.7
$4 projection	0.2	0.9	1.4	1.6	1.9	1.6	1.5
$7 projection	0.3	1.2	1.9	2.1	2.1	1.7	1.5
Balance of payments							
$2 projection	–2.4	–1.8	–1.9	–2.3	–2.2	–2.5	–2.6
$4 projection	–2.5	–1.8	–1.8	–2.2	–2.1	–2.5	–2.7
$7 projection	–2.5	–1.8	–1.7	–2.0	–1.9	–2.4	–2.6

Appendix Table 2

Selected Indicators, Policy Packages

	1979	1980	1981	1982	1983	1984	1985
	(Percentage Increase)						
Gross National Product (1971$)							
Reference projection	3.0	2.9	4.9	4.9	3.3	3.5	3.1
Highly stimulative	3.0	3.3	5.9	5.3	3.9	3.8	3.4
Stimulative	3.0	3.3	5.5	5.3	3.7	3.7	3.3
Investment stimulus plus offset	3.0	3.3	4.4	5.1	3.1	3.4	3.0
Restraint	3.0	2.4	3.7	4.2	2.6	3.1	2.9
Consumer Price Index							
Reference projection	9.5	8.6	8.5	8.7	9.2	8.7	8.4
Highly stimulative	9.5	8.2	8.4	8.7	9.6	9.2	9.0
Stimulative	9.5	8.2	8.4	8.6	9.4	9.0	8.8
Investment stimulus plus offset	9.5	8.2	8.4	8.4	9.0	8.5	8.3
Restraint	9.1	8.3	8.6	8.5	8.6	8.0	7.7
Unemployment rate (level)							
Reference projection	7.7	7.7	6.7	5.6	5.0	4.8	4.8
Highly stimulative	7.7	7.7	6.3	5.1	4.3	4.0	4.0
Stimulative	7.7	7.7	6.5	5.2	4.5	4.2	4.2
Investment stimulus plus offset	7.7	7.7	6.9	5.6	5.0	4.8	4.9
Restraint	7.7	7.8	7.1	6.1	5.6	5.5	5.3
Labour force							
Reference projection	1.7	2.1	1.9	1.8	1.8	1.9	1.8
Highly stimulative	1.7	2.2	2.1	2.0	1.9	1.9	2.0
Stimulative	1.7	2.2	1.9	1.9	1.8	1.9	2.0
Investment stimulus plus offset	1.7	2.2	1.6	1.7	1.5	1.9	1.8
Restraint	1.8	2.2	1.5	1.5	1.4	1.7	1.6
Employment							
Reference projection	2.3	2.2	3.0	3.0	2.4	2.1	1.8
Highly stimulative	2.3	2.3	3.6	3.3	2.7	2.2	2.1
Stimulative	2.3	2.3	3.2	3.3	2.6	2.2	2.0
Investment stimulus plus offset	2.3	2.3	2.5	3.1	2.2	2.1	1.7
Restraint	2.4	2.1	2.2	2.6	1.9	1.8	1.8
Productivity							
Reference projection	0.7	0.9	1.9	1.8	1.0	1.8	1.7
Highly stimulative	0.7	1.3	2.4	2.0	1.2	2.1	1.9
Stimulative	0.7	1.3	2.2	2.0	1.2	2.0	1.9
Investment stimulus plus offset	0.7	1.3	1.5	2.0	1.0	1.8	1.8
Restraint	0.7	0.6	1.1	1.5	0.7	1.6	1.4
Real wage rate							
Reference projection	-0.9	0.5	0.7	1.1	1.4	2.8	2.9
Highly stimulative	-0.9	0.8	0.6	1.3	1.6	3.5	3.8
Stimulative	-0.9	0.8	0.6	1.3	1.5	3.2	3.5
Investment stimulus plus offset	-0.9	0.8	0.7	1.2	1.4	2.7	2.9
Restraint	-0.6	0.5	0.3	0.4	0.7	1.8	1.9
	(Per cent of GNE)						
Federal deficit							
Reference projection	-4.2	-4.4	-3.8	-3.2	-3.0	-2.7	-2.4
Highly stimulative	-4.2	-5.4	-5.2	-4.6	-4.3	-4.0	-3.9
Stimulative	-4.2	-5.4	-4.8	-4.2	-3.9	-3.6	-3.4
Investment stimulus plus offset	-4.2	-5.4	-3.7	-3.1	-2.9	-2.6	-2.3
Restraint	-4.5	-4.9	-3.4	-2.9	-2.8	-2.5	-2.2
Provincial Surplus							
Reference projection	0.3	0.9	1.4	1.7	2.0	1.8	1.7
Highly stimulative	0.3	1.0	1.7	2.1	2.4	2.2	2.2
Stimulative	0.3	1.0	1.6	1.9	2.3	2.1	2.0
Investment stimulus plus offset	0.3	1.0	1.4	1.7	2.0	1.7	1.6
Restraint	0.3	1.0	1.3	1.5	1.8	1.5	1.5
Balance of Payments							
Reference projection	-2.5	-1.9	-2.0	-2.5	-2.5	-2.9	-3.1
Highly stimulative	-2.5	-2.0	-2.6	-3.2	-3.3	-3.8	-4.0
Stimulative	-2.5	-2.0	-2.4	-3.0	-3.1	-3.5	-3.7
Investment stimulus plus offset	-2.5	-2.0	-2.0	-2.5	-2.4	-2.8	-2.9
Restraint	-2.7	-2.3	-2.0	-2.3	-2.1	-2.4	-2.5

Notes

1 The Canadian Economy in the Seventies

1 The Centre for the Study of Inflation and Productivity estimated the effect as one-third of the changes in the Consumer Price Index in 1977 and 1978.

2 Economic Council of Canada, *Thirteenth Annual Review: The Inflation Dilemma* (Ottawa: Supply and Services Canada, 1976), ch. 2.

3 Economic Council of Canada, *One in Three: Pensions for Canadians to 2030* (Ottawa: Supply and Services Canada, 1979).

4 Eliminating the cyclical component from productivity change is not simply a matter of averaging. We have estimated the productive potential of the Canadian economy from year to year with the use of the CANDIDE model, and the corresponding rate of labour productivity growth. See T. A. Wilson and P. Dungan, "Potential Economic Growth: Performance and Prospects," Economic Council of Canada, Ottawa, forthcoming.

5 This is consistent with the observations of M. Wachter for the United States, who holds that labour supply was the constraining growth factor in the 1960s, but that capital has assumed that role in the 1970s. M. Wachter, Testimony to the Joint Economic Committee, United States Congress, 1979.

6 Agriculture, forestry and fishing, mining, quarries and oil wells, petroleum and coal products, pipelines, and electricity and gas distribution.

7 See S. Ostry and S. Rao, "Productivity Trends in Canada," paper presented at the Conference on Lagging Productivity Growth, Toronto, May 24, 1979.

8 Economic Council of Canada, *People and Jobs: A Study of the Canadian Labour Market* (Ottawa: Information Canada, 1976).

9 See for instance, P. Fortin and L. Phaneuf, "Why is the Unemployment Rate So High in Canada?" paper presented at meetings of the Canadian Economics Association, Saskatoon, May 29, 1979; J. P. Aubrey, P. Cloutier, and J. Dimillo, "An Estimation of the Natural Rate of Unemployment in Canada," Bank of Canada Research Memorandum, 1979; E. Carmichael, "Assessing Canada's Potential Economic Growth," The Conference Board in Canada, October 1979. 10 See T. A. Wilson and P. Dungan, "Potential Economic Growth: Performance and Prospects," Economic Council of Canada, Ottawa, forthcoming. This estimate of the equilibrium unemployment rate is based on changes in labour force composition and effects of unemployment insurance. The equilibrium unemployment rate for men in the 25- to 54-year age group is set at 3 per cent up to 1972 and 3.6 per cent after 1972. The 0.6 per cent increase reflects the effect of the unemployment insurance changes in 1972; this estimate is derived from several independent studies. Equilibrium unemployment rates for other labour force groups are estimated on the basis of the relationships between the 25- to 54-year age group; this relationship includes demographic shifts and effects of unemployment insurance. The aggregate equilibrium rate is obtained as a weighted average of the rates of all groups.

11 The inflation rate can also be affected by external and relative price shocks, as detailed earlier in this chapter.

12 The deficit of the government sector, on a national accounts basis, was $8.9 billion in 1978. The output gap, at 3.1 per cent of GNP, was $7 billion. Hence if the economy had been at potential, governments would still have had a sizable deficit, since their revenues would have been higher by only a portion of the $7 billion in additional output. Our calculations show that, with the economy at potential, the federal deficit would have been in the order of $8.5 billion (compared with the actual $11.4 billion) as a result of $2 billion in additional revenue and $1 billion less in expenditures (mainly unemployment insurance payments). The comparable deficit for all governments combined is in the range of $5 billion (compared with the actual $8.9 billion). Similar results are found in E. A. Carmichael, "The Budgetary Impact of High

Employment," *Canadian Business Review*, Summer 1979. The "cyclically adjusted" budget deficit in 1978, calculated by the Department of Finance, was $7.3 billion for the federal government and $3.4 billion for the total government sector. This measure estimates the budget balance which would have occurred, under the tax and expenditure structure actually in place, had the economy been operating at an "average level of activity," and is not based on a measure of potential output of the economy. Canada, Department of Finance, *Economic Review*, April 1979, pp. 83-85.

2 Household Saving

1 Only capital consumption allowances showed a relative decrease, leading to a larger increase in the net saving rate than in the gross saving rate. In view of the valuation difficulties involved in calculating depreciation in times of inflation, we shall ignore this aspect and concentrate on the gross saving rate. It should also be noted that household data used in this chapter include figures for unincorporated business. This is not important since the phenomena discussed in this chapter are overwhelmingly due to household behaviour.

2 This includes not only homebuying but also the purchase of cottages and expenditures on major renovations. Note that the increase in home ownership is *not* a result of changes in the age structure of the population. If the proportion of homeowners in each age group had not changed since 1971, the share of households owning their home would have *dropped* by 1.3 per cent by 1976.

3 It has been suggested that many homeowners themselves may have borrowed against the equity in their property in order to make financial or business investments or to purchase durable goods. Mortgage interest rates, even those on second mortgages, were generally lower than the rates for consumer loans. The argument is plausible but the extent of borrowing for acquisition of durables was probably limited, since this kind of behaviour directly reduces the saving rate. The large majority of mortgage borrowing is related to purchases of dwellings. If this argument seems to beg the question — that is, the negative effect on the saving rate might well have been strong but other positive influences were even stronger — it should be noted that the full extent of acquisition of real estate by the Canadian public has not been widely recognized. This is so because the published national accounts figures for investment in physical assets by the household and unincorporated business sector, which are commonly used as a source of information on the matter, are based on assumptions regarding the share of new housing purchased by households that are not in accordance with current behaviour and capture only part of the shift to homeownership.

4 See, C. S. Samur, W. D. Jarvis, M. C. McCracken, *Analysis of the Recent Behaviour of the Personal Savings Rate* (Ottawa: Informetrica Ltd., February 1979). It may be noted that saving towards homeownership and increased mortgage borrowing is related to the increase in multiple-earner families. These families can set more money aside for housing. People may also be induced to join the labour force for this reason.

5 Atttions show that, with the economy at potential, the federal deficit would have been in the order of $8.5 billion successful. These new securities were debt instruments convertible into equity. Neither in Canada nor the United States were these securities with "equity kickers" notably successful, and their prevalence subsequently waned. The performance of common stocks during recent inflation is discussed in some detail in James E. Pesando, *The Impact of Inflation on Financial Markets in Canada* (Montreal: C. D. Howe Research Institute, 1977).

6 In the United States the practice of mortgaging houses in excess of funds needed to acquire the property is widespread. In Canada this practice is very costly.

3 Business Performance

1 See Charles R. Nelson, "Inflation and Capital Budgeting," *Journal of Finance*, June 1976.

2 This situation was discussed in considerable detail in Economic Council of Canada, *Thirteenth Annual Review: The Inflation Dilemma* (Ottawa: Supply and Services

Canada, 1977), ch. 4. See also Glenn P. Jenkins, *Inflation: Its Financial Impact on Business in Canada*, Economic Council of Canada (Ottawa: Supply and Services Canada, 1976).

3 Many of the different views advanced in Canada and the United States can be found in Ontario, Committee on Inflation Accounting, *Report*, 1977, and in the references given therein. A review of various British opinions is provided in J. A. Kay, "Inflation Accounting: A Review Article," *Economic Journal*, June 1977.

4 See Franco Modigliani and Richard A. Cohn, "Inflation, Rational Valuation and the Market," *Financial Analysts Journal*, March-April 1979. These authors' estimates imply that the size of the debt adjustment, if made as they recommend, would, in the United States, approximately offset the combined adjustment for understated depreciation and cost of sales that the stock market presumably does make. To indicate the possible significance of this "inflation illusion," Modigliani and Cohn suggest that American stock market values would, at the end of 1977, have been on average double what they actually were.

5 A. Tarasofsky and T. G. Roseman, "Ex Post Aggregate Real Rates of Return in Canada, 1947-76," Economic Council of Canada, Ottawa, forthcoming; and John Bossons, "Inflation-Adjusted Financial Accounts for Canadian Non-Financial Corporations," Economic Council of Canada, Ottawa, forthcoming.

6 See, in particular, Phillip Cagan and Robert E. Lipsey, *The Financial Effects of Inflation*, National Bureau of Economic Research (Princeton: Princeton University Press, 1978).

7 This holds for normal and below-normal utilization rates. When firms operate at maximum capacity and cannot meet demand for their products, they will charge what the market can bear.

8 See John Bossons, "Inflation-Adjusted Financial Accounts for Canadian Non-Financial Corporations," Economic Council of Canada, Ottawa, forthcoming.

9 The actual situation of many firms can only be worse than this table implies, since it includes the figures of a great many firms which paid little or no dividends during the interval.

10 The current 3 per cent inventory deduction and two-year write-off notwithstanding.

11 This likelihood is advanced strongly in Touche Ross & Co., "Inflation: Its Impact on Business," Touche Ross, Toronto, 1976.

12 The two-year write-off, for example, applies only to firms in the manufacturing and processing sectors. Even there, it gives relief only to certain new capital formation, leaving older assets unaffected. This must have a differential impact on some firms, thereby creating undesirable inequities. As to the many firms in the other sectors, they, of course, derive no benefit from this provision. This, too, is inequitable. The absence of the necessary microeconomic data precludes judgments as to the magnitudes of these inequities, but their very existence confirms the difficulty of rectifying inappropriate tax rules by means of measures of this type.

4 Issues in Government Finance

1 The story of the growth of the Canadian public sector has been documented elsewhere. See, for instance, Economic Council of Canada, *Fifteenth Annual Review: A Time for Reason* (Ottawa: Supply and Services Canada, 1978), ch. 6.

2 In the United States, for example, the public sector has peaked at about 35 per cent of GNP and most utilities are privately owned.

3 Fiscal arrangements with the federal government are different for the province of Quebec, in that it has a larger share of direct taxes than others, separate transfer programs, and a separate pension plan — the Quebec Pension Plan.

4 A similar trend towards larger shares of the public sector being concentrated at the state and local levels was observed in the United States. But once again, the shift has been less pronounced than in Canada and the share of GNP held by state and local governments has peaked at around 15 per cent, still substantially below the corresponding share of the U.S. federal government (about 20 per cent).

5 A small increase from, say, 9 to 10 per cent in interest for a particular loan implies a rise of about 10 per cent in the annual cost of carrying such a loan.

6 Governments borrow substantially on behalf of Crown corporations and for other investments. The same arguments apply, and the effect of high debt charges on the

deficit is in part offset by higher interest income. Since 1974, however, governments have borrowed heavily to finance their own expenditures.

7 Since the economy was stimulated by the measures, it cannot be assumed that federal revenues would have been higher by some $8 billion (the bulk of the deficit of $11.4 billion) had these steps (including indexing of the personal income tax) not been taken.

8 The difference from the situation depicted at the end of the previous section lies in the large revenues collected through increases in the oil and gas prices, as well as continued expenditure restraint.

9 This estimate includes effects of an equivalent increase in the price of natural gas, and applies as long as the one-third ceiling on equalization payments arising from revenue from natural resources is not effective. See also Chapter 6.

5 Canada's Medium Term Prospects

1 In June 1977, research work began at the Economic Council of Canada on a new version of the CANDIDE Model. By October 1978, this new version was in the final stages of testing. Among the many improvements are: structural improvements, a revised data base, refined detail at the sector level (both public and private), and new software techniques to aid in performing policy analysis. For a complete description of CANDIDE Model 2.0, see "CANDIDE 2.0, Model Description," Economic Council of Canada, Ottawa, forthcoming.

2 In these projections, the exchange rate stays in the range of 83 to 85 cents U.S. Since monetary policy currently seems to be directed towards defence of the external value of the dollar (as well as towards a growth target for the money supply), the dollar may turn out to be stronger in international markets than our projections indicate.

3 This is an artificial option included for purposes of comparison; see text below.

4 Some 15 per cent of that gain would occur even if there were no new price increase in 1980, because this year's OPEC price hike occurred at mid-year, making the 1979 average lower than the current figure.

5 The risk of a strong wage response increases as the oil price change is more rapid. Recently, T. A. Wilson argued that a more sudden energy price shock would require a larger change in unemployment (man-years lost) to be neutralized or would, if validated, lead to a higher price level in the longer run than a gradual increase. See papers presented to the Ontario Economic Council's Energy Conference, September 27-28, 1979, forthcoming.

6 For more detail, see "Sixteenth Annual Review Outlook Simulations and Policy Alternatives," Economic Council of Canada, forthcoming. One of the projections presented in that paper explores additional investment in energy projects in the order of $3 billion (in real 1971 dollars) over the period 1980-85, leading to significant increases in domestic energy supply by mid-decade. The investment projects include Coldlake, increased development of tertiary oil, completion of the Q & M pipeline to Quebec City, and increased licensing of natural gas exports. The results are as expected: more real growth and inflation, reduced government deficits, and a considerably improved trade balance due to a reduction in energy imports and an increase in energy exports. Another possibility we have examined is a reduction in indirect taxes (the federal manufacturers sales tax) as an offset to the effects of oil price changes on inflation and demand. This policy has the desired effects but at the expense of larger deficits of the federal government and on the current account of the balance of payments.

7 The deterioration of the overall budget balance of governments is in the order of $500 million a year over 1982-85. This difference between the $4 projection and the reference projection does not show up in Tables 5-2 and 5-5 because of rounding.

6 Conclusions and Recommendations

1 See International Monetary Fund, *Annual Report*, 1979, and OECD, *Economic Outlook*, July 1979.

2 OECD *Observer*, 1979.

3 An additional reason for more gradual increase lies in the fact that very substantial intra- and inter-national transfers of income and wealth are caused by the price increase which cannot be ignored when weighing the efficiency gains to Canadians. A more gradual move permits time to make the necessary policy adjustments to mitigate these serious effects.

4 If the world price rises to a higher level than we have assumed, a reassessment of domestic pricing policy becomes necessary. For moderately higher increases, the principle of gradual adjustment to the world price level remains valid, although at a certain point the speed of the adjustment may have to be revised. However, the rationale for moving in the direction of the world price rests on the cost of petroleum from sources that will replace the dwindling conventional sources. Hence if the world price rises to a level well above the "replacement price" — that is, the price level at which large scale production from new sources becomes economically viable — there is no longer a justification for moving to parity with the world price.

5 See Douglas G. Hartle, "The Federal Provincial Relations Dimensions of the Canadian Energy Issue," paper presented to the Ontario Economic Council's Energy Conference, September 27-28, 1979, forthcoming. Hartle argues that some of the tax concessions for conventional oil and gas are offset by capitalization of the benefit in higher land bids and captured by the provinces. But they also increase retained earnings and probably thus affect investment behaviour.

6 The treatment of equalization payments is, of course, inextricably bound up with the issue of the treatment of the economic "rents" arising from higher energy prices. For a discussion of these issues see papers presented to the Ontario Economic Council's Energy Conference, by Thomas J. Courchene and Douglas G. Hartle.

7 For a full discussion of the financial aspects see Peter A. T. Campbell, "Financial Intermediation and its Implications for the Recycling Problem," paper presented to the Ontario Economic Council's Energy Conference, September 27-28, 1979, forthcoming. The non-financial and especially foreign ownership and control issues are presented in B. W. Wilkinson and B. L. Scarfe, "The Recycling Problem," a paper presented to the same conference

8 For analysis of this issue, see John F. Helliwell, "Trade Policies for Natural Gas and Electricity," Ontario Economic Council's Energy Conference.

9 Given the uncertainties involved at present, it was not possible for our projections to account for the impact of the recently concluded GATT agreements. It is unclear whether the net effect on the overall trade balance will be positive or negative; nor are the differential impacts on specific sectors clear at this time.

10 See J.-P. LeGoff and B. Rosenfeld, "The Reactions of Canadian Entrepreneurs to Various Investment Assistance Programs," Economic Council of Canada, Ottawa, forthcoming; and Ernst and Whinney Chartered Accounts, "Government Incentive Programs in Canada: Are They an Effective Tool in Stimulating Investment in Productive Plant and Equipment?" Economic Council of Canada, Ottawa, forthcoming.

11 This is part of our ongoing research on financial markets.

12 A useful discussion with respect to manpower and labour relations issues is contained in *A Report by the Second Tier Committee on Policies to Improve Canadian Competitiveness*, October 1978.

13 While improved openness is clearly desirable, we recognize there are some risks in this approach. See, for discussion, Douglas G. Hartle, "Report of the Royal Commission on Financial Management and Accountability (The Lambert Report): A Review," *Canadian Public Policy*, vol. 5, no. 3, 1978.

14 We have investigated the effects of such a policy. See Chapter 5, note 6.

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