ECONOMIC COUNCIL of CANADA

Thirteenth Annual Review



The Inflation Dilemma



The Inflation Dilemma

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ECONOMIC COUNCIL OF CANADA

Thirteenth Annual Review

The Inflation Dilemma



1976

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Available by mail from

Printing and Publishing Supply and Services Canada Ottawa, Canada K1A 0S9

or through your bookseller.

Catalogue No. EC21-1/1976 ISBN 0-660-00595-6 Price: Canada, \$5.00 Other countries, \$6.00

Price subject to change without notice.

Contents

1	Introduction	3
2	Social Well-Being, Households, and Inflation	-
	The Evolution of Family Incomes in Canada	5
	The Relative Positions of Households during Inflation	3
	The Effect of Inflation on Incomes	10
	The Effect of Inflation on Expenditures	10
	The Effect of Inflation on Net Assets	20
	Conclusion	23
3	Inflation, Wages, and Private Pension Plans	25
	Real Wages and Collective Bargaining	25
	Nonwage Benefits	32
	Inflation and Private Pension Funds	34
	Conclusion	39
4	Inflation and Business Decisions	41
	The General Effects of Inflation	41
	Income Taxes and Depreciation Expenses	42
	The Evaluation of Inventories	45
	Inflation as a Tax on Cash Balances	47
	Income Transfers between Borrowers and Lenders	48
	Short-Term Financial Assets and Liabilities	49
	Long-Term Financial Assets and Liabilities	51
	Tax Benefits from Anticipated Inflation	52
	Integration of the Financial Effects of Inflation on the	
	Business Sector	54
	Inflation and Business Risk	56
5	Inflation and Governments	57
	Fiscal and Monetary Policies	57
	Overall Development in Government Expenditures and	
	Revenues	59

vi Contents

	Government Revenues and the Inflationary Bias	64
	The Merits of Indexation	66
	The Impact of Inflation on Government Revenues and	
	Expenditures	68
	The Public Debt	70
	Conclusion	72
6	Prices and Costs	75
	Pricing Patterns	75
	Price Indexes	78
	Recent Price and Cost Developments	79
	The Transmission of Inflation	79
	International Developments	82
	Price Developments in Canada	86
	Food Prices	89
	Housing and Other Costs	90
	Production Costs	92
	Conclusion	99
7	Trade	101
	A Perspective on Canada's Trade Performance	101
	Canada's Performance on Capital Account	111
	Conclusion	114
8	The Performance Indicators	117
	Individual Indicators and Recent Performance	117
	Gross National Expenditure	119
	Consumer Expenditure	119
	Investment	121
	Exports and Imports	123
	Government Current Expenditure	125
	Real Disposable Income per Capita	126
	Productivity	127
	Labour Market	127
	Relative Price Performance	129
	The Prelude to Controls	130
	The Implementation of the Controls Program	132
	Performance Indicators for 1975-79	135
	The Reference Solution	136
	rioposed Performance Indicators	137
9	The Challenges Ahead	141
	I owards the 1980s	141
	Inflation and Its Consequences	145

	Contents	vii
The International Experience with Incomes Policies		150
The United States		150
The United Kingdom		151
Scandinavia		152
The Netherlands		153
West Germany		154
The Canadian Anti-Inflation Policy		154
Organized Labour and the Controls		162
The Broader View		164
Appendix		167
List of Tables		182
List of Charts		185
List of Project Staff		187

This Review has been approved by the members of the Economic Council with the exception of Messrs. McCambly, Morris, and Taylor, who withdrew from active participation in the Council during 1976. While the Chairman, who resigned on October 18, shares, with the other signatories, responsibility for the contents of the Review, he did not participate in the final editing of the text.

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The Inflation Dilemma

1 Introduction

Throughout the first half of the 1970s, Canada and virtually all the other western countries were confronted with a persistent and sometimes overriding issue — a very substantial increase in inflation, coinciding with an apparent rise in the level of structural unemployment. This inflationary phenomenon is common to all the major western nations, and it has become evident that, in relatively open economies where much of the impetus derives from trade and capital flows, domestic developments cannot be completely shielded from developments elsewhere.

Much of the discussion on inflation in the *Eleventh* and *Twelfth Annual Reviews* dealt with the consequences of policies such as indexation or with the eventual impact of inflation on economic prospects and long-term growth potential. However, little is known in Canada about who in fact wins and who loses from inflation, or about how it is anticipated and how it affects decision-making. In the following chapters, we attempt to provide some modest insight into these and other issues.

As in many other areas, there is no unanimity in the explanations or prescriptions offered for inflation. Inflation may spring from real pressure on the demand or supply sides, from monetary management, or through mechanisms of domestic and international price transmission. Its impact may vary, as some prices and costs lead while others follow and as each person, group, or enterprise adjusts to preserve, or improve, his or its relative situation. While not neglecting the processes behind Canada's current inflationary experience, this Review focuses in particular on the effects of the present inflationary trends on the main economic participants — governments, firms, and households — and on the collective bargaining strategies of management and labour.

As in the past, this Review analyses Canada's economic performance in the light of indicators that have been developed in earlier Reviews and attempts to ascertain whether the projected economic activity is likely to lead to a moderation of inflation and a decline in unemployment. Most of the empirical analyses and projections were completed in September 1976. Hence they do not reflect some of the most recent data or new developments, which suggest an increased degree of uncertainty on the broad front of federal-provincial relations, spending decisions, and investment outlays.

2 Social Well-Being, Households, and Inflation

The equitable distribution of incomes among all Canadians is a continuing objective of economic policy in this country. The Economic Council of Canada Act stipulates that the Council should suggest how "all Canadians may share in rising living standards." As a result, the Council has, in the past, developed social and economic indicators of well-being and has periodically reviewed, in the light of acknowledged needs, some of the government programs designed to guarantee income security. As part of this concern, this chapter focuses on the distribution of total individual and family incomes in recent years and examines some of the factors contributing to changes in the patterns of income flows. In addition, it attempts to show how inflation — the main theme of this year's *Annual Review* — alters the value of the money income of households, affects their expenditure patterns, and erodes their purchasing power, and how, as a result, it inevitably hurts some groups more than others.

The Evolution of Family Incomes in Canada

Canada is among the half dozen western countries with the highest family incomes. In addition, subject to the difficulties of international comparisons,¹ it seems to occupy a middle position between those industrialized nations with the most, and those with the least, unequal distribution of incomes, both before and after direct taxes.² This position in the international ranking is not significantly altered after adjustments are made to take account of differences between countries in age levels or family size.

Precise international comparisons are tentative at best, because each country differs in the way public goods are distributed, taxes are collected, and income and expenditure data are reported. Moreover, even if standardization of all these measures were possible, any comparison would still present problems because of continuously fluctuating exchange rates.

² M. Sawyer, "Income Distribution in OFCD Countries," *OECD Economic Outlook*, Occasional Studies (Paris: Organisation for Economic Co-operation and Development, 1976).

Canadians are getting richer. Between 1965 and 1975, the average total income of all families³ rose from \$5,779 to \$13,573 — a nominal increase of about 135 per cent. At the same time, the cost of living — as measured by the consumer price index (CPI) — increased by 72 per cent. In real terms, therefore, Canadians were almost two-thirds better off last year than a decade earlier. However, the combination of inflation and rising unemployment in 1975 resulted in an actual reduction of average real income over the previous year (Table 2-1).

Table 2-1

	1965	1973	1974	1975	Total increase, 1965-75
		(Doll	ars)		
Average income of families and individuals	5,779	10,694	12,437	13.573	
Average annual increase	8.0) 16.	3 9	0.1	134.9
Average annual increase in CPI	4.3	3 10.	9 10).8	72.1

Total Family Incomes and Consumer Price Index, 1965-75

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

The distribution of incomes can be estimated by the use of a statistical indicator called the Gini coefficient, which, roughly interpreted, measures the income disparity between the richest and poorest families. The theoretical values of the coefficient range between zero, which represents complete equality of incomes among the families considered, and unity, which would represent an absolutely extreme imbalance of incomes between rich and poor. Moreover, within a specified range the indicator is quite sensitive to changes in income distribution. For example, if families are ranked according to income in five equal-sized groups covering the lowest 20 per cent to the highest, a Gini coefficient of .25 coincides with a situation where the highest has an average income roughly three times that of the lowest group, whereas with a Gini coefficient of .45 the highest income group averages about twelve times the income of the poorest group.⁴

- 3 Throughout this chapter, the term "family" refers to both economic families and unattached individuals. An economic family is defined as "a group of individuals sharing a common dwelling unit and related by blood, marriage, and adoption. Thus all relatives living together [are] considered to comprise one family unit whatever the degree of family relationship; aside from single sons and daughters, other relatives most commonly found in a household [are] married sons and daughters and widowed parents." Statistics Canada, *Income Distributions by Size in Canada*, Cat. No. 13-207.
- 4 These are calculated approximations and presuppose, among other things, a normal arc-shaped Lorenz distribution. For a more complete and precise explanation of the Gini coefficient and the Lorenz curve, see footnote 1 to Chart 2-4.

The Evolution of Family Incomes 7

fth

41.35

41.90

42.58

42.93

42.65

42.52

Total

100

100

100

100

100

100

Using the Gini coefficient, we observe that, between 1951 and 1965, for instance, there was a notable reduction in income inequality, probably in large part as a result of Canada's industrial and urban development. However, despite an impressive growth in overall average individual and family incomes from 1965 to 1971, the lowest income group commanded a smaller proportion, and the highest income group a larger proportion, of overall income in Canada at the end of the period (Table 2-2). In 1973 and 1974, there was again some reduction in income inequality, but unofficial figures for 1975 suggest that at least part of this reduction may have been short-lived.⁵ Does this mean that Canadian society is, in fact, drifting away from the objective of equitable sharing of rising incomes? Is this somehow a consequence of rising inflation rates? Or are there other underlying factors at work that explain the wider gaps in income distribution in recent years?

Table 2-2

1965

1967

1969

1971

1973

1974

Selected Years,	1965-74					
	Gini			Quin	tiles ¹	
	coefficient	First	Second	Third	Fourth	F
			(Pe	er cent)		

4.44

4.19

4.28

3.65

3.84

4.02

.370

.378

.385

.399

.391

.389

Distribution of Total Family Incomes before Taxes, Selected Years, 1965-74

1 All family units are divided into five quintiles, each representing 20 per cent of the total. The first quintile comprises families with the lowest incomes, and the fifth quintile comprises families with the highest incomes.

11.77

11.45

11.00

10.60

10.71

10.91

17.95

17.82 17.58

17.99

17.65

17.68

24.49

24.64

24.56

24.83

25.15

24.87

SOURCE Based on data from Statistics Canada (Surveys of Consumer Finances) and estimates by the Economic Council of Canada.

No one, of course, expects individual or family incomes to be equal. People have different skills and experience. Some — students, housewives, pensioners — work for wages only part-time or seasonally, or not at all. Families with only one person working are likely to earn less than those with two or more employed. Young people with little experience or few work skills are paid less at the beginning of their careers than when they

⁵ More specifically, whereas in 1965 the highest group had an average annual income (about \$12,000) roughly nine times that of the lowest income group (\$1,300), in 1975 it averaged an annual income (\$29,000) roughly eleven times the lowest income group (\$2,600).

become more mature and accept more supervisory responsibilities. Hence changes in the distribution of incomes over a number of years may spring from a number of causes, particularly increases or decreases in the relative numbers of young people working, older persons on pension, or multipleearner families. More equality in family incomes could, for instance, reflect a condition of rapid growth and tight labour markets favouring multiple-earner families, combined with a reduction in the proportion of persons receiving pension benefits. Conversely, less equality in family incomes could result from a combination of slow growth and less opportunity for the main or secondary breadwinners to find jobs.

It is perhaps worth noting that, among single people in the low-income category, about two-thirds are either under 25 years of age — mostly students working part-time — or over 65 years, and two-thirds are not working or not looking for work.⁶ Among families in the low-income category, about one-quarter are headed by pensioners, and one-half of the heads are not working or not looking for work. Those in the highest income group, however, include a substantial number of multiple-earner families.

It is also instructive to note changes that have strongly shaped the pattern of family income over the last decade. Among these is the change in the relative distribution of families by age of head (Table 2-3). The impact of the postwar baby boom is evident in the table, as is the increase in the proportion of family units who qualify for pensions. The average number of earners per family unit remained at approximately 1.4 persons between 1965 and 1974, but the average family size shrank from 3.4 persons in 1965 to 2.9 persons in 1974. Thus there was a significant increase in the ratio of earners to dependants in many family units.

Table 2-3

	1965	1974
	(Per	cent)
Age of head		
Under 25	7.8	10.4
25-34	19.2	23.3
35-44	22.4	18.0
45-54	20.8	17.0
55-64	14.5	14.3
65 and over	15.3	16.9
All family units	100.0	100.0

Distribution of Family Units, by Age of Head, 1965 and 1974

SOURCE Based on data from Statistics Canada (Surveys of Consumer Finances) and estimates by the Economic Council of Canada.

6 Economic Council of Canada, *People and Jobs: A Study of the Canadian Labour Market* (Ottawa: Information Canada, 1976), p. 119.

The Evolution of Family Incomes 9

Between 1965 and 1974, participation rates among young women aged 20-24 increased from 52.6 to 63.0 per cent and, among women aged 25-54, from 33.9 to 45.6 per cent. Roughly 60 per cent of working women are married and their contribution to higher levels of family income has been substantial (Table 2-4). In all families composed of two persons or more, the average income increased significantly more than among unmarried individuals. Similarly, families with heads in the prime-age groups also increased their incomes substantially more than did those headed by younger people or prisoners.

Table 2-4

	Average an	nual income	
	1965	1974	Increase
	(Do	ollars)	(Per cent)
Size of family unit			
1 member	2,872	6,099	112.4
2 members	5,278	12,051	128.3
3 members	6,226	14,297	129.6
4 members	7,054	16,213	129.8
5 or more	7,408	17,993	142.9
Average	5,779	12,437	115.2
Age of family head			
Under 25	3,877	7,272	87.6
25-34	6,065	12,866	112.1
35-44	7,028	15,936	126.8
45-54	6,935	16,057	131.5
55-64	5,448	12,902	136.8
65 and over	3,305	7,267	119.9
Average	5,779	12,437	115.2

Increase in Money Income, by Family Size and by Age of Family Unit Head, 1965 and 1974

SOURCE Based on data from Statistics Canada (Survey of Consumer Finances) and estimates by the Economic Council of Canada.

In general, income inequality among families tends to increase with the age of the family heads — undoubtedly reflecting the career climb of some and the entrapment of others in unskilled and dead-end jobs (Chart 2-1). The greatest disparity is found among families headed by older persons and by those under 25 years, many of whom have only a tenuous attachment to the labour force. Even within the same age groups, there are considerable differences in annual income, depending partly on the number of wage- and salary-earners in the family. Indeed, with increasing educational attainments, along with the more varied options they are exercising with respect to having or deferring children, or in working part-time or full-time, income disparities among many younger families with

Chart 2-1

Gini Coefficients for Family Unit Incomes, by Age of Head, 1965-731



1 The higher the Gini coefficient, the wider is the income gap between families with the lowest and the highest incomes within each category. SOURCE Based on data from Statistics Canada (Surveys of Consumer Finances), and estimates by the

Economic Council of Canada.

The Evolution of Family Incomes 11

heads under age 35 have been widening. With respect to employment income, there is less inequality in earnings among families having two or more earners than among those having only one earner (Chart 2-2).

Chart 2-2

Gini Coefficients for Family Incomes, by Number of Earners in Family Unit, 1967-731



SOURCE Based on data from Statistics Canada (Surveys of Consumer Finances), and estimates by the Economic Council of Canada.

Chart 2-3

Gini Coefficients for Family Unit Incomes, Unstandardized and Standardized for Structural Changes in the Canadian Population, 1965-73



SOURCE Based on data from Statistics Canada (Surveys of Consumer Finances), and estimates by the Economic Council of Canada.

The Evolution of Family Incomes 13

The demographic tilt towards old and young households, which traditionally manifest wide differences in income, and the trend to wider disparities among families in the 25-34 age group, favour less overall income equality in Canadian society. At the same time, the growth in the number of multiple-earner families with wives and teenagers contributing to family incomes has likely promoted less inequality among a broad range of families and has perhaps increased the share going to the highest income group. "Standardization" of these and other structural developments within the Canadian population helps to explain a large part of the overall trend to greater income inequality in Canada from 1965 to the early 1970s (Chart 2-3).

But, beyond these factors, many other economic and institutional developments have also contributed to altering the distribution of incomes among Canadians. Throughout the 1965-75 period, there were important changes in the demand for skills. The exodus of labour from marginal and unskilled jobs in the traditional primary sectors and some of the low-productivity manufacturing industries continued. Regional development initiatives brought new jobs and incomes to some slow-growth areas. Collective bargaining was extended to cover parts of the public service and other white-collar occupations. But, at the same time, unemployment rates generally were creeping upward, along with inflation. And, because unemployment is not randomly distributed, the combined burden may well have fallen disproportionately on low-income families.

With Canadians living longer and retiring somewhat earlier, the proportion of family units without earners has grown. As a consequence, there has been a persistent decline in the share of employment income and an increase in the share of government transfers of total income. In any particular year, government transfers and other income⁷ together tend to reduce inequality in the distribution of total income (Charts 2-4 and 2-5).

Our conclusion is that, over the 1967-75 period, federal and provincial transfers helped many "have-not" families keep pace with those who were benefiting from increased employment income. But, even after 1971, despite the significant enrichment of most transfer payment programs, transfers generally played a relatively minor role in effecting greater equality in the distribution of family income, in the face of demographic and job-related factors fostering less equality of income. Moreover, by 1973, although transfer income in Canada was substantially increased from the levels of the mid-1960s, it was somewhat less directed towards low-income families. This was partly because a large number of the beneficiaries of the Unemployment Insurance Act revisions of 1971 were

7 "Other income" is defined as all income other than employment income (including income from self-employment) and government transfers. It includes interest dividends, alimony, income from private pension schemes, and so on.

families who, having labour force attachments, were already in the middleincome range (Chart 2-6).

Chart 2-4

Distribution of Total Income and Its Components among Families, 19731



1 The various lines in this chart are called Lorenz curves. The diagonal represents a hypothetical situation where incomes would be perfectly distributed among all families, and the Gini coefficient would have a value of zero. The further the other curves are below the diagonal, the greater the distributional inequality in favour of the rich. The further they are above the diagonal, the greater the distributional inequality in favour of the poor.

SOURCE Data based on Statistics Canada (Surveys of Consumer Finance), and estimates by the Economic Council of Canada.

The Evolution of Family Incomes 15

Chart 2-5

Distribution of Canada and Quebec Pension Plan Income among Families, 1971 and 1973



SOURCE Based on data from Statistics Canada (Surveys of Consumer Finances), and estimates by the Economic Council of Canada.

Chart 2-6

Distribution of Unemployment Insurance Commission Benefits among Families, 1967, 1971, and 1973



SOURCE Based on data from Statistics Canada (Surveys of Consumer Finances), and estimates by the Economic Council of Canada.

The Relative Positions of Households during Inflation

Inflation alters the budgetary circumstances of different households through its effects on their income, expenditures, assets, and debts. This section examines the direction of changes in the budgetary position of households over the years 1969-75 — a period that was marked by a substantial escalation of family income, partly as a result of real increases in productivity and effort, and partly as a result of nominal increases in

wages to keep pace with inflation. Real and nominal factors also shaped both the patterns of expenditures and the prices of assets and liabilities.⁸

Inflation may be generated from a variety of sources and transmitted through various channels with widely differing results. Hence the effects described here and elsewhere should be interpreted with caution: they reflect what seems to have occurred in a specific period of high inflation rather than what necessarily happens in inflation per se. Since what is a price to a consumer is income to a producer, the incomes of households inevitably grew differentially, depending partly on their personal circumstances and partly on the proportion of their income derived from wages and salaries, self-employment, investments, transfers, and other sources. Between 1969 and 1975, prices overall increased by 47 per cent, some rising by twice, others by half, that amount. In the same period, the average working household increased its nominal wage and salary income by over 70 per cent; retired persons relying exclusively on public old-age-security pension schemes enjoyed an 85 per cent increase in benefits. Investment income, however, failed entirely to keep pace with inflation. Knowing how the relative importance of various sources of income grew as they affected different occupations and categories of savers, we can estimate approximately how particular sets of households, grouped by different incomes and ages, fared during the period, assuming no change in family size, number of earners, and so on.9

As with incomes, inflation alters the real value of individual or family spending, depending on personal circumstances, on what goods and services they consume, and on how much prices increased. If the consumption and savings patterns of particular sets of households are known, then, using the index of price changes for each main category of goods and services, it is possible to calculate overall expenditure indexes showing by what percentage each group of households would have had to

8 There is a significant difference between this and the preceding section. The characteristics of family units and their relative positions on the income scale are continuously changing. Individual families grow older, change in size, and alter their patterns of earnings, consumption, and savings. Hence, in the previous section, family units within each category were not necessarily the same from year to year. In this section, we examine the effects of inflation between 1969 and 1975 on groups whose composition and relative incomes are assumed not to have changed. Since there is in fact no available data on the evolution of the income, expenditure, and asset positions of individual families over the years, our conclusions can only be tentative, but they do suggest how inflation-induced gains or losses were initially distributed among households.

Nonetheless, looking at the issue from different perspectives creates certain problems. For instance, we state in the first section (p. 7) that inequality has increased; yet we say later that low-income earners enjoyed a more-than-proportionate increase in income over the period 1969-75 (p. 19). The apparent contradiction arises because, in the first case, each category that we follow contains different people at different times and, in the second case, we follow the same people.

9 M. Boyer, "The Impact of Inflation on Households," Economic Council of Canada Discussion Paper (forthcoming).

increase its spending in 1975 to maintain its earlier 1969 patterns of real expenditures. By the same token, if the composition of the assets and debts of the same groupings of households is known, then we can estimate the changes in the book value of their various asset/liability positions that would have occurred if these households had maintained the same portfolio throughout the period.

It is impossible to isolate the changes solely attributable to inflation. But to determine at least the initial effects of inflation on income and spending, it is necessary to assume that, between 1969 and 1975, the quantity and quality of the goods and services that each household bought, sold, or owned, remained unchanged, as did many of its characteristics — number of earners, children, and occupations. But, of course, changes did occur in the age/income composition of families, and we allow for adjustments in expenditure patterns that are consistent with their higher nominal incomes and their older age structure.

The Effect of Inflation on Incomes

Among the middle-income group, which comprises the largest proportion of families, wages and salaries accounted for over four-fifths of all household income in 1969. Among the lower-income groups — those with a total income of less than \$4,000 in 1969 and which included pensioners, widows, students, and quite a few farmers and fishermen — wages and salaries were about 40 per cent, and transfers about 38 per cent, of the total family income. Hence changes in the benefit levels and availability of retirement pensions, social assistance, family allowances, unemployment insurance, and farm income support programs were particularly important to this group. At the other end of the scale, households in the highestincome group in 1969 showed substantial earnings from investment and self-employment — a reflection, no doubt, of the large number of professionals among them. The income of young households consisted almost entirely of wages and salaries, whereas the incomes of older families were drawn from a greater variety of sources.

Average growth rates were calculated for different income sources. On the assumption that the proportion of income derived from the different sources remained roughly constant between 1969 and 1975 for each income and age group, we estimated the likely percentage increase in the nominal income of the set of households identified in 1969.

Thanks to several key changes in federal transfer programs during the early 1970s, along with significant advances in agricultural prices, lowincome households would have progressed faster over the period than those in the middle- or higher-income categories. But, of course, their original incomes were very low and, in absolute terms, the increase in their earnings was substantially lower than that of the more affluent groups.

The income generated by self-employment, investment, and savings grew at rates much lower than the average rate of price increases. Since these sources accounted for roughly one-third of the household income of high-income groups, their relative gains were, on average, less than those of the lower- or middle-income groups. If, by 1975, each household in the original group drew its income in identical proportions from the same sources as in 1969, on average those with initial incomes under \$4,000 would have doubled this figure, while those with initial incomes of \$4,000 to \$15,000 would have increased theirs by 70 per cent, and those earning over \$15,000 would have recorded nominal gains of about 50 per cent. Among household groups with the most consistent attachment to the labour market, incomes would have increased by about 67 per cent. Younger households, starting from lower income levels, would have recorded a slightly faster growth rate than older families.¹⁰ Whereas persons aged 65 and over did achieve a more-than-proportionate gain through increases in the old age security and the Canada and Quebec Pension Plan benefits, those who also drew fixed-income pensions lost very heavily in real terms.

In summary, it appears that, during the 1969-75 period, other things being equal, some redistribution of income would have occurred in favour of households that are traditionally dependent on transfer payments, because the latter increased substantially faster than wages or the cost of living. By the same token, those who drew most of their income from wages and salaries would have gained relatively more than those receiving a significant proportion of their income from investment or selfemployment. In fact, the combination of new employment opportunities, enriched unemployment insurance benefits for those without work, and some structural shift in demand away from low-paying occupations were highly significant to the well-being of many families during this period.

The Effect of Inflation on Expenditures

The spending and savings patterns of households also depend in large part on their income and their age. Since the prices of the goods and services they buy do not increase uniformly, inflation can be expected to affect some groups' expenditures differently than others. In 1969, for

¹⁰ Persons under 25 and over 54 years of age in 1969 were excluded because, over the six-year span between 1969 and 1975, many young people shifted from school and from part-time to full-time employment, thereby recording dramatic increases in income that were totally unrelated to the inflation calculations used here. The reverse situation occurred for persons aged 55 to 64 in 1969, who subsequently retired and recorded a significant drop in earnings.

instance, food, housing, and transportation expenditures accounted for 70 per cent of total spending by households with an income of less than \$4,000, but these items accounted for only 40 per cent of the expenditures of households earning more than \$15,000. Older people, living on more limited income, spend more of their budgets on housing and food than do middle-aged households. By multiplying the price increases of the various components of the consumer basket by the proportion of spending that households of a given income or age group devoted to each item in 1969, we can get initial estimates of the effects of inflation on their respective expenditures. We then adjust these estimates to take into account the fact that by 1975 the household breadwinners had grown older and their average income had increased, and that they would likely have adapted their spending patterns accordingly. These calculations suggest that inflation would have affected consumer budgets in a relatively uniform manner regardless of age or income. The expenditures required in 1975 to maintain the same profile of consumption would have been roughly 47 per cent higher than in 1969 for all groups, although low-income households would have been hit somewhat harder as a result of the higher price increases on basic staples.

Actual earnings from investments and savings were included in the income calculations, just as interest payments were included in the expenditure estimates. Our observations on income/expenditure flows present an incomplete picture of the effects of inflation on the well-being of households during the 1969-75 period, since they also experienced gains and losses on the relative value of their assets and debts.

The Effect of Inflation on Net Assets

Most families have assets of one sort or another, with homes probably the most common. Close to 60 per cent of Canadian households own their own homes, although the proportions vary significantly with age. Nearly three out of four middle-age families, 70 per cent of retired persons, and less than one-third of families under 35 years of age, are home owners. Even among the lowest-income groups, half are home owners, compared with close to 80 per cent of families in the high-income category. Moreover, it is characteristic of most households initially to go substantially into debt to purchase their homes, automobiles, and other fixed assets, which they pay off over the years, winding up with minimal debts as they approach retirement. A factor in the impact of inflation, therefore, is that it reduces the real value of fixed-debt repayments and thus favours younger families to the detriment, conceivably, of even their own parents or grandparents, whose savings are being used, through financial intermediaries, to finance their debts. Close to two-thirds of the assets held by middle-income groups

The Relative Positions of Households 21

are in the form of real estate, compared with about 45 per cent for lowincome groups and 34 per cent for the highest-income group. Fewer poor families have the means to buy homes, whereas wealthier families naturally have more of their assets in other forms. Since the value of real estate has climbed apace with inflation while the purchasing value of mortgage debt charges has eroded, home ownership has been the most secure form of saving over the recent past. In addition, home owners have benefited from certain tax concessions and grants, and homes constitute the only form of assets exempt from capital gains taxes.

There is also the value of home furnishings, automobiles, and so on, which for most families averaged about \$5,000 in 1969. Among the richest groups, the largest portion of savings was in the form of commercial assets, mortgages, and the like. Indeed, among the wealthiest group, one out of four owned commercial assets valued in excess of \$25,000. However, the nominal value of these assets failed to keep pace with inflation over the period.

It is a common observation that the poor carry little debt because they cannot afford it, and official surveys of assets and expenditures seem to bear this out.¹¹ Among families earning less than \$4,000 in 1969, three out of four had little or no debt. The richest families averaged the largest debt of any income group, even though it represented less than 10 per cent of their total assets. Middle-income groups traditionally have higher fixed debt/asset ratios, and this works to their advantage during inflationary periods such as that which occurred between 1969 and 1975. Wealthier families who were net holders of assets with fixed nominal values would have lost directly or indirectly, as would those in the lowest-income brackets, including persons on fixed-income pensions.

Any comparison of the effects of inflation on incomes, expenditures, and net assets (or wealth) should be interpreted with caution (Tables 2-5 and 2-6). Our estimates provide, at best, approximations of the first-round effects of inflation, and they say very little about how households actually responded during this period. The income and expenditure effects are more easily identified, since they reflect flows of income that actually occurred. The wealth effects are less certain. They reflect book values realized only if transactions occur, and no adequate data are available on the number of actual transactions. Some households, for instance, might have anticipated the relative drop in security prices, sold their holdings, and reinvested in real estate. Others might simply have waited for the recovery of stock prices. The range of possible decisions and transactions is wide. Hence, the wealth effect values shown in Tables 2-5 and 2-6 must be taken as indicative only.

¹¹ Statistics Canada, Incomes, Assets and Indebtedness of Families in Canada, 1969, Cat. No. 13-547.

Table 2-5

Estimated Impact of Inflation on the Relative Positions of Households, by Age Group, 1969-75

	Age group in 1969					
	Under 25	25-34	35-44	45-54	55-64	65 and over
			(Per	cent)		
Increase in income Increase in expenditures	n.a. 46.1	70.4 46	67.4 5.6	65.5 46	n.a. 5.6	n.a. 47.4
value of net assets	21.1	14.5	4.4	-7.2	-10.8	-11.6

n.a. not available.

SOURCE M. Boyer, "The Impact of Inflation on Households," Economic Council of Canada Discussion Paper (forthcoming).

Table 2-6

Estimated Impact of Inflation on the Relative Positions of Households, by Income Group, 1969-75

	Income group			
	Less than \$4,000	\$4,000- 7,999	\$8,000- 14,999	\$15,000 and over
		(Per	cent)	
Increase in income Increase in expenditures Increase or decrease in	107.1 48.6	74.5 47.3	69.3 46.5	54.2 45.8
value of net assets	-10.8	5.1	10.9	-10.0

SOURCE M. Boyer, "The Impact of Inflation on Households," Economic Council of Canada Discussion Paper (forthcoming).

However imcomplete, the evidence nonetheless suggests that, in the absence of any adjustment in economic activity or any alteration of portfolios, the past period of inflation would have worked to the disadvantage of high-income households. While individual circumstances undoubtedly were vastly different, on average the highest-income group would have realized the lowest relative gains on income and sustained the highest real capital losses on assets. Those in the lowest-income bracket would also have sustained real losses on their assets, but these would have been partly offset by real income gains generated from enriched transfer payments. Middle-income households would likely have gained through increased income and employment opportunities, and through the reduced real value of their fixed obligations. In fact, households in all income classes and age groups recorded real income gains between 1969 and 1975. For some, however, these gains were partially or largely offset by the negative effects that inflation exerted on their savings. Comparisons among income groups indicate that, during this period, inflation eroded the value of almost all forms of savings and assets except that of houses. Hence those, particularly among middleincome groups, who held much of their savings in the form of property and houses, or who relied more than proportionately on debt financing, tended to be somewhat better off as a result of inflation. It seems likely, however, that the poorest groups, who had little access to credit, suffered real losses, as did the richest groups, who held a substantial portion of their savings in the form of financial assets.

Conclusion

In this chapter, we have focused mainly upon two questions: Has the objective of equitable distribution of rising incomes among all Canadians been met? How has the overall budgetary position of Canadians been affected by inflation? We have looked at factors underlying the changes in income distribution among different age and income groups, and we have concluded generally that, aside from demographic changes, the most significant element was related to changing employment opportunities, particularly with regard to the increasing number of multiple-earner families. Thanks to enriched transfer payments, the incomes of pensioners and families with limited earnings have generally managed to keep pace with others in the economy. In some cases, a widening of family income disparities seems to have been associated with increased effort and employment, although a recession in business activity would likely have had the same effect.

It was also possible, under somewhat restrictive assumptions, to estimate how some groups may have fared during the recent inflationary period. Overall, from a total budgetary point of view, the losers may well have been the poorest and oldest groups, and those among the very rich who held large amounts of financial assets. The gainers were probably the relatively young middle- and upper-middle-class people who had purchased homes prior to, or at the beginning of, the period. In this exercise, we have attempted no more than directional observations, since we really have no way of knowing how individuals and families actually responded to the rising wages and prices, or how they actually adjusted their working patterns and their consumption and savings patterns. We know from developments in income distribution that many adjustments were made. Moreover, we have dealt entirely with their pre-tax situation and, as we shall see in subsequent chapters, neither personal income taxes nor corporate taxes are neutral instruments during an inflationary period.

3 Inflation, Wages, and Private Pension Plans

The rise in the wages of organized labour in Canada has been impressive in recent years, and workers in many industries now enjoy higher hourly earnings than those of employees in the same type of firm in the United States. But, in the race against inflation, how much have they actually gained in real terms? Have workers in some industries gained more than others? Have organized workers in the government and in semipublic sectors — education, health and welfare — fared better than those in the private sector? Has inflation led to changes in bargaining strategies? Has there been a shift of emphasis to nonwage fringe benefits? And can private pension plans remain viable in the face of inflation and its erosion of pension benefits? This chapter attempts to bring an answer to these questions.

Real Wages and Collective Bargaining

During the two decades prior to 1973, the real gains in average weekly earnings¹ realized by Canadian workers ranged between 1 and 6 per cent annually, roughly matching the annual increases in productivity. But rising inflation in 1973 and 1974 eroded most of the purchasing power of workers' wages, and workers in some industries were worse off, in real terms, than in 1972. Workers in the forestry, mining, transport, and financial sectors, for instance, realized moderate real increases in 1974, while those in the manufacturing, commercial, and services sectors, on average, experienced a reduction in real wages (Table 3-1). Moreover, wage settlements varied substantially within each industry. In manufacturing, for instance, some groups realized very substantial increases, but wage settlements in the majority of firms were relatively modest. The consequence was a widening of some traditional wage differentials and the

1 The increase in real wages is measured by the difference between the nominal wage increase and the growth in the cost of living.

26 Wages and Private Pension Plans

creation of new expectations, catch-up pressures, and tensions in the bargaining process. These were manifest in collective negotiations throughout 1975, despite the weakness in business activity and the achievement of real gains, and they precipitated the introduction of the anti-inflation controls. In 1976, real average weekly earnings in all industries have continued to grow.

Table 3-1

	1973	1974	1975	19761
		(Per	cent)	
Mining	3.6	2.1	6.5	6.2
Forestry	6.4	0.6	2.8	3.4
Manufacturing	-0.2	-0.1	4.2	4.7
Construction	-0.1	0.1	5.4	9.0
Transportation and communications	0.8	1.5	3.7	3.3
Wholesale trade	-0.6	-0.6	2.9	3.0
Retail trade	0.4	-0.2	2.8	3.7
Finance, insurance, and real estate	2.2	0.6	1.3	2.6
Services	-0.8	-0.8	3.1	4.7
Average ²	0.0	0.1	3.4	4.2

Annual Change in Real Average Weekly Earnings, by Sector, 1973-76

I First semester.

2 Excludes public administration.

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

Average weekly earnings data are useful for purposes of comparison because they cover salaried workers as well as those who are paid on an hourly basis.² If the pace of activity in some industries picks up much more rapidly than in others, and if this is reflected in relative changes in the average numbers of hours worked per week, the pattern of weekly earnings will be changed. At least part of the increase in average weekly earnings during the first half of 1976 reflects the pick-up in industrial activity; in construction, for example, the extraordinarily large increase in weekly earnings stems from the longer hours and overtime paid in residential and nonresidential building.

The base rate increase in major collective agreements is another widely used indicator of wage developments. This wage indicator is significant because major wage settlements are usually well publicized and hence play

² A strict comparison of wages should be based on hourly wage data, although these present a disadvantage in that they exclude salaried and professional personnel, as well as differentials in hours of work and overtime.

a prominent role in the evolution of collective bargaining and wage demands in general. However, even this indicator must be interpreted cautiously for, although the number of organized workers has increased steadily, close to two-thirds of nonagricultural workers are still not covered by collective agreements. Moreover, organized workers in the major bargaining units of 500 members or more represent only 22 per cent of the total labour force.

As the inflation rate rose in 1973-74, organized workers in larger enterprises did somewhat better than the average and, on balance, their wages managed to keep just ahead of inflation. But, even within the organized sector, there were almost as many workers whose real earnings declined as there were whose real wages advanced. Many of the agreements expiring in 1974 were two- and three-year agreements that had been signed before the upward acceleration of prices that began in late 1972, and contained no provision for cost-of-living increases to offset the inflation rates that subsequently occurred. Moreover, many of these settlements had been deliberately "front-end loaded" — that is, they bore higher increases in the first year and lower increases in the following years, thus running directly contrary to the pattern of escalating inflation. Consequently, there were numerous cases in 1974 and 1975 where workers entered collective bargaining with a strong desire to catch up in real terms for wages that had lagged behind price increases. The fact that some groups gained very considerably in the process spurred the expectations of others.

Since the beginning of the 1970s, the average annual change in wages negotiated under major collective agreements has been slightly higher in the private than in the public sector in each year except 1975 and 1976 (Table 3-2). The lower overall rate in the public sector has been due largely to a slower advance in wages at the federal level. In 1975, the higher-than-average wage increases obtained by public employees were achieved mainly at the provincial and semipublic levels.³

Were the large and often well-publicized wage settlements in the provincial and semipublic sectors a delayed reaction to inflation, or were there other factors that, combined with inflation, might explain this pronounced upward movement? At the provincial level, 51 collective agreements were signed in 1974-75; of these, 25 were first-time agreements and 26 were renewals. The wage increases averaged 23.5 per cent in first-time agreements and 13.2 per cent in renewed contracts. Implicit in the

³ This does not necessarily mean that federal employees earned less than nonfederal employees over the period 1970-75. Provincial and local governments may have had to increase their pay levels more than proportionately in order to compete for the kinds of qualified managerial and professional staff they are now attracting. To draw conclusions on the relative claims of workers in the various sectors, more information would be required about the levels of wages paid to public servants in similar occupations in the three levels of government.

28 Wages and Private Pension Plans

Table 3-2

Average Annual Wage Change¹ Provided under New Major Collective Agreements, by Sector, Selected Years, 1970-75

	1970	1973	1974	1975	19762
	(Per cent)				
Private sector	8.5	10.5	14.3	14.7	11.0
Manufacturing	8.3	9.4	13.1	13.9	
Public sector	8.3	10.0	14.2	19.1	12.2
Federal	5.7	9.0	11.3	13.6	
Provincial	7.1	10.0	14.6	19.3	
Semipublic	9.2	10.5	19.0	20.8	
Municipal	9.9	9.9	12.5	17.6	
Total	8.5	10.3	14.3	16.9	11.6
Consumer price index	3.3	7.6	10.9	10.8	

1 An average of the compound rates of increase over the duration of the agreement.

2 Average annual increases approved by the Anti-Inflation Board by October 1976.

SOURCE Based on data from Labour Canada and estimates by the Economic Council of Canada.

overall wage gains achieved at the provincial level in 1975, therefore, were an unusually large number of settlements covering newly organized workers, for whom an equalization of wages with those of similar occupations played an important role in the bargaining process. In the semipublic sector, first-time agreements accounted for only a small proportion of the total, and the large wage gains reported in this sector were the result of major increases granted to hospital workers.

The acceleration in prices and, in some cases, record profit levels spurred new bargaining vigour, and some existing agreements were reopened to provide additional wage increases. In new agreements, much greater emphasis was given to cost-of-living indexation and to contracts of shorter duration. More than two-fifths of all major collective agreements had a cost-of-living adjustment (COLA) clause of one kind or another in 1975 — a situation not seen since the inflationary Korean War period (Table 3-3).

Some preliminary research has been done to determine whether the automatic indexation of wages through COLA clauses has contributed to the upward momentum of wage settlements. Our findings indicate only an indirect relationship between indexation and rising wage pressures. In recent years, indexing has occurred mainly in contracts covering workers in manufacturing industries and in some agreements covering provincial government employees (Table 3-4). Although 41 per cent of union agreements carried COLA clauses, only about 15 per cent of all non-agricultural workers were covered by such provisions in 1975.

In 1975, agreements incorporating COLA clauses provided an average increase of 14.6 per cent in base wage rates over the life of the contracts,

Table 3-3

Wage, Cost-of-Living, and Duration Features of Bargaining Agreements, 1970-75

	Increase in	Collective	Collective agreements covering:			
	real base wage rate	agreements with COLA clauses	l year	3 years and over		
		(Per cent)				
1970	5.2	n.a.	14.2	31.8		
1971	4.9	4.4	18.2	32.6		
1972	2.4	11.8	17.6	30.9		
1973	0.7	19.4	13.8	30.8		
1974	1.2	33.7	27.3	13.3		
1975	2.3	41.0	47.0	10.9		
1976 ²	3.0	n.ą.	51.9	20.0		

n.a. - not available.

1 Major collective agreements, excluding those in the construction industry.

2 First semester.

SOURCE Based on data from Statistics Canada and Labour Canada, and estimates by the Economic Council of Canada.

Table 3-4

Proportion of Major Collective Agreements Containing COLA Clauses, 1971-75

	1971	1972	1973	1974	1975	
	(Per cent)					
Private sector	6.0	13.6	23.6	40.5	50.4	
Manufacturing	9.2	16.9	31.0	45.5	56.3	
Public sector	0.0	7.4	9.5	17.7	20.3	
Federal	0.0	0.0	0.0	1.8	1.8	
Provincial	0.0	14.0	17.0	29.0	25.0	
Semi-public	0.0	5.9	8.4	15.3	16.3	
Municipal	0.0	0.0	0.0	2.0	11.0	
Total	4.4	11.8	19.4	33.7	41.0	

SOURCE Based on data from Labour Canada and estimates by the Economic Council of Canada.

compared with 18.1 per cent for agreements without such provisions.⁴ The clauses themselves provide either an absolute or percentage rise in hourly pay for each stipulated increase in the cost of living; our estimates indicate

4 Department of Finance, *Economic Review*, April 1976 (Ottawa: Minister of Supply and Services, 1976), p. 46.

30 Wages and Private Pension Plans

that they currently provide a level of protection equal to approximately a 0.5 percentage point wage increase for each percentage point increase in the consumer price index. For 1976, therefore, cost-of-living provisions are likely to add 3.8 per cent to hourly wages in settlements with such clauses. In short, while COLA clauses provide some flexibility in protecting the wages of workers covered by well-established agreements, they do not represent a strong push factor with regard to wage levels. However, if high inflation rates were to remain unchecked, then COLA clauses, together with accompanying base rate increases, could be a significant cost element; but if inflation were reduced, organized labour's interest in COLA clauses would likely decline.

Between 1973 and 1975, there was a substantial shift to collective agreements of shorter duration — a shift less pronounced in the private sector than in the public sector (Table 3-5). Whereas, in 1970, almost onethird of the major collective agreements covered a period of at least three years, only 11 per cent of all agreements signed in 1975 were of this duration. This shift has had an influence on the calculation of measured wage gains. The rise in the observed average hourly base rate under collective agreements in a given year results from two elements: the increases embodied in existing contracts, and those established under new contracts signed that year. Normally, multi-year contracts provide for periodic (usually annual) increases in wages and benefits. When unanticipated inflation is escalating, only those workers whose contracts are up for renewal or are reopened in any given year can press for higher wages. If they represent only a small proportion of total organized labour, the impact of their settlements on the overall average wage measure will be small, and average wage increases are likely to lag behind prices. However,

Table 3-5

	1970	1973	1974	1975		
	(Months)					
Private	27	27	24	23		
Manufacturing	29	28	26	23		
Public	23	21	18	15		
Federal	32	24	23	18		
Provincial	19	21	18	16		
Semipublic	22	20	18	14		
Municipal	20	23	16	15		
Total	26	25	22	19		

Duration of Major Collective Agreements, by Sector, Selected Years, 1970-75

SOURCE Based on data from Labour Canada and estimates by the Economic Council of Canada.
Wages and Collective Bargaining 31

if the number of workers whose contracts are subject to renegotiation is large, the impact of the wage increases granted on the annual wage measure will be significant and, if past experience is any guide, the average wage increase is likely to outrun the overall increase in prices.

Thus, as inflation reduces the average duration of collective agreements and increases the number of agreements to be renegotiated each year, the "wage drag" of the unrenewed stock of contracts is reduced, and the measured increase in base wage rates is more sharply influenced by the wage increases granted under new or renewed agreements. The annual increases in base rates for all collective agreements in 1970 and 1971 were divided roughly equally into those granted under existing contracts and those obtained under new or renewed contracts. But thereafter the situation changed markedly. New and renewed contracts took on added weight and, on average, accounted for about two-thirds of the annual increase in base wage rates. In 1974 — a year in which an unusually large number of workers negotiated or renegotiated their contracts — close to four-fifths of the recorded increases in base wages were attributable to new or renewed contracts (Table 3-6).

Table 3-6

Relative Importance of Existing and New or Renegotiated Major Collective Agreements in Determining Annual Increases in Base Wage Rates, 1970-75

	Annual ir	ncrease in base	wage rates	Number of workers
	Total	Existing contracts	New or renewed contracts	covered by new or renewed contracts
		(Per cent)		(Thousands)
1970	8.5	4.3	4.2	591.4
1971	7.8	3.7	4.1	661.3
1972	7.2	2.4	4.8	794.4
1973	8.3	3.1	5.2	675.3
1974	12.1	2.6	9.5	932.6
1975	13.1	4.5	8.6	738.6

SOURCE Based on data from Labour Canada and estimates by the Economic Council of Canada.

The higher the number of contracts that are negotiated each year, the greater the possibility of prolonged industrial disputes in the form of strikes and lockouts. For instance, the average duration of contracts was reduced from 25 months in 1973 to 22 months in 1974; as a result, the number of expired contracts rose in 1975 from 365 to 442. There was a

32 Wages and Private Pension Plans

substantial rise in the number of strikes and in the amount of time lost through work stoppages. It is estimated that, overall, a 12 per cent drop in the average duration of contracts in this period directly increased the number of renegotiated contracts by 21 per cent and was accompanied by an 18 per cent increase in man-days lost through work stoppages.

There is little doubt, therefore, that the combination of past inflation, legitimate wage catch-up situations, and uncertainty about future inflationary trends and business expectations had the effect of hardening negotiating postures, lengthening the bargaining period after the termination of contracts, and encouraging work stoppages and strikes. In 1974 and in 1975, over ten million man-days were lost. The duration of strikes and lockouts remained generally unaffected, the main impact on time lost being their added frequency. Whether the strikes measurably improved the wage position of the strikers is not clear, since the bargaining units that did strike do not seem to have gained increases larger than those that did not strike. But, of course, many elements could account for this finding.

Nonwage Benefits

In addition to wages, workers are equally concerned with nonwage items and improvements in working conditions paid for by employers. These include a wide variety of benefits such as holiday pay, premiums for overtime and shift work, and contributions to unemployment insurance, pension, sickness, and welfare plans. While detailed and comprehensive data are lacking in this area, available indicators suggest that, over the past five years, there has been a strong increase in fringe benefits per worker in all segments of the economy, the largest gains having been won by public employees (Table 3-7).

Does inflation prompt organized labour or employers to choose between higher wages or more nonwage benefits in their bargaining strategies? For example, as their purchasing power is eroded, workers may prefer to obtain a larger share of their negotiated increases in the form of wages. But wages are immediately taxable, whereas some fringe benefits are not, and other workers may therefore opt for higher benefits. By the same token, if inflation creates liquidity problems for firms, they may be more inclined to grant increased nonwage benefits than higher hourly wages. But they, too, will keep an eye on the tax implications of alternative claims. In this regard, the available data preclude any firm conclusions specifically related to changes in the rates of inflation. What is clearly evident, however, is that employee benefits account for a growing proportion of the gross payroll costs of Canadian business (Table 3-7). Since 1970, the annual rates of increase in supplementary labour income

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Annual Change in Wages and Salaries and in Supplementary Labour Income per Person Employed,¹ by Major Sector, 1970-75

	Priv	ate sector	Public a	dministration		Total
	Wages and salaries	Supplementary labour income	Wages and salaries	Supplementary labour income	Wages and salaries	Supplementary labour income
			(P	er cent)		
179	7.0	14.9	8.2	9.1	7.2	14.4
972	8.0	15.7	7.2	13.6	7.9	15.6
973	9.5	15.2	7.2	9.6	9.3	14.5
974	12.7	20.5	15.2	23.8	12.9	21.0
975	12.3	19.6	15.8	29.1	12.7	21.1

Nonwage Benefits 33

34 Wages and Private Pension Plans

per worker have been substantially higher than the growth in average wages and salaries.

The two major components of employee benefits are paid time off vacations, statutory holidays, lunch periods, and travel time — and private pension and welfare plans. Evidence for a selected group of large firms in Canada shows that the proportion of gross annual payroll costs going to employee benefits has doubled over the past two decades, from 15 per cent in 1954 to over 31 per cent in 1976. These benefits now average about \$3,800 annually per employee in these companies.⁵ Of the firms surveyed, paid time off accounted for close to 15 per cent, and employer contributions to pension and welfare plans for slightly less than 10 per cent, of payroll costs in 1975-76. Employee nonwage benefits in Canada have been rising more rapidly than in the United States, although they are still slightly below U.S. levels.⁶

Another relevant question is whether inflation impairs fringe benefits in the same way that it erodes nominal wages. Intuitively, one would expect that, if the increase in the nominal value of fringe benefits is at least equal to the progression of prices, then the real value of benefits should not decline. This is probably so for most of the components of employee benefits that are designed to meet the current needs of workers. However, in the case of benefits that are a form of savings payable in a subsequent time period, such as pension plans, the impact of inflation is more serious and deserves more detailed examination.

Inflation and Private Pension Funds

Private pension plans can be grouped into three major categories: final earnings plans, in which the level of pension benefits is usually based upon the length of service of a participant and his average earnings during a stated period just prior to his retirement; career average plans, in which a member accumulates each year a unit of pension equal to a percentage of his earnings that year; and a residual category, consisting mainly of pension schemes that give fixed benefits for each year of employment, and schemes that embody profit-sharing elements. There are, of course, other forms of retirement savings, including individual registered retirement savings plans. Here we deal only with employer-employee pension programs.

5 Thorne Riddell Associates, I.td., Employment Benefit Costs in Canada, 1975-76. Toronto, 1976.

6 Canadians, however, enjoy a number of comprehensive benefits — such as old age security benefits and the various benefits provided for widows and the disabled under the Canada Assistance Plan — that are paid for from general revenues rather than specific contributions that are characteristic of the U.S. social security system. Inflation and Private Pension Funds 35

Not all employers have private pension plans for their employees. Where such plans do exist, several years may be required before the worker becomes eligible to participate and, even after he has joined, it may take five to ten years before his pension rights are vested. Because so many workers switch jobs and, in the process, withdraw or forgo their accumulated pension entitlements, it is estimated that only about 40 per cent of Canadians qualify for private pensions upon retirement.

Inflation can undermine pensions by lowering the real value of pension entitlements as they accumulate during the active life of an employee, by lowering the real value of benefits during the employee's retirement years, and by jeopardizing the actuarial soundness of pension funds. How damaging this influence is depends on the seriousness and persistence of inflationary pressures, as well as on the specific type of plan offered by individual employers. Since the wages and salaries of most workers contributing to private pension funds have tended to rise at least at the same rate as inflation, final earnings plans effectively ensure that the real value of a member's initial benefits at the time of retirement will generally correspond to the anticipated percentage entitlement of his best earnings. Contributors to career-average plans, however, are likely to receive lower nominal pension benefits that, in addition, will have lost much of their real purchasing power during the contributory period marked by inflation. Pension plans in the residual category, providing mostly flat benefits or annuities, expose their members to the most severe inflation risk.⁷ It is not surprising, therefore, that final earnings plans have become more popular, and career-average plans less popular, during the past decade (Table 3-8). However, in the process of collective bargaining,

Table 3-8

	1965		19	74
	Number	Distribution	Number	Distribution
	(Thousands)	(Per cent)	(Thousands)	(Per cent)
Final and average best				
earnings	1,145	48.9	1,861	54.3
Career average	667	28.4	689	20.1
Other	533	22.7	874	25.6
Total	2,346	100.0	3,424	100.0

Members of Pension Plans, by Type of Benefit, 1965 and 1974

SOURCE Statistics Canada, Pension Plans in Canada, 1974.

7 J. E. Pesando and S. A. Rea, *Retirement Incomes and Public Policy*, a report submitted to the Ontario Economic Council, March 1976.

36 Wages and Private Pension Plans

some employers have agreed to liberalize career-average benefits in response to an acceleration in the rate of inflation.

Unless pension benefits are fully indexed, inflation inevitably reduces the real value of the pension income during an employee's retirement years. However, except for federal superannuation, relatively few plans provide for automatic indexing of benefits, although a number of employers adjust pensions on an ad hoc basis.⁸ In 1974, only 41,560 workers in the private sector — 2 per cent of the membership of private pension plans — had some form of escalation clause linked to the increase in the CPI. Of course, benefits granted under the Canada and Quebec Pension Plans and the Old Age Security Program are indexed, thus providing a measure of protection against inflation for all persons over 65 years of age.

The extent of the loss to pensioners is difficult to estimate, since little is known about those who are actually drawing private pensions or about the nominal amounts of their benefits. However, income tax returns show that Canadians declare pension income other than old age security payments or benefits from the Canada and Quebec Pension Plans; in 1974, this declared income amounted to \$1.5 billion. If all private pension benefits were fixed in nominal terms, without indexation, then the annual loss to pensioners as a result of inflation would probably correspond to the increase in the costof-living index. By this measure, between 1970 and 1974, private pensioners lost considerable amounts annually in real purchasing power (Table 3-9). To the extent that at least some of the pensions were indexed, the actual loss was probably slightly less than indicated here.

Table 3-9

Estimated Loss on Pension Incomes as a Result of Inflation, 1969-74

	Amount of other pensions and superannuation declared	Consumer price index	Estimated loss caused by inflation
	(\$ Million)	(Per cent)	(\$ Million)
1969	681	4.5	31
1970	783	3.3	26
1971	1,052	2.9	30
1972	1,074	4.8	52
1973	1,283	7.6	98
1974	1,515	10.9	165

SOURCE Revenue Canada, Taxation Statistics; and estimates by the Economic Council of Canada.

8 Statistics Canada, *Pension Plans in Canada*, 1974, p. 76. It is true that the number of plans with an indexing formula increased from 60 with 191,700 members in 1970 to 141 with 607,894 participants in 1974, but this was largely attributable to the introduction of an indexing formula in some public sector plans, the largest of which was the federal superannuation plan, with about half a million members.

Inflation and Private Pension Funds 37

These aggregate figures, however, mask the real income losses suffered by individual pensioners as a result of inflation. For instance, because of continuously rising prices, the fixed pension incomes of individuals who had retired in 1969 were worth less than two-thirds of their original purchasing value by 1975. It is not surprising, therefore, that the heightened concern about the need for more adequate postretirement income has, along with rising wage rates — on which pensions are based — led to very significant increases in contributions to pension plans in recent years. In 1974, for instance, total contributions to pension plans — in both the public and the private sectors — were close to \$3 billion, 35 per cent of which was paid by employees and 65 per cent by employers.⁹

What about the effects of inflation on pension plans as a form of savings? As with other savings, to remain sound, pension funds must record rates of return that move at least at the same pace as inflation. However, rising prices tend to produce transfers of wealth from long-term lenders to borrowers of money and, since pension funds are heavy lenders of capital, they too are likely to be adversely affected.¹⁰ Partial estimates of the losses to the funds caused by the recent inflation were developed with the available data on the distribution of assets in private trusteed pension funds. Only bonds, stocks, and mortgages - which account for roughly 80 per cent of the portfolio of these funds — were considered. The estimated values of mortgage and bond yields, and the gains or losses in stock values, were compared with a rate of return that would accommodate a 1.5 per cent administration cost and fully anticipate the rising rates of inflation. Bonds and mortgages were assumed to yield the going interest rates at the time of acquisition,¹¹ and took account of annual purchases and retirements at maturity (Table 3-10). The plight of private pension funds in recent years is evident from the results. Thus it comes as no surprise that employers paid into the plans, for experience deficiencies

- 9 Employer liabilities involve current service costs, which must be fully funded on a yearly basis; initial unfunded liabilities, which arise from the establishment of a new plan or an amendment to an existing plan and are usually amortized over a fifteen-year period; and experience deficiencies, which may result from factors such as pensioners living longer than the assumed mortality risk, a decline in earnings on the fund's investments, and unexpected large increases in employee salaries and wages, which will ultimately have to be reflected in the pension benefits from final earnings plans. These deficiencies and unfunded liabilities account for about one-third of employer contributions.
- 10 See J. Lintner, "Inflation and Security Returns," Journal of Finance (May 1975): 259-80.
- 11 This assumption may in fact be rather generous. It has been estimated, for instance, that over a ten-year period ending in 1975, the median rate of return on the assets of private pension funds was 3.2 per cent. Other authors argue that pension funds that have averaged a return of 5 per cent over the past ten years have done quite well. See R. M. MacIntosh, "The Great Pension Fund Robbery," *Canadian Public Policy* (Spring 1976); and J. D. Gibson, "Inflation and Private Pension Funds," *The Canadian Business Review* (Winter 1975).

	Mor	tgages	Bo	spu	Stocks	
	Average yield ²	Gains or losses	Average yield ²	Gains or losses	Gains or losses ³	Total gains or losses
	(Per cent)	(\$ Million)	(Per cent)	(\$ Million)	(\$ Million)	(\$ Million)
02	7.4	- 4.1	5.8	- 40.1	-347.2	-391.4
12	7.6	- 0.6	6.0	- 22.1	- 7.7 -	- 30.4
72	7.8	-12.7	6.1	- 77	+281.5	+191.4
73	8.1	-36.7	6.2	-160.5	-161.2	-358.4
74	8.2	-79.6	6.6	-266.6	+ 18.1	-328.1

Gains and Losses' Resulting from the

Table 3-10

Wages and Private Pension Plans

38

and unfunded liabilities, amounts totaling over 600 million in 1974^{12} — a requirement that does not arise in the case of the indexed superannuation scheme of the federal civil service, since benefits are paid out of general revenue.

One final observation on these actuarial losses, which in fact constitute income transfers from pension plan contributors to the issuers of securities and the signatories to mortgages. In some cases, they may be one and the same person or organization — workers who own houses, or firms that issue bonds or equities. As noted earlier, in the case of the portfolios of households, inflation generally alters both sides of the ledger.

Conclusion

Through their union locals, workers traditionally make choices between the relative desirability of higher wages and of additional nonwage benefits such as time off, improved working conditions, and retirement savings. If the majority of workers are young and the turnover is relatively high, they are likely to emphasize immediate rewards. If their job attachment is reasonably permanent, however, they are likely to attach more importance to the need for adequate working conditions and retirement income. During inflation, the real value of nominal gains is eroded, and workers adjust their bargaining strategies accordingly. In the case of wages and most fringe benefits, the current level of inflation is a major concern, but decisions about pensions and related savings involve anticipations of future price increases. Employers, too, enter negotiations with an eye to the impact of present and future rates of inflation on their overall costs, sales, and profits. Both parties to collective agreements thus aim at obtaining postinflation real income gains. We have seen that, during the spiraling inflation of 1973 and 1974, organized labour's wage increases barely kept pace with the cost of living. While more recently they have achieved real wage gains throughout, they have lost ground in the area of pensions. Employers have suffered a loss on pensions in actuarial terms, but inflation has also affected businesses in other ways, as the next chapter shows.

¹² Pension Commission of Ontario, "Preliminary Report on the Funded Status of Certain Pension Plans Registered with the Pension Commission of Ontario" (Toronto, August 1975).

We have seen earlier how an inflationary environment can affect the relative position of households in terms of changes in their income, expenditure, and balance sheet structure. We also looked briefly at the effects of inflation on private pensions and at the transfers of real income from pension contributors to borrowers from pension funds. We now extend the analysis more fully to the business sector, where inflation has a double impact. First, it alters the distribution of the income generated by an enterprise between the owners, the creditors, and the taxation authorities. Second, since inflationary pressures foster a greater degree of price and cost uncertainty, they alter the amount of risk associated with business investment and planning decisions.

The General Effects of Inflation

The difficulties for businesses have become more evident as the rate of inflation in Canada has grown. Because existing accounting and taxation procedures were not designed to function in an inflationary environment, distortions have arisen both in the measurement of the firms' financial performance and in the calculation of their tax liabilities.

Inflation has raised the effective rate of corporate income tax on profits by decreasing the real value of capital cost allowances. Inflation has also generated increases in the amount of net earnings subject to tax by allowing only the historical purchase price of inputs, and not their current replacement cost, to be used as the basis for calculating costs.¹ However, its impact on corporations has not been entirely a one-way street. The unanticipated increase in the rate of inflation has also resulted in a transfer of wealth to the owners of corporations from the holders of their financial debt. This has occurred whenever the original interest rates paid on financial liabilities were too low to offset the inflation-induced erosion of

¹ Touche Ross & Co., "Inflation: Its Impact on Business," Report to an Association of Canadian Corporations Representing a Wide Base of Canadian Industry (Toronto, May 7, 1976).

the real purchasing power of repayments fixed in nominal values. Even when lenders and borrowers have incorrectly anticipated the inflation that occurred subsequently and wealth has been transferred in one direction or another, higher nominal interest rates have created liquidity problems for a number of borrowing corporations, thus raising the level of risk associated with long-term borrowing costs.

In addition to interest-bearing assets and liabilities, individuals and businesses hold non-interest-bearing cash balances to facilitate quick and ready purchases and sales of goods and services. Because money has a fixed nominal value, a price increase is likely to prompt those wishing to conduct transactions to add to their holdings of money in order to complete the same volume of business. The reduced purchasing power of the original nominal cash balances can be viewed as a tax paid by the holders of money.

In most cases, the additional cost burden that inflation imposes on some sectors or industries becomes a windfall for others. Inflation-induced gains accrue to the federal and provincial governments, through proportionately higher corporate taxes than they would otherwise receive, and to the financial enterprises that benefit from increased monetary transactions and from borrowing long and lending short at rising interest rates. Over the past decade, most other industries have tended to lose in the inflation sweepstakes.

The main purpose of this chapter is to estimate the importance of these inflationary effects on the financial well-being of business enterprises. The calculated impact of all these effects will then be integrated to estimate the overall impact of inflation on Canadian corporations.² It must be emphasized that we attempt here to identify these effects as isolated phenomena, separate from the actual patterns of boom and recession that have affected, and have been affected by, the simultaneous price changes that have occurred. While rising inflation from 1972 to 1974 coincided with overall profit levels that were never higher in money terms, these reflect an inflationary factor and a real factor, just as do wages and interest rates. Our purpose is to probe beneath the inflationary factor to determine how that recent experience alone has distorted the real returns to the various business sectors.

Income Taxes and Depreciation Expenses

Capital items are purchased only periodically but are used in the operation of a business over a series of accounting periods. The

² Two recent papers contain a similar analysis for the United States: see John B. Shoven and Jeremy I. Bulow, Inflation Accounting and Non-Financial Corporate Profits: Physical Assets, Brookings Papers on Economic Activity, vol. 2, 1976; and Inflation Accounting and Non-Financial Corporate Profits: Financial Assets and Liabilities, Brookings Papers on Economic Activity, vol. 3, 1976.

measurement of net income would thus be distorted if the full costs of these fixed assets were claimed, for tax purposes, in the period of purchase rather than over the assets' useful life. To avoid this distortion, Canadian corporate tax regulations, as well as traditional accounting practices, provide a procedure whereby new plant and equipment costs are distributed over the period in which their services contribute to production.

This gives rise to four elements used in calculating depreciation expenses for financial and taxation purposes: 1/ the original cost of the equipment; 2/ the estimated life of the equipment; 3/ the percentage of the original cost that firms may deduct annually from earnings, for tax purposes, as a legitimate depreciation expense; and 4/ the replacement cost of the equipment. Standard accounting procedures in Canada dictate that, for both financial and taxation purposes, depreciation expenses must be calculated on the basis of the historical cost of these fixed assets. For tax purposes, the maximum capital cost allowance is usually a fixed proportion of the undepreciated historical costs while, in the financial statements of the business, an amount representing the depreciation expense is claimed. This amount is usually calculated by distributing the historical cost of the assets over time, according to the firm's estimate of their service lives. For instance, even if a piece of machinery is expected to last ten years and is written off at 10 per cent annually in the company's financial books, corporate tax regulations allow a 50 per cent tax write-off annually over two years.

With inflation, the replacement prices of capital assets rise. But the allowable depreciation for tax purposes in Canada is a fixed percentage of historical costs. If the depreciation expenses allowed over the life of a fixed asset were recalculated in terms of its ultimate replacement cost, the higher the rate of inflation after the asset was purchased, the wider would be the gap between the present value of the stream of depreciation expenses based on replacement cost and that based on historical cost.

Table 4-1 compares the tax depreciation allowance (more commonly known as capital cost allowance) based on the historical costs of the assets for selected years during the last decade with the tax depreciation allowance that would have been available had the replacement costs of fixed assets been used as the basis for the calculations. For Canadian manufacturing corporations, the ratio of the estimated allowance at current replacement cost to the actual allowance at historical cost averaged 1.39 for the 1965-74 period. It fluctuated within a narrow range between 1965 and 1973, then jumped to 1.59 in 1974. This means that the depreciation allowance, for income tax purposes, would have been approximately 59 per cent higher in 1974 had the same rates been applied to the replacement rather than historical costs of fixed assets in Canadian manufacturing. For nonmanufacturing industries, the ratio averaged 1.36

over the decade, with only a modest increase in value up to 1970. However, as inflation rates climbed in the 1970s, the ratio rose from 1.33 to 1.48 for nonmanufacturing industries. In the financial sector, the increase was also pronounced.

Table 4-1

Estimates of Depreciation Expense, by Major Sector, Selected Years, 1965-74

	Capital cost al	lowance based on:	
	Historical costs (1)	Current replace- ment prices (2)	Ratio: (1)/(2)
	(Millions o	of 1974 dollars)	
Manufacturing			
1965	2,581	3,614	1.40
1970	2,271	3,060	1.35
1974	2,909	4,622	1.59
Nonmanufacturing			
1965	1,727	2.257	1.31
1970	2,464	3,277	1.33
1974	2,012	2,982	1.48
Finance			
1965	230	268	1.16
1970	480	588	1.22
1973	834	1,135	1.36

I Excluding utilities and finance.

SOURCE Glenn P. Jenkins, Inflation: Its Financial Impact on Business in Canada, Economic Council of Canada (forthcoming).

For some industrial sectors — such as textile mills, printing and publishing, and transportation — inflation-induced increases in the ratio have been significantly greater than the average for manufacturing as a whole. These industries have expanded relatively slowly over the past decade; hence their plant and machinery and equipment tend to be relatively old. As a result, the book value of their fixed assets, in terms of historical costs, is now substantially below the value at replacement cost.³

It is true, of course, that the full burden on businesses of tax allowances based on historical costs is considerably offset by their ability to write off

3 Glenn P. Jenkins, Inflation: Its Financial Impact on Business in Canada, Economic Council of Canada (forthcoming).

plant and equipment more quickly than if the tax allowances were limited to the true economic life of the fixed capital assets. However, the depreciation allowances embodied in the tax regulations are matters of discretionary government policy and, in any particular year, they apply, regardless of the replacement/historical cost ratios or whether prices are stable or increasing. Hence, in an appraisal of the anticipated or unanticipated transfers of income arising from inflation, they are part of the elements we assume to be fixed.

The Evaluation of Inventories

When prices are rising steadily, there are parallel effects, in terms of historical/replacement cost accounting for tax purposes, with respect to the overvaluation of net earnings from goods sold from inventories and hence to the overstatement of net earnings subject to corporate taxes. As with plant and equipment, the problem arises because accepted tax accounting procedures in Canada do not differentiate between net earnings required, in a period of rising costs, to replace items sold from inventories and those which constitute legitimate business profits. It is true that, in inflationary periods, firms can realize extra profits through higher markups on their finished goods. But how real are these profits, bearing in mind that the firm will expect to replace these goods in its inventory with goods that embody higher-cost material and labour inputs?

Inventory accounting is necessary in order to distinguish costs that relate to sales at a given point in time from purchases of inputs or the accumulation of replacement products in that and subsequent periods.⁴ In the simple case of material inputs, purchases may occur over several periods prior to the sale of the finished product. An accounting problem arises in estimating the correct cost of inputs that have been stockpiled for some time but are used in the current year's production and sales. If the

4 Some traditional methods of business inventory accounting are FIFO (first in, first out) and LIFO (last in, first out). The FIFO method assumes, for costing purposes, that the goods are charged to production or sales in the order of their acquisition. When prices are changing, a physical unit of stock will be charged to the cost of either production or sales, at a price that differs from that of its replacement. As goods flow into and out of inventories, the book value of inventory holdings changes, although there may be no change in the number of physical units held. In times of inflation, when goods are removed from inventories and charged out at other than their replacement cost, the measurement of their historical acquisition cost, even though the number of physical units in the urbor discusses that the goods charged out first are those acquired last. This method approximates that of charging out withdrawals at replacement cost and is generally more consistent with national accounting requirements. However, LIFO is not an accepted method of inventory valuation for taxation purposes in Canada.

original cost of these inputs differs from their replacement cost, the use of the former to measure current net earnings will either under- or overestimate the real income associated with sales in any particular period. If income is overstated, as it almost inevitably is when prices are rising, the tax liability will rise as well.

Chart 4-1

Extra Declared Earnings Resulting from the Use of Historical Rather than Replacement Costs in Inventory Valuation, 1965-74



SOURCE Glenn P. Jenkins, Inflation: Its Financial Impact on Business in Canada, Economic Council of Canada, (forthcoming).

In order to calculate the inventory valuation adjustment, the change in the book value of inventories resulting from changes in physical assets must be differentiated from the amount obtained by replacing, at current prices, the units taken from inventories for production or sales.⁵ From 1965 to 1970, the inventory valuation adjustment grew very slowly,

⁵ The basic data used for the estimation of the inventory valuation adjustment were prepared by the National Accounts Section of Statistics Canada for each industrial sector.

averaging approximately \$244 million a year (at 1974 prices) for manufacturing and \$275 million for nonmanufacturing. However, from 1971 to 1974, the size of the inventory valuation adjustment, which equals the amount by which business income has been overestimated, accelerated to almost \$3 billion for manufacturing and \$1.9 billion for non-manufacturing (Chart 4-1).

At the sectoral level, the industries hardest hit by the tax liabilities on this artificially identified income were food and beverages, textile mills, paper and allied products, primary metals, metal fabricating, and retail and wholesale trade. We estimate that, in 1973, Canadian corporations paid more than \$1 billion extra in taxes as a result of the prevailing costaccounting system for goods sold from inventories. By 1974, the inventory valuation adjustment had grown to the extent that these extra taxes amounted to between \$1.5 and \$2.0 billion.

Inflation as a Tax on Cash Balances

Cash balances — composed of currency and demand deposits, neither of which bear interest — are held for the services they provide in facilitating the completion of transactions. Because money has a fixed nominal value, rising prices lower the value of a given stock of money held by individuals or businesses in terms of the quantity of goods and services for which it can be exchanged. During an inflationary period, holders of money must therefore increase their nominal cash balances in order to buy and sell the same quantity of goods and services. Thus, to the extent that the purchasing power of these money holdings has eroded, without any compensation in the form of interest, inflation can be viewed as a tax⁶ on these monetary assets.

To calculate the amount of an industry's losses of this type, it seems reasonable to assume that the erosion in the overall value of cash balances held each year by the industrial sector coincides roughly with the overall rate of price increases, as measured by the implicit gross national expenditure (GNE) deflator. The resulting estimates are reported in Table 4-2, for selected years.

Financial institutions are both receivers and bearers of the inflationary "tax" on cash, since they create additional cash balances at a very low cost and hold large quantities of these nominally denominated assets. The next

^{6 &}quot;Tax," in this sense, has a different meaning than in preceding sections, where it referred specifically to the application of corporate taxes on net earnings inflated because of regulations and accounting practices. An inflationary "tax" refers to inflation-induced losses in the real-wealth value of cash holdings; these losses do not necessarily represent a windfall to government.

section will show, however, that this "tax" on the financial sector is far outweighed by the benefits received through its holdings of demand deposits and other low-interest, short-term liabilities.

Table 4-2

Inflation "Tax" on Cash Balances, by Major Sector, Selected Years, 1965-74

	Manufacturing	Nonmanufacturing ¹	Finance
		(Millions of dollars)	
1965	41	62	162
1970	40	86	208
1973	63	165	516
1974	91	135	n.a.

n.a. – not available.

1 Excluding utilities and finance.

SOURCE Glenn P. Jenkins, Inflation: Its Financial Impact on Business in Canada, Economic Council of Canada (forthcoming).

Income Transfers between Borrowers and Lenders

Inflation has a strong impact on the financial performance of a business when the interest rates paid on financial liabilities or received on financial assets either do not fully compensate, or overcompensate, lenders for the actual rate experienced during a period. When this occurs, there is an unanticipated transfer of wealth between corporation owners and debtholders.

The nominal interest rate that a financial security yields is made up of two components: a real return consistent with normal risk considerations, and compensation to offset the expected inflation-induced erosion of the real value of future principal repayments.⁷ Because the course of future prices is variable and not easily foreseen, substantial divergences between expected and actual rates of inflation are frequent. If the actual rate is lower than that which lenders build into their lending rates, the nominal interest rate will include an unanticipated premium payable by the borrower to the lender. Conversely, when the actual rate is higher than the expected rate, there is an unanticipated transfer of income from the lender to the borrower.

7 For a more complete discussion of this issue, see Jenkins. Inflation.

Short-Term Financial Assets and Liabilities

In terms of book value, the net amount of unanticipated income transfer that lenders receive or that borrowers pay is determined by the composition and net balance of the financial short- and long-term liabilities and assets that they possess and by the difference between the actual rate of inflation and the rate implicit in the various nominal interest rates on their ledger items. Many of the short-term liabilities held by banks and other financial institutions, such as demand deposits, do not bear a nominal interest rate. In inflationary periods, therefore, this sector gains on these liabilities by an amount equal to the actual rate of inflation multiplied by the face value of the non-interest-bearing deposits.⁸

Many things help to shape businessmen's anticipations of the future levels of inflation — business forecasts, the stage of the business cycle, government pronouncements, past price performance, and their own pessimism. Taken together, these factors form an average perspective that becomes built into the nominal interest rate and that may be compared with the actual course of events. There is no magic formula that singles out the overall expected price level. One method consists in assuming that lenders and borrowers agree on a nominal interest rate based on shortterm expectations of inflation that are largely determined by price changes over the preceding three years. Using these calculations, Chart 4-2 compares actual changes in prices with the estimation of the expected rate of inflation implicit in the nominal interest rate. If a fixed amount to cover risk is added to the expected rate, the pattern very closely resembles that of corporate short-term interest rates. The result suggests that, in all but a few years since 1960, creditors have been transferring real income to corporate borrowers.

The estimated amounts of Canadian business income (in 1974 prices) transferred between borrowers and lenders of short-term financial obligations are presented in Table 4-3. The gains received by business from holders of short-term corporate notes, in paying compensation for a lower expected inflation rate than actually experienced, increased dramatically as the rate of inflation accelerated after 1972. In particular, industries such as retail and wholesale trade, which rely heavily on short-term financing of inventories, received very significant income transfers.

Inflation, whether anticipated in the interest rate structure or not, transfers income to financial institutions on the demand deposits and other low-interest-bearing, nominally denominated liabilities they have issued.

⁸ To the extent that banks provide an assortment of unpaid services as well as simply facilitate the physical security and transferability of deposits and that these services vary with the rate of price changes, there may be legitimate costs to be deducted from these calculations.

This transfer more than tripled between 1965 and 1973. Who were the net losers? In almost all cases, they were the individual savers and creditors holding these forms of assets (see Chapter 2).

Chart 4-2

Actual and Expected Growth in the Price Levels, 1954-74



SOURCE Glenn P. Jenkins, Inflation: Its Financial Impact on Business in Canada, Economic Council of Canada, (forthcoming)

Table 4-3

	Manufacturing	Nonmanufacturing ²	Finance
		(Millions of dollars)	
1965	13	33	390
1970	14	22	588
1973	57	132	1,290
1974	200	328	n.a.

Income Transfers¹ Resulting from the Impact of Unanticipated Inflation on Net Short-Term Liabilities, by Major Sector, Selected Years, 1965-74

n.a. - not available.

1 Positive values indicate an income gain for the owners of business firms.

2 Excluding utilities and finance.

SOURCE Glenn P. Jenkins, Inflation: Its Financial Impact on Business in Canada, Economic Council of Canada (forthcoming).

Long-Term Financial Assets and Liabilities

Whereas the long-term financial liabilities of nonfinancial corporations are generally much larger than their long-term financial assets, the opposite relationship usually exists in the financial sector. And, since the actual rate of inflation may diverge considerably over the longer term from the expected rate implicitly built into the fixed nominal interest payments made annually, this raises the possibility of large income transfers between corporate debt-holders and the owners and shareholders of corporations.

The financial impact of inflation discussed so far is felt during the period in which inflation occurs. However, in the case of long-term financial assets or liabilities, unexpected inflation means that the present real value of future principal payments on securities is lower than expected at the time the loan was negotiated. While the current inflation has caused the real book value of long-term financial assets and liabilities to decline and gross revenues from sales to increase, the real transfer from lenders to borrowers takes place only when the principal of the security is repaid.

Income transfers from unanticipated inflation estimated here for longterm financial securities include only the differences between the actual and the expected inflation implicit in the nominal interest rates paid on these securities. They do not include changes that occur in the market value of the securities themselves, because expectations in the financial markets about future inflation rates become more or less optimistic during the life of the security. These changes are realizable only when the security is resold or repurchased by the original issuer before its date of maturity. Only a small proportion of Canadian corporate financial liabilities are traded on financial markets. It is not very realistic, therefore, to assume that companies buy back their debt and realize the gain whenever its market value falls below its face value.

To estimate the income transfer on long-term financial securities that is caused by unanticipated inflation, it is necessary to have some idea of the negotiated life of each loan and to calculate the average distribution of the term to maturity of the liabilities. Accordingly, a set of weights was constructed to measure the proportion of existing long-term debt that was issued each year. We then used these to get a weighted average of the expected price growth implicit in the nominal interest rate for the corresponding years.

The value of the net corporate gain or loss from unanticipated inflation, as it affected the net long-term debt position of the three sectors surveyed here, is reported in Table 4-4. Inflation has caused a net income transfer to the owners of manufacturing and nonmanufacturing corporations from the holders of their net long-term liabilities every year since 1965. As expected, this transfer has generally reduced the wealth of financial

institutions, many of which carry such long-term securities as part of their portfolios. The transfer has been highly variable, averaging -\$63 million over the 1965-71 period, but subsequently increasing to -\$265 million in 1973.

Table 4-4

Income Transfers¹ Resulting from the Impact of Unanticipated Inflation on Net Long-Term Liabilities, by Major Sector, Selected Years, 1965-74

	Manufacturing	Nonmanufacturing ²	Finance
		(Millions of dollars)	
1965	81	180	-261
1970	169	356	-38
1973	325	788	-265
1974	561	894	n.a.

n.a. - not available.

1 Positive values indicate an income gain for the owners of business firms.

2 Excluding utilities and finance.

SOURCE Glenn P. Jenkins, Inflation: Its Financial Impact on Business in Canada, Economic Council of Canada (forthcoming).

The industries that have gained the most on their net long-term debt from unanticipated inflation are transportation and communications, retail trade, paper and allied products, and primary metals.⁹ Transportation and communications account for approximately 65 per cent of the combined gains of both manufacturing and nonmanufacturing; the other industries, for about 15 per cent.

Tax Benefits from Anticipated Inflation

Even if inflation were perfectly anticipated by all parties, transfers to or from government would occur by virtue of the tax system. While corporate debtors can claim the full nominal interest expense they pay as a legitimate tax-deductible expense, corporate creditors must also include the interest they charge as taxable income. In the case of unanticipated inflation, the extent of transfers between debtor and creditor is not affected by changes in the inflation rate per se, but rather by the difference between the actual rate and the expected rate built into prevailing interest charges. However, when inflation is perfectly anticipated and there are no windfall debtor/ creditor transfers, changes in the level of inflation per se alter the

9 The results by sector are reported in Jenkins, Inflation.

Tax Benefits from Anticipated Inflation 53

amounts of tax-induced transfers on interest charges that are taxed, or are allowed as tax deductions, by government. Under present Canadian tax laws, the full amount of the interest paid each year on a firm's outstanding debt is allowed as a deduction from taxable income when calculating corporation income, even though the component of the interest rate that is a compensation for expected inflation is in fact an early repayment of the real value of the loan's principal. In this way the real cost of borrowing for firms is reduced, at least over the short term. For financial corporations that are net long-term lenders, this compensation for expected inflation becomes included in taxable incomes and therefore lowers the real returns from lending. The higher the rate of inflation eroding the real purchasing power of the value of a security and the higher the implicit interest rate paid to compensate for this erosion, the greater the tax advantage to borrowers and the tax disadvantage to lenders.¹⁰

Since both the manufacturing and nonmanufacturing sectors are net debtors, the tax benefit resulting from inflation has grown substantially since 1965 (Table 4-5). Among the manufacturing industries, food and beverages, paper and allied products, and primary metals received the largest amounts, while transportation and communications, and wholesale and retail trade have been the principal beneficiaries in nonmanufacturing. Public utilities would have been the largest recipient of this tax benefit, but electric utilities — the major component of this industry are almost all government-owned and thus do not pay income taxes.

Table 4-5

	Manufacturing	Nonmanufacturing ²	Finance
		(Millions of dollars)	
1965	65	150	-178
1970	158	312	-12
1973	133	401	17
1974	209	407	n.a.

Value of Tax Reduction¹ from Expensing of Anticipated Inflation Component of Nominal Interest Rate, by Major Sector, Selected Years, 1965-74

n.a. - not available.

1 A negative figure indicates a tax increase.

2 Excluding utilities and finance.

SOURCE Glenn P. Jenkins, Inflation: Its Financial Impact on Business in Canada, Economic Council of Canada (forthcoming).

10 In theory, it might be supposed that creditors and debtors would take account of the tax regulations in determining a mutually acceptable interest rate — a rate that would then include a premium payable to the creditor to cover his tax disadvantage. In fact, prevailing lending rates have not normally reflected such a premium.

The financial sector has moved from a position of overall tax disadvantage to one of net benefit, mainly as a result of the nature of that sector's portfolio structure. In the early 1960s, when inflation and interest rates were low, taxes paid on the inflationary component of their interest income from long-term assets outweighed the tax savings on this component of the interest paid on their short-term liabilities. As inflation increased, most financial institutions were locked into low interest rates on their stock of long-term assets — mortgages bearing fixed interest rates lower than 7 per cent, for example — but found that they had to pay higher interest rates on their short-term liabilities.

Integration of the Financial Effects of Inflation on the Business Sector

We have seen that the effects of inflation on businesses fall into two main categories. First, there are the changes that inflation brings about in the income taxes paid to governments. These include tax losses resulting from the decline in the real value of the capital cost allowance and the growth in the inventory valuation adjustment, as well as net tax gains or losses on the inflation component of interest charges, depending on the structure of a firm's portfolio and the level of inflation. Second, because inflation erodes the purchasing power of a given amount of money, it creates income transfers on assets and liabilities that carry a fixed face value in money terms. Such transfers occur in real terms through an inflationary "tax" on cash balances, just as they occur between debtors and creditors through interest charges that over- or under-anticipate the effect of inflation on short-term and long-term securities.

We have attempted to measure these effects and have combined them into one overall balance sheet (Table 4-6). It shows that inflation has caused a substantial decrease in the real income of nonfinancial businesses in Canada. When all the effects of inflation resulting from current tax regulations and short-term transfers are summed up, they are found to have reduced the real income of manufacturing and nonmanufacturing industries very substantially in 1973 and 1974, compared with what their income would have been in the absence of inflation. It is true that, overall, profit levels in those years had never been higher, but this resulted from a combination of peaking sales and rising inflation rates. Had prices remained stable throughout and had the absolute levels of profit been stripped of the inflationary amounts built into them, business enterprises would have been substantially better off in real terms.

Part of the short-term financial losses in business income arising from inflation may be offset by the income gains that firms derive through their long-term indebtedness. These gains become apparent in their cash flow situations; as price levels rise, sales revenues also increase relative to debt

repayments, which are fixed in terms of the price level of a previous period. However, it takes time for this income transfer to be realized, and companies that might ultimately be net beneficiaries from inflation over the longer term could suffer severe liquidity crises from inflation's short-run effects.

Table 4-6

	Income changes resulting from:		
	Additional taxes	Transfers to borrowers	Net effect
		(Millions of dollar	s)
Manufacturing			
1965	-589	53	-536
1970	-367	126	-241
1973	-1,032	292	740
1974	-1,657	671	-986
Nonmanufacturing ²			
1965	-240	151	-89
1970	-101	248	147
1973	-1,088	754	-334
1974	-1,003	1,087	84
Finance			
1965	-200	-32	-232
1970	-69	342	273
1973	-130	509	379

Effects1 of Inflation on the Income of Major Business Sectors, Selected Years, 1965-74

Negative values indicate an income loss for the owners of business firms.
Excluding utilities and finance.

SOURCE Glenn P. Jenkins, Inflation: Its Financial Impact on Business in Canada, Economic Council of Canada (forthcoming).

Inflation has also had a much more favourable effect on financial institutions. Admittedly, the "tax" on their cash balances has grown, but this has been more than offset by the rising real income transfers realized on their short-term net liabilities. Indeed, every year since 1965, the business income of the financial sector has been improved by inflation. Although available data for this sector for the last three years are incomplete, evidence shows that financial institutions have continued to enjoy substantial business income benefits from the inflation-induced factors that we have identified.

Inflation and Business Risk

The present provisions of the Canadian taxation system effectively "tax away" part of the inflation-induced inventory profits. They also pre-empt part of the income derived from assets containing an implicit inflation factor in the nominal interest payments. In the process, they decrease the net cash flow of a business in the early years of an inflationary cycle and thus increase the risk of default.

Another form of business risk arises when a firm decides how to finance its long-term investments. After inflation has been experienced for several years, it becomes a part of people's expectations of the future and is built into the nominal interest rate. If this anticipated rate of inflation is, in fact, realized over the life of the security, the tax provisions bearing on this form of compensation for expected inflation will effectively lower the real cost of capital, compared with that of a noninflationary situation. However, should the actual rate of inflation fall below that anticipated implicitly in the interest rate, borrowers could end up paying a higher real price for capital than if prices had remained stable.

In most countries that have experienced inflation, the variability of the rate of inflation has increased relative to the real interest rate, as the mean rate of inflation has risen over time. Therefore, the variability of the ex post real cost of capital paid for debt-financing has also increased. In this way, the rising rates of inflation that have plagued most western economies in recent years have led to increased risk associated with the financing of long-term debt.

This variability of the real cost of borrowing could perhaps be overcome by indexing interest payments to the actual rate of inflation. However, indexing interest payments could also create genuine liquidity problems for business. For example, if the annual rate of inflation rose - as it did in the United Kingdom recently - to 25 per cent, indexing would imply that a business would either have to repay one-quarter of the real principal of its loans that year or increase its borrowing to pay the indexed component of the interest payment. In order to eliminate the liquidity crisis created by the indexing of interest payments, lenders would automatically be required to grant refinancing for the indexed portion of the interest payments. Admittedly, this could be just a paper transaction, with the lender increasing the nominal size of his loan and the borrower increasing the nominal size of his loan obligation, without any cash changing hands. Nonetheless, if widely practised, it could generate tremendous pressure for monetary accommodation by the central bank and hence could add fuel to the inflationary fire.

5 Inflation and Governments

Through their ability to raise taxes, spend money, and transfer income, the federal and provincial governments exercise legal powers that go well beyond those available to the private sector. At the same time, they have social and economic responsibilities that go beyond those of individuals and firms. In examining the interrelationship between inflation and the budgetary positions of the federal, provincial, and local governments, recent measures to index personal income taxes and transfer payments must be considered, as well as the impact of sudden variations in the economic situation — such as major changes in import and export prices or domestic wage levels — on the revenue and expenditure components of the various levels of government. The federal government is not a neutral participant in the inflationary process. It contributes to the determination of inflation through its influence and objectives in the conduct of monetary policy, its control and administration of the national debt, and its expenditure patterns and fiscal structure. While the latter two factors are also found at the provincial and local levels, the first is unique to the federal government.

Fiscal and Monetary Policies

Taking into account its ultimate taxing power, the federal government can sell securities to the central bank, which pays for these by creating deposits on government account. On the strength of these deposits, the government can make expenditures: the withdrawal of the deposits increases notes in circulation or expands the lending capacity of commercial banks. If additions to aggregate demand outrun the available supply of goods and services, inflationary pressures are likely to mount. And, if the rate of expansion in the money supply outruns the rate of expansion of purchasable goods and services for any length of time, inflation is inevitable.

In the past, one of the main objectives of Canada's monetary policy has been to avoid sharp interest-rate fluctuations that would encourage speculative capital movements and put pressure on the country's balance of payments. While such a policy was required under a system of fixed

58 Inflation and Governments

Chart 5-1

Quarterly Change in Narrowly Defined Money Supply¹ and Consumer Price Index, 1970-76



SOURCE Data from the Bank of Canada and Statistics Canada. 1 Currency and demand deposits.

exchange rates, this policy was pursued even after the adoption of a managed floating exchange rate in 1970. As a result, external price pressures and strong upward movements in domestic spending tended to be accommodated by monetary policy. Between 1971 and 1973, the narrowly defined money supply — comprising currency and demand deposits — increased by roughly 15 per cent annually, leveled off in 1974, but increased substantially again in early 1975 (Chart 5-1). In the words of a former Governor of the Bank of Canada, "in the day to day determination of monetary policy, the central bank is not primarily influenced by considerations relating to the size of the money supply We give priority in our thinking to the kind of credit conditions that seem appropriate in the prevailing circumstances."¹

There are significant lags, generally varying in duration from eighteen months to two years, before increases in the money supply permeate the system through increases in output and prices. In the meantime, the economic climate can change dramatically. Recognizing the difficulties of alternatively accelerating and decelerating the rate of monetary growth to

¹ Louis Rasminsky, "Central Banking in the Canadian Financial System," An Address by the Governor of the Bank of Canada to the 20th International Banking Summer School, Queen's University, Kingston, Ontario, August 1967.

stabilize interest rates, the Bank of Canada has, since 1975, committed itself to a slower, steadier expansion of the money supply — ranging between 8 and 12 per cent annually — allowing short-term interest rates to fluctuate more freely over the course of the business cycle. This move is consistent with the fact that a floating exchange rate allows monetary policy to operate with less concern for balance-of-payments considerations, and it is seen as a complementary requirement of an anti-inflation program.

On the fiscal side, much debate has developed among economists in the private sector on the extent to which federal policy — and, specifically, federal cash requirements — has contributed to inflation by encouraging an "overly accommodative" monetary policy.² Apart from the general recognition that the government's influence over the course of monetary policy, as well as its spending and revenue decisions, normally reflect common objectives and affect, and are affected by, inflation, no clear consensus has emerged so far.

Overall Development in Government Expenditures and Revenues

In their expenditure programs, governments usually have limited room to manoeuvre, for expenditures usually presuppose a public commitment that cannot easily be reversed. The provision of adequate transportation and communications, internal security, employment, consumer protection, health care, social security, education, and so on, all require continuous spending. So, too, do Canada's international obligations.

Most government goods and services are available to consumers freely or at highly subsidized prices — a unique feature. Although they are paid for ultimately through taxes, the demand for these goods and services can be expected to be higher than for those priced at full cost. Futhermore, if inflation widens nominal price differentials, then consumers, seeing their purchasing power eroding, are likely to demand even more of government.

2 In this context, it is perhaps worth noting that, with rising inflation, it has become more costly to hold non-interest-bearing balances, and there has been some public shift from demand deposits to savings deposits in banks and other financial institutions. This has had the effect of loosening the potential supply of money and credit somewhat more than might have been anticipated on the basis of the annual increases in the cash holdings and demand deposits that constitute the money supply narrowly defined (M1). For more details on the debate, see Thomas J. Courchene, Money, Inflation, and the Bank of Canada: An Analysis of Canadian Monetary Policy from 1970 to Early 1975, C. D. Howe Research Institute, April 1976; Robert B. Crozier, Deficit Financing and Inflation: Facts and Fictions, and Inflation, Government Financing, the Money Supply and the Fiscal Setting: A Review of the Evidence, The Conference Board in Canada, 1976; Loewen, Ondaatje, McCutcheon and Company Limited, "Has Ottawa Had a Policy Relapse: Misconception or Misdirection?" July 28,1976, and "Has Ottawa Had a Policy Relapse? A Follow-up Report," October 14, 1976.

60 Inflation and Governments

This pattern has become evident in Canada, and governments at all levels have come to play a more pervasive role in the economy. A generation ago, government expenditures accounted for 25 per cent of all national expenditures but, by 1975, this share had risen to 41 per cent (Chart 5-1). Canada's gross national expenditure in current dollars last year was almost five times its level in 1955; but, during the two intervening decades, federal expenditures had multiplied slightly over six times, local expenditures ten times, and provincial expenditures close to twenty times, their 1955 levels. Whereas, in 1955, federal expenditures accounted for close to 60 per cent of all government expenditures, by 1975 the federal share had dropped to 43 per cent. Over the twenty-year period, local and provincial expenditures — after intergovernmental transfers — accounted for five-sixths of the increased share of government expenditures in GNE; federal expenditures, for only one-sixth. The implications of these developments warrant more extensive analysis than is possible in this Review, but they do suggest that to single out federal spending as the main cause of our present inflation is perhaps to misplace somewhat the true perspective.

Table 5-1

1755	1975	Change
	(\$ Million)	
28,528	154,752	126,224
7,178	63,215	56,037
	(Per cent)	
25.2	40.8	15.6
15.6	22.5	6.9
9.6	18.3	8.7
15.0	17.6	2.6
10.2	23.2	13.0
	28,528 7,178 25.2 15.6 9.6 15.0 10.2	(\$ Million) 28,528 154,752 7,178 63,215 (Per cent) 25.2 40.8 15.6 22.5 9.6 18.3 15.0 17.6 10.2 23.2

National and Public Expenditure Indicators, 1955 and 1975

SOURCE Based on data from the Department of Finance, *Economic Review, April 1976*, Reference Table 65, and estimates by the Economic Council of Canada.

Of course, income security, education, and health care, which have received high priority in recent years, are fields that generally fall under provincial jurisdiction, although federal initiatives have been instrumental in launching new programs. In the ten-year period ending in 1975, federal transfers to persons and provinces, as well as subsidies to businesses, increased from just under half of all federal expenditures to more than 62 per cent. It is probably fair to say that a large proportion of the increase was in response to discretionary policy decisions and was only indirectly linked to the level of inflation. It seems clear, however, that rising costs led to an acceleration in spending on virtually all the education, health, and welfare schemes: rising inflation rates prompted the indexing of most social security payments, and alterations in the Unemployment Insurance Act, which came into effect fully in 1972, also resulted in a sizable expansion of federal transfers to persons.

The rapid escalation in provincial spending over the past two decades has been facilitated by commensurate increases in revenues, along with borrowings from Canada Pension Plan funds, and other sources. Of course, widespread differences exist between the expenditure patterns and budgetary positions of the provinces. Nonetheless, much of their spending reflects a joint effort with the federal government to provide more or less uniform standards of care and assistance, as well as equal economic opportunities for all Canadians. In the process, there has been a rapid expansion in the number of personnel on provincial and municipal payrolls — particularly in the education and health-care fields — along with qualitative improvements and wage and salary increases that have been higher than corresponding rates in the private sector. As a proportion of all provincial spending over the last decade, spending on goods and services — including the salaries of public employees — has grown, whereas transfers to local government have declined (Table 5-2). Provincial governments now account for over a third of all government expenditures and over 14 per cent of GNE.

At every level of government, expenditures and revenues are strongly affected, often in reverse directions, by swings in the level of economic activity. Over the long run, however, they tend roughly to balance out. The proportion of total federal revenues received directly from households and businesses has been rising. In 1955, personal income taxes accounted for only one-third of all federal revenues; in 1975 they accounted for more than one-half. The share of corporate taxes, however, has dropped during the same period from 25 to 15 per cent of federal revenues. The proportion of sales taxes and other indirect taxes, most of which are ad valorem and therefore rise with prices, dropped during the same period from 35 to 26 per cent of federal revenues.

With the 1962 Federal-Provincial Arrangements Act, all provinces reentered the personal and corporate income tax field, whereas, except for Quebec's imposition of personal income taxes from 1954 on, they had previously been limited to tax-rental agreements. All provinces, except Quebec, chose to let the federal government collect direct taxes and then transmit an agreed percentage to them. Quebec opted to maintain its own personal income tax, which is not indexed. As provincial expenditures mounted, the provincial governments increased their percentage rates now averaging, for personal income taxes, about 30 per cent of the total revenue collected. In the process, the share of direct taxes from persons —

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Public Revenues and Expenditures, All Government Levels, 1955, 1965, and 19751

	19	55	19	65	19	75
	Millions of dollars	Per cent	Millions of dollars	Per cent	Millions of dollars	Per cent
Federal government						
Revenues	4,926	100.0	8,944	100.0	30,888	100.0
Direct taxes on persons		33.4		37.2		49.4
Direct taxes on corporations and						
government enterprises		25.3		18.5		16.4
Indirect taxes		35.5		36.3		25.5
Other items		5.8		8.0		8.7
Evnonditures	1 644	0.001	000 8	0.001		
rypullulus	4,044	100.0	0,200	100.0	54,114	100.0
Purchases of goods and services		50.9		34.6		24.3
Transfers to persons		26.5		28.2		31.2
Transfers to provinces		9.5		16.5		22.0
Interest on public debt		9.5		9.4		7.4
Subsidies and other items		3.6		11.3		15.1
Provincial governments						
Revenues	1,742	100.0	6,075	100.0	28,691	100.0
Direct taxes on persons		11.9		18.1		23.9
Indirect taxes		43.8		37.3		26.8
Transfers from federal government		25.4		22.3		26.1

62 Inflation and Governments

Investment income Other items		10.7 8.2		7.8		12.0
Expenditures Purchases of goods and services Transfers to persons Transfers to local governments Transfers to hospitals Other items	1,463	100.0 39.5 30.7 22.4 7.4	5,453	100.0 27.7 18.8 26.4 20.5 6.6	28,439	100.0 32.5 18.7 22.8 16.5 9.5
ocal governments Revenues Indirect taxes Transfers from provinces Other items	1,269	100.0 71.0 3.2 3.2	3,861	100.0 57.8 37.3 4.9	12,729	100.0 45.8 50.9 3.3
Expenditures Purchases of goods and services Interest on public debt Other items	1,241	100.0 88.1 6.8 5.1	3,473	100.0 86.8 9.6 3.6	11,735	100.0 89.4 8.0 2.6

expenditures of the different levels of government. SOURCE Based on data from Statistics Canada.

64 Inflation and Governments

including succession duties — in total provincial revenues rose between 1965 and 1975 from 18 to 23 per cent; transfers from the federal government, from 22 to close to 27 per cent; and income from provincial investments, from 7 to over 12 per cent. Revenues from indirect taxes (liquor, tobacco, and gasoline) declined in relative importance.

This brings us to the plight of local governments, which have only limited taxing authority. Their share of provincial revenues through transfers has declined, but their reliance on transfers to supplement their own resources has grown dramatically. Two decades ago, transfers accounted for less than 30 per cent of municipal revenues; they now provide more than half of all municipal revenues.³ Most other municipal revenues come directly from property taxes, which are relatively inflexible in periods of inflation, largely because assessment increases lag substantially behind the rise in property values. Indeed, despite the expansion of the tax base associated with municipal growth almost everywhere, during the recent period of rapidly rising municipal costs, local governments have found that, beyond certain reasonable limits, mill rates cannot be increased, or funds borrowed, to compensate for assessment deficiencies. Most provinces are currently revising their assessment practices, with New Brunswick and Prince Edward Island in the forefront of reform. Even so, it is unlikely that changes in administrative practices alone will eliminate assessment lags or broaden the local tax base sufficiently to reverse the growing dependency of local governments on provincial transfers.

Government Revenues and the Inflationary Bias

The inflationary bias resulting from the progressivity of direct income taxes tilts revenues continuously towards the federal and provincial governments. It pushes individuals and corporations into higher nominal income brackets, which are subject to higher marginal income or profit tax rates, and it creates nominal capital gains that are also taxable. While the recent indexation of personal income taxes eliminated much of this inflationary bias, they are still not entirely devoid of it. The bias emerges at two points: through the exemptions available to persons with taxable income, which are frequently set in nominal terms; and through the progressivity of the rates on taxable income. In the middle-income brackets — where the majority of taxpayers are found — the range of taxable income over which marginal tax rates remain constant is broad.

³ In Ontario, the increase in the CPI between 1970 and 1975 amounted to 44 per cent, whereas property taxes rose by only 17 per cent. See Hon. Darcy McKeough, "An Address to a Special Meeting of Municipal and School Board Representatives and Officials of Metropolitan Toronto," February 3, 1976.

Thus the bias affects only taxpayers whose real incomes lie so close to the tax-rate boundaries that inflation pushes their nominal income into the next marginal tax bracket. The declining real value of exemptions during inflation constitutes a more significant bias. When personal income taxes were indexed in 1974, it was estimated that, during the first year, exemptions accounted for roughly three-quarters of the index-related savings accruing to tax-filers.⁴

The problem of an inflationary revenue bias is probably not too serious when the annual rate of price increases is confined to a few percentage points. But, when inflation rates reach 10 per cent and beyond, not only does this substantially inflate government revenues, as in the case of taxes on business earnings, but it also generates an unanticipated income redistribution that may impose real hardship on the losing individuals and firms.

What is the magnitude of this inflationary bias? In 1976, the revenues accruing to both the federal and provincial governments from personal income taxes are estimated to have been approximately \$18 billion. Had personal income taxes not been indexed, these revenues would have been slightly less than \$21 billion. This difference suggests that the unindexed inflationary bias would have added another 17 per cent or \$3 billion to the total income tax revenues collected in 1976 (Table 5-3). Indexation has not been applied to corporate taxes but, as seen in the preceding chapter, the additional amount of corporate taxes paid in 1974 solely as a result of the effects of inflation exceeded \$2.6 billion. More generally, it has been estimated that, until personal income taxes were indexed, they, together with corporate taxes, increased by about 1.3 per cent for every increase of 1 per cent in taxable income.

Indexation is based on past cost-of-living calculations and, with rising inflation rates, indexing does not entirely eliminate the bias associated with tax deductions and progressivity.⁵ Nonetheless, taking into account lags and some deductions that are not indexed, it is estimated that indexation has removed about four-fifths of the inflationary bias in personal income taxes.

⁴ Organisation for Economic Cooperation and Development, *The Adjustment of Personal Income Tax Sytems for Inflation* (Paris: OECD. 1976). The one-year lag in applying the CPI indexation to personal income taxes resulted, in 1975, in an indexation rate substantially below the rate of price increases that year; hence this first-year estimate may underestimate the loss resulting from the rate of progressivity. By 1977, personal income tax exemptions will rise by 8.6 per cent as a result of indexation.

⁵ By the same token, should inflation rates drop significantly, the lag in indexation calculations would generate savings to taxpayers.

66 Inflation and Governments

The Merits of Indexation

With inflation generating additional revenues of the magnitude described, governments can exercise their discretion in several ways. They can increase expenditures in line with their increased share of revenues; they can reduce taxes, contain expenditures, and restore purchasing power to the private sector; or they can combine some elements of both strategies. Alternatively, they can index at least part of their revenues and expenditures, effectively isolating that portion from discretionary adjustments. Most OECD countries have adopted the discretionary approach, while Canada and the Netherlands have legislated partial indexation, and a few other countries use ad hoc combinations of both practices.

Since the issues of inflation and indexation involve redistribution of the incidence of taxation and income transfers, there are factors such as equity to be considered. For instance, in 1967, the Carter Commission concluded that indexing personal or corporate taxes would impair the built-in stabilizing features of the tax system by dampening tax revenues just when stabilizing considerations would suggest that they should be increased.⁶ It also argued that, if prices eased when economic activity slowed down, indexed tax reductions would automatically drop just when stabilizing

Table 5-3

The Effect of Indexing on

Personal Income Tax Revenues and Transfer Payments 1974-79

	1974	1975	1976	1977	1978	1979
		(Millions	of dollars	5)	
Personal income tax						
revenues						
Without indexing	17,051	21,100	20,942	24,974	29,519	34,847
With indexing	16,339	19,062	17,918	20,779	24,019	28,043
Loss in personal income						
tax revenue from						
indexing	712	2,038	3,024	4,195	5,500	6,804
Transfer payments						
Without indexing	4,985	5,145	5,325	5,503	5,688	5,810
With indexing	5,251	5,974	6,618	7,464	8,399	9,309
Increase in transfer payments from			,	,	,	,
indexing	266	829	1,293	1,961	2,711	3,499

SOURCE Carlton Braithwaite, "The Effects of Indexing on the Built-in Stability of the Canadian Economy," Economic Council of Canada Discussion Paper No. 65, 1976.

6 Report of the Royal Commission on Taxation, vol. 2 (Ottawa: Queen's Printer, 1967), p. 33. considerations would want them to increase in order to transfer more income back to the private sector. By the same token, the extension of indexing to the whole range of transfer payments could be seen as a destabilizing factor.

These arguments against indexation rested on many assumptions besides the symmetry of aggregate demand and aggregate price changes. First, they assumed that indexing would occur without lags, which is not the case in the Canadian system. Second, they overlooked the possibility of rising inflationary expectations and of stagflation, as well as the danger that, because of the influence of price "shocks" on federal revenues and expenditures and on monetary strategy, an unindexed system could itself be destabilizing. Third, they neglected the possibility that, in an inflationary period, corporations and workers might adopt strategies designed to preserve or increase their real disposable income in prices or wages, thus generating "tax-push" inflationary pressures. Finally, they ignored the inflationary bias built into the federal government's revenue system.

Thus the validity of these earlier views is now a matter for debate, and the whole issue of indexation and economic stability is seen as much more complicated than earlier analysis suggested. To explore the issue in more detail, we employed CANDIDE under various assumptions about the degree of indexation of personal income taxes, using four transfer payment programs — family allowances, old age security payments, and the Canada and Quebec Pension Plans — although, for calculation purposes, the last two were considered as one. Alternative simulations involved subjecting the indexed, partially indexed, and nonindexed systems to different inflationary "shocks," such as a sustained increase in government expenditures or in food and fuel prices, accommodated through increases in the money supply.

On the strength of the results of these simulations, we reached the conclusion that, over the short term, complete indexing of personal income taxes and the four transfer schemes is not likely to have much effect on the built-in stability of the economy. Over the medium term, there is greater instability, as well as a large difference between the effects of a sustained government expenditure shock and those of a price shock. Thus the relative merits of indexation as a device designed to cope with inflation, unemployment, and slow growth depend mainly on the source of the destabilizing shocks and on the importance attached to other benefits that may derive from indexing. If the economy is to be faced with sustained increases in food and fuel prices over the medium term, indexing could help to increase the built-in stability of the economy. Moreover, indexing helps to weaken "tax-push inflation" and to avoid the contribution that unindexed progressive tax systems make to inflationary pressures. In addition, there is a very strong case for indexing for reasons of equity. Indexing does, however, reduce the federal government's discretionary
68 Inflation and Governments

fiscal options. In the face of major shifts in aggregate demand or foreign spending, this could have a destabilizing effect or put pressure on monetary policy to achieve the desired measure of overall economic stability.

The Impact of Inflation on Government Revenues and Expenditures

Aside from the question of indexation, we examined how inflation could alter the revenue and expenditure patterns of governments. Here, again, we concluded that this also depended on the source of the inflationary pressures themselves and on whether the pressures were induced by domestic or international factors. Moreover, through their effects on federal and nonfederal budgets, different types of inflationary shocks clearly would result in different consequences for Canada's overall growth, employment, and balance of payments. An across-the-board increase of 5 per cent in wages, for instance, would have markedly different consequences than, say, a sustained shock in export and import prices.

Such developments not only affect prices — in the case of the wage shock, raising them by about 3.5 per cent, on average — but also impart further changes in economic activity. Using CANDIDE, we isolated the firstround differential effects of the inflationary shocks on prices and compared the consequent increases in various components of government revenues and expenditures with the overall increase in prices, as measured by the GNE deflator. We then allowed for the added effect of the inflationary shock on aggregate demand and economic activity (Table 5-4).⁷

According to the simulations, price increases confined to Canada's main foreign trade goods could increase unemployment, slow GNE growth, and have a varied impact on the current-account balance of payments. Through their impact on aggregate demand, wage increases could be consistent with lower unemployment rates and a higher GNE growth rate, but also with a deteriorating trade balance. The budgetary position of governments in all years would be improved more from a wage shock than from an international commodity price shock.

Extending our simulations further, we examined the effects of inflationary shocks on individual federal and nonfederal revenue and expenditure components (Table A-11). For the two levels, most revenues will increase with an inflationary shock, but the amount of the increase may be higher or lower than the corresponding increase in the GNE price deflator.

⁷ B. Lodh, "Effects of Alternative Sources of Inflationary Shocks on the Budgetary Positions of Governments: Simulation Results with CANDIDE 1.2M," Economic Council of Canada Discussion Paper (forthcoming).

Table 5-4

The Impact on the Budgetary Position of Governments and Other Macro-Variables from Alternative Inflationary Shocks to Forecast Solutions of CANDIDE 1.2M over 1976-85

	Federal budget	Nonfederal budget	government budget	GNE (Real terms)	GNE deflator	ployment rate	balance of payments
Vature of shock 5 per cent wage shock, in 1976 only	(+)	(-)	(+	(+)	(-)	(+)	(-)
Continuing increases in a given set of export and import prices from 1976 through 1985	÷	(+) in 1976-78; (-) in 1979-85	 (+) in 1976-77 and 1979-82; (-) in other years 	(-)	(-)) (-)	+) in 1\$76-79 and 1962-83; -) in other years

B. Lodh. "Effects of Alternative Sources of Inflationary Shocks on the Budgetary Positions of Governments: Simulation Results with CANDIDE 1.2M," Economic Council of Canada Discussion Paper (forthcoming). SOURCE

70 Inflation and Governments

Similarly, some expenditures increase faster, and others slower, than the overall inflation rate.

For instance, in the case of an assumed wage increase of 5 per cent, the initial inflationary effects show that the federal government budgetary position improves consistently over time, whereas the position of non-federal governments deteriorates, primarily because of revenue short-comings at the municipal level. As expected, both federal and nonfederal governments show strong and equal improvements through personal income tax receipts, with the federal government gaining in absolute terms. Higher wage costs cause a drop in corporate profit levels and, consequently, in government revenues derived from corporate taxes. On the expenditure side, the largest items contributing to additional spending at all levels of government are wages and salaries, and transfers to persons, which increase more than the GNE deflator. However, hospital wages and medical expenditures run behind average price increases.

With an export and import price shock, all governments would gain additional revenue from personal income tax receipts but, for nonfederal governments, the relative gains would be smaller than the inflationary increase in the GNE deflator. As with a wage-induced shock, federal transfer payments to the provinces lag behind prices. The export/import price shock would induce an initial reduction in the overall value of wages and salaries paid by every level of government, and the growth rates of federal, provincial, or municipal wages and salaries at no time would match the overall increase in prices. Because many of the materials are affected by rising export prices, expenditures on residential, highway, and school construction grow more rapidly than the inflation rate.

Similar comparisons can be made with respect to other types of inflationary shocks, such as sharp increases in sales taxes, massive energyrelated development schemes, and so on, taking into account initial priceinduced effects only or including the subsequent effects as inflation further alters economic decisions and activity.

The Public Debt

Both the federal and the provincial governments gain, as do all debtors, when rising inflation rates reduce the real value of both principal and interest payments on their outstanding debt, which was issued at yields lower than those reflecting current rates of inflation. Over the last decade, total federal debt expenditures increased, but more slowly than public expenditures overall, resulting in a relative reduction in public-debt service charges from about 13 per cent of total federal expenditures in 1965 to just over 10 per cent in 1975. At the provincial level, interest on the public debt has risen slightly, from 4 to 6 per cent of total expenditures. As issuers of long-term bonds, all levels of government have enjoyed real income transfers as a result of rising inflation rates. The federal government's outstanding debt in 1975, for instance, equaled \$37 billion, almost all of it held in Canada. Both the Bank of Canada and all chartered banks held close to \$8 billion, and the general public over \$20 billion, mostly in the form of Canada Savings Bonds. As observed in Chapter 4, if the actual rate of inflation exceeds the anticipated rate, the debtor gains and the lender loses. Since 1973, the federal government as a debtor has come out ahead, despite paying an increasing average interest rate on its debt portfolio and paying additional premiums on previously issued Canada Savings Bonds or allowing bond holders to exchange them for higher-yield issues without penalty (Table 5-5). Similar calculations and observations apply to provincial and local governments,⁸ although about a quarter of their securities — and an even greater share in recent years have been sold to nonresidents.

Table 5-5

Estimates of Inflation-Induced Gains and Losses on the Federal Public Debt, 1970-75

	Average yield	Gains (+) or losses (-)
	(Per cent)	(\$ Million)
1970	7.23	-350
1971	6.98	-464
1972	7.54	-78
1973	8.47	+488
1974	8.72	+1,575
1975	10.08	+1,229

SOURCE Based on data from the Bank of Canada Review, and estimates by the Economic Council of Canada.

In addition to the gains on securities issued to the general public, provincial governments have also benefited from the low interest rates paid on their borrowings from the Canada Pension Plan. The fund itself now exceeds \$10 billion, and provincial governments borrow at the rate set for federal bonds of 20 years and over. In 1975, the effective interest rate

8 In earlier calculations for pension plans and business financial holdings, it was assumed that individual or corporate lenders would want, aside from a rate that fully anticipates inflation, an additional real return on their capital that varied between 2.5 and 3.5 per cent, depending on the riskiness and liquidity of the asset. Since full repayment of the nominal value of federal bonds is assured, their purchasers have traditionally settled for a somewhat lower real return — say, 2 per cent — plus a premium to cover anticipated inflation. We allowed for a slightly higher-risk premium on the debt of junior governments. We recognize, of course, that losses or gains to the various levels of governments as organizations in their own right.

72 Inflation and Governments

paid on accumulated borrowings by the provinces was roughly 6.9 per cent. By our calculations, this would be consistent with an inflationinduced gain of about \$537 million for the provinces (Table 5-6). In this instance, the loss is borne by the federal government, since pensioners' entitlements are independent of CPP earnings.⁹

Table 5-6

	Average rate of interest	Gains (+) or losses (-)
	(Per cent)	(\$ Million)
1970	5.79	-15
1971	6.17	-59
1972	6.36	+23
1973	6.49	+200
1974	6.60	+478
1975	6.88	+537

Estimates of Provincial Inflation-Induced Gains and Losses on Borrowings from the Canada Pension Plan, 1970-75

SOURCE Health and Welfare Canada, Canada Pension Plan Statistical Bulletin, and estimates by the Economic Council of Canada.

Conclusion

The share of government in Canada's economic life has been growing, more so at provincial and local levels than at the federal level. Yet, through its exclusive influence over monetary policy and its pre-eminence in fiscal matters, the federal government carries primary responsibility for the nation's economic management and well-being. From our examination, it is clear that the federal government has been the principal benefactor from the rising inflation of recent years, through the unanticipated transfers of real income from businesses and individuals. It has gained in real terms through the built-in progressivity of personal income taxes, through the cost and inventory accounting required in the corporate tax regulations, and through its situation as a net debtor. Provincial governments too have benefited to the extent that they levy or share direct taxes with the federal government and are debtors as well. And, while local governments have benefited as net debtors, in general they have undoubtedly lost ground, since increases in property taxes almost inevitably lag behind the

9 The Quebec Pension Plan is not included in the foregoing calculations, since it is administered by an agency of the same provincial government that is empowered to borrow from it.

inflationary rise in local expenditure obligations. In the latter case, this means inflation-induced real income transfers from local governments to property owners or, to be more precise, from nonproperty- to propertyowning taxpayers.

How these developments are regarded really depends on one's perspective on the role of government. To the extent that the federal and provincial governments enjoy windfall revenue transfers, they may ease the target levels of their other revenues, reduce or offset the inflationary bias by indexing both taxes and transfer payments, or be less restrained in their expenditure strategies. If one regards governments as, in a sense, autonomous bodies in competition with, or hostile to, private spending and saving decisions, one is likely to regard their inflation-induced gains with alarm. If one regards governments in a more benign way, the issue may be less important. One factor that does emerge, however, is that the tilt of the inflation-induced gains is towards the federal government and away from local governments, which runs counter to what many agree to be the direction of fiscal need. A second factor is that, to the extent that these transfers constitute "inflationary taxes" on individual taxpayers and firms, who in turn set themselves post-tax income targets in their wage and price strategies, the transfers may add to the severity of the inflationary dilemma. And, finally, a third factor has to do with the public debt. The heavy issue of municipal and provincial bonds in 1975, and again this year, involved high rates of interest, and debt repayments could become a more significant fiscal burden for governments in the future, particularly at the municipal level, if inflation is reduced and the increases in tax revenues decelerate.

In previous chapters, the effects of inflation on particular groups or sectors were examined without specific reference to the ways in which prices and costs evolved in the 1970s. It seems clear that at least a good part of the initial inflationary impulse had an international origin but, as the resulting price increases worked their way through the economy and entered into the expectations and attitudes of people, they became sources of further inflationary pressures. And, since the price of a good or service received by one person represents an expenditure or cost to another, the course of these inflationary price movements has had profound effects on costs of production in the form of higher wages, financial input costs, profits, and indirect taxes. Price and cost movements, of course, presuppose a myriad of individual decisions and responses every day.

Pricing Patterns

Analysis of the changing patterns of prices and costs too often relies on impersonal and mechanistic explanations. While these might suffice in an inflation-free world where increases in some prices would tend to be offset by reductions in others, the issues become more complex in an inflationary situation, when firms, workers, and consumers try to anticipate, or compensate for, increases in prices and costs.

In a mixed and open economy such as Canada's, there is no standard formula for determining prices. While the ultimate limitations on price discretion are indeed consumer response and the degree of competition from either foreign sources or other Canadian firms, individual decisions are required at every turn. Naturally, each enterprise will try to cover its costs and secure profit margins that coincide with its longer-term corporate objectives. The mix and cost of the inputs and equipment used in the productive process will in turn reflect the prices of intermediate goods and services purchased from other firms, organizations, and individuals. Governments also have a direct effect on prices through their purchases, their administration of trade and tariff regulations, and their taxing

powers. Decisions by the Bank of Canada and prime lending agencies are critical to the price of capital and the terms under which loans are made, investments are channeled, and mortgages are secured. Moreover, because wages and salaries constitute a major cost in all but the most capitalintensive industries, the presence and vigour of organized labour, as well as the role of provincial or federal governments in setting minimum wages and working standards for unorganized workers, enter directly into decisions affecting prices.

In the final analysis, the pattern of relative price adjustments is determined by the interaction of supply and demand. These two elements are interrelated in several ways and, in particular, on the supply side; producers can influence demand through advertising and other means.¹ But competition often bears on elements other than prices. While advertising and product differentiation are usually aimed at enabling the individual firm to gain an edge over its immediate competitors, they may in fact promote a whole industry by winning sales from other industries producing near-substitutes. If competitive price-cutting is sustained, however, it could lead to increased sales overall, but it could also mean losses for all or most of the firms in the industry. What emerges then are composite strategies wherein prices are maintained low enough to promote the growth of sales but high enough to maintain satisfactory profit margins.

In its *Third Annual Review*, the Economic Council described how some larger firms arrive at their pricing decisions.² Several points are perhaps worth re-emphasizing. Consideration of foreign competition constitutes the most pervasive limitation on discretionary pricing. Moreover, in industries where a few firms have substantial market power — such as in pulp and paper, automobiles, or banking — the pricing policies of a leading firm usually influence those of the other firms in that industry. This is not inconsistent with the observation that enterprises producing brand products tend to prefer nonprice competition. Sales competition for alcoholic beverages, cigarettes, and petroleum products, for instance, is limited almost entirely to advertising and product differentiation. In such cases, the consumer is a price-taker. Much depends also on the perishable nature of the product or on its potential obsolescence because of fashion, style, or technological change. Prices of the most perishable items tend to be high initially but are reduced later, as their condition deteriorates or the

¹ Evans cites the case of Canadian physicians who, in the face of their growing numbers and rising doctor/patient ratios, encouraged more frequent check-ups and adjusted their fee schedules to achieve what appeared to be their own income-targeted objectives. See Robert G. Evans, *Price Formation in the Market for Physician Services*, Prices and Incomes Commission (Ottawa: Information Canada, 1972).

² Economic Council of Canada, Third Annual Review: Prices, Productivity and Employment (Ottawa: Queen's Printer, 1966).

season or year ends. This, for instance, occurs with bakery products daily, clothing seasonally, and automobiles annually.

Even in such competitive areas as intermediate goods sold under contractual arrangements to assure supply at a stipulated price, there is a distinct advantage in eliminating uncertainty, even if it entails higher costs. Prices are usually arrived at through competitive bids based on markup on costs. Wage rates, generally the largest cost component, are usually negotiated for periods of no less than one year and are adjusted in response to many criteria other than the relative surplus or shortage of labour. One such generally accepted criterion is that wages should rise at least as much as the cost of living, assuming business conditions warrant it, which is by no means guaranteed. Another criterion is the harmonization of salaries and wages among different firms. In construction, for instance, centralized bargaining between labour and employer associations is encouraged for many of the trades, because standardized rates, even when they are very generous, effectively remove wages as a source of competition among local organized firms.

As a result, the attribution of inflationary pressures to individual market participants becomes a purposeless exercise, since rounds of administered markups applied to costs are followed by increased wages, and then by increased prices, and so on. The importance of the overall market conditions cannot be ignored, for the average level of business markups is likely to rise or fall as total demand increases or abates, just as the target wage gains of union locals may expand or shrink as the likelihood of unemployment increases or declines. In prosperous years, buyers press their demands on retailers and wholesalers through increased purchases and show less resistance to sellers' markups. And, with sales increasing and inventories declining, businessmen are likely to augment their capacity utilization and output, risk new venture capital, and often be more tolerant of union demands in order to avoid work stoppages. Unit costs and prices are then likely to rise still further. In such situations, the conventional distinction between demand- and cost-push inflation becomes a matter of degree.

Standard markups can be consistent with stable or falling prices if they are accompanied by sufficient productivity to keep costs down. But if each participant tries to capture the gains of rising productivity through expanded markups, the result is likely to be a sequence of upwardly ratcheted prices that, if accommodated by monetary policy, could produce an inflationary spiral of considerable duration. Indeed, if the central government cannot effectively stem the monetary expansion that contributes to further inflation, the danger is that the traditional patterns of competitive price and wage reference points will break down.³ As a

3 Sidney Weintraub, "Incomes Policy for Full Employment without Inflation," Economic Council of Canada Discussion Paper No. 54, 1976.

result, consumers, fearing new price hikes, will begin to stockpile; business markups will rise appreciably as producers try to protect their real profits in the face of new rounds of wage demands and interest rate increases; and wage demands will rise rapidly as labour union locals try to anticipate future price increases. The higher that prices rise, the less stable and more explosive anticipations become. Thus it seems clear that in 1975 it was the conjunction and interaction of wage claims and business pricing policies that sustained the initial demand-induced inflationary momentum into a period of business slowdown and rising unemployment. And it is upon these interacting business and labour expectations and claims that the present anti-inflation controls are operating.

Price Indexes

The general price level in Canada can be measured by either the consumer price index (CPI) or the gross national expenditure (GNE) deflator. The former captures the price changes in a given bundle of goods bought by middle-income (\$4,000-\$12,000) urban households comprising two to six persons, while the latter attempts to measure the price level for the whole economy, including such costs as those of heavy machinery, roads, and office buildings, and not just consumer items. It reflects price changes in each category of goods and services, weighted by the current level of output. Both indexes have their strengths and limitations. Both suffer from well-known biases resulting from measurement difficulties, and both fail to capture adequately changes in the quality of goods and services -shortcomings that are common to corresponding indicators in all countries. Since the CPI measures the prices of a basket of goods that is altered relatively infrequently, it can be criticized for not adequately reflecting changes in consumer choices as prices change; the GNE deflator does measure prices for a constantly changing pattern of national expenditure. which means that major swings in economic activity alone could affect the index. Although the two indexes are generally consistent over the long run. the GNE deflator is more volatile in the short run (Chart 6-1).

The CPI has also been criticized for being too middle-income-oriented in the selection of goods included in the survey. It is alleged that the proportion of items included is not representative of the purchases of the poorest or oldest groups — those hardest hit by price changes. The Council commissioned a study of this issue, to trace the price changes of representative baskets of goods for twenty-one different income groups.⁴ The author found that, while there were some variations in the measured

4 S. Afriat, "Consumer Expenditures and Inflation Structure," a background study prepared for the Economic Council of Canada, 1976.

Price and Cost Developments 79

Chart 6-1 Price Indexes, 1961-75

(Annual percentage change)



indexes for the various groups, the deviations from the average CPI were minimal.

Recent Price and Cost Developments

Between 1965 and 1975, the rates of price increase in virtually all western industrial countries moved decidedly upward. Whereas, in the early 1960s, GNP deflators of the member countries of the Organisation for Economic Co-operation and Development (OECD) grew annually by slightly over 3 per cent, they were close to 5 per cent by the end of the decade; by 1974, they had reached 12 per cent, and higher in some countries. Even in 1975, when most western countries were experiencing their worst recession and highest unemployment rates since the postwar recovery, the overall increase in prices in OECD countries was more than 10 per cent.

The Transmission of Inflation

Opinions vary on the extent to which international factors contribute to Canada's inflation. Some analysts have suggested that, apart from the

occasional external "shock" such as the oil crisis, Canada's inflation is entirely determined by domestic factors; others consider Canada's performance to be inevitably locked into world price developments. In a study undertaken for the Council some years ago, the authors found that about 60 per cent of Canadian price changes could be "explained" by U.S. indicators — presumably through price linkages in industries with large amounts of traded goods or foreign ownership.⁵ More recently, the Prices and Incomes Commission offered another view, stating that "imported inflation during the 1960s was more a consequence of Canadian exchange rate policy than of foreign inflation as such."⁶

It seems reasonable to assume that the more a nation sells, buys, borrows, or invests abroad, the more likely it is to be affected by price developments elsewhere. A basic indicator of a country's exposure to internationally transmitted inflation is the size of its foreign trade sector relative to its GNP. Canada's position in this regard falls generally within the same range as the main countries of western Europe, such as West Germany, the United Kingdom, Italy, and France (Table 6-1).

Table 6-1

Exchange Rate Variations between January 1970 and June 1976, and Relative Importance of Trade in 1975, Seven Leading Industrial Nations

	Trade ¹ as a percentage of gross national product	exc	Change in change rate ²
	(Pe	r cent)	
Canada	22.0	51/2	(\$ Can.)
United States	6.9	-111/2	(\$ U.S.)
Japan	11.7	111/2	(yen)
France	17.83	0	(franc)
West Germany	19.4	261/4	(Deutsche mark)
Italy	20.44	-391/4	(lira)
United Kingdom	24.0	-361/4	(pound sterling)

I Average of exports and imports.

Changes in the effective exchange rate of a country in relation to the currencies of each of its major trading partners — the weights are determined by an International Monetary Fund (IMF) model.
 Trade as a percentage of gross domestic product.

4 Estimate for 1974.

SOURCE Based on data from the Organisation for Economic Co-operation and Development.

5 R. G. Bodkin, E. P. Bond, G. L. Reuber, and T. R. Robinson, Price Stability and High Employment: The Options for Canadian Economic Policy, Economic Council of Canada Special Study No. 5 (Ottawa: Queen's Printer, 1967).

6 Prices and Incomes Commission, Inflation, Unemployment and Incomes Policy, Summary Report, June 1972.

In recent years, the Council has taken the view that Canada is unlikely to achieve enduring levels of price increases that are significantly lower or higher than those of her major trading partners without substantial costs. This view is consistent with the recent commitment by the OECD and by seven western nations (including Canada), whose political leaders met in Puerto Rico this year, to exercise monetary prudence jointly during the current recovery, in order to prevent the recurrence of mutually interacting rounds of successive price escalations.

In the periods between 1945 and 1966 when prices and costs rose most rapidly, the escalations coincided with massive capital investment booms linked with strong domestic and foreign demand. They were, in short, typical cases of demand-pull inflation. Only during the Korean War did price increases come anywhere close to the levels experienced in 1974 and 1975 (Chart 6-2). It seems evident that, in this most recent period, the initial impetus of price escalation in Canada, as in most western countries, coincided with the peak of the business cycle; subsequently, however, other factors played a major role in maintaining the inflation momentum. And, while the origin of inflationary impulses may be debated, monetary

Chart 6-2

GNP Price Index and Total Public and Private Investment, 1950-75

(Annual percentage change)



SOURCE Based on data from Statistics Canada.

accommodation is generally conceded to have been an important precondition of the secondary stage of accelerating inflation.⁷

International Developments

Although overall growth and aggregate demand in western Europe and North America were generally strong in the mid-1960s, the monetary systems in these areas were subject to pressures. The British pound was devalued in 1967, and this was followed by a run on the U.S. dollar for conversion into gold. In 1968, the link between private and official gold was broken, putting the world monetary system de facto on a dollar standard. Thereafter, the number and frequency of official exchange rate changes began to increase; the Deutsche mark was revalued and the French franc was devalued. Canada allowed its dollar to float upward in 1970 and, in May 1971, West Germany did likewise with the mark. In August 1971, the United States forced a realignment by devaluing the dollar and stopping the convertibility of dollars into gold. A period of generalized floating followed, accompanied by widespread exchange rate variations. In the process, the value of several currencies appreciated, while the U.S. dollar, the pound sterling, and the lira depreciated. The Canadian dollar traded roughly at par with the U.S. dollar between 1971 and 1973. It then appreciated in 1974, moved below par in 1975, and then recovered and stayed above par until November 1976.

In Canada and other OECD countries, the main thrust of monetary expansion occurred during the 1971-73 period, when demand was strong and most economies were operating at close to capacity. After growing at an annual rate of a little over 9 per cent during the 1960s, the money supply (broadly defined) in OECD countries rose during the early 1970s at rates in excess of 20 per cent in some years. The combination of the business surge, the rapid rise in oil and other commodity prices, and the significant increase in domestic money supplies and international liquidity, resulted in an overall increase in OECD prices to double-digit levels in late 1974 and in 1975, despite record levels of unemployment (Table 6-2).

A major factor adding to rising price levels was the commodity price boom of 1972-74 (Chart 6-3). In the upswing of the business cycle in most western countries in 1972, low initial inventory levels of industrial materials and inadequate capacity meant that supply was unable to keep pace with demand, so that prices were driven upward. Exchange market uncertainty caused heavy speculative buying and the building of stocks as a hedge against future shortages, precipitating a further acceleration of prices.

⁷ T. J. Courchene, *Money, Inflation and the Bank of Canada* (Montreal: C. D. Howe Research Institute, 1976).

	Money supply (broadly defined)	Potential output	Consumer price index	Nominal interest rates
	(A	unnual perce	entage chang	e)
Average, 1965-69	9.8	5.0	3.7	5.7
1970	9.8	5.5	5.6	7.7
1971	17.4	5.4	5.2	5.1
1972	21.5	5.3	4.7	4.6
1973	25.3	5.2	7.7	8.0
1974	10.8	5.0	13.2	11.4

Table 6-2

Changes in Money Supply, Potential Output, Consumer Price Index, and Nominal Interest Rates, All OECD Member Countries, 1965-74

SOURCE Based on data from the Organisation for Economic Co-operation and Development.

Chart 6-3

International Commodity Price Index, 1971-76

(1970=100)



SOURCE The Economist (September 1976).

Throughout the late 1960s and early 1970s, relatively high inventory levels of foodstuffs in producing countries had tended to mask the fact that demand was beginning to outgrow average supply levels. But, in 1972 and 1973, several factors combined to reduce agricultural output: harvests were particularly poor in the Soviet Union, and world wheat production fell by 2 percentage points; wheat and rice crops were also seriously affected by drought and floods in a number of countries in Southeast Asia; and anchovies disappeared from the Peruvian coastal waters, causing a scarcity of fishmeal and an increased demand for feed grains. The impact of these natural phenomena was exacerbated by poorly timed government policies, such as the curtailment of European beef production, which followed efforts by the European Economic Community to lower surpluses of milk and butter, and the reduction in wheat acreage in both the United States and Canada.

And then there was the decision by the Organization of Petroleum Exporting Countries to increase crude oil prices in late 1973. How damaging was the OPEC decision? Among the main western countries, those initially injured the most by the oil "crisis" were Japan, Italy and France; the least injured was Canada, a net oil exporter at that time (Table 6-3). The OECD has suggested that "full measure of the direct price effect of the 1973-74 actions over the period 1973 to October 1975 could potentially range between 5 and 6 per cent."8 Moreover, to the extent that companies used standard percentage markups on costs, the secondary repercussions of the increase in energy prices became much more severe, and the OECD has estimated that the indirect pass-through effect of oil price increases will at least equal the direct price effects. (The additional 10 per cent rise in crude oil prices announced in October 1975 added another percentage point to the GNE deflator of OECD member countries beginning in 1976.) To put the issue in perspective, however, it is worth remembering that, since the initial OPEC decision, the GNE deflator in OECD countries has grown by more than 30 per cent, and by slightly less than that figure in Canada.9

Just as the boom conditions experienced by individual countries in 1972 and early 1973 were mutually reinforcing, so were the depressing conditions of 1974 and early 1975. Despite the economic slowdown, however, the sharp rise in consumer prices generated increasingly large wage demands, as workers attempted to protect, restore, or increase their

8 Organisation for Economic Co-operation and Development, Working Paper, CPE/TWP(75)13.

9 According to a recent study of the macroeconomic effects of an increase in the oil price from \$4.50 to \$6.50 a barrel, close to one-quarter of the 10.6 per cent increase in the implicit consumer expenditure price deflator in 1974 and one-fifth of the 10.9 per cent rate in 1975 was attributable to higher energy costs. See G. V. Jump and T. A. Wilson, *Macroeconomic Effects of the Energy Crisis 1974-75*, Institute for Quantitative Analysis, University of Toronto, Reprint Series No. 76, 1976.

Table 6-3

	Net oil imports	Change in con resulting increases in e	sumer prices g from nergy costs
	total energy requirements in 1973	Total	Oil price increase
		(Percentag	e points)
Canada	-8.01	2.3	1.7
United States	16.9	2.2	1.4
Japan	81.0	4.3	3.3
France	72.1	3.6	2.9
Germany	49.6	3.1	1.9
Italy	76.4	5.9	5.3
United Kingdom	46.9	5.5	3.9
All OECD countries		3.32	2.3

Relative Importance of Oil Imports, and Effects of Oil Price Increases on the Cost of Living, Seven Leading Industrial Countries, 1973 and 1974

I Net exports.

2 Plus roughly 0.2 per cent for hydro-electricity and other sources of primary energy. SOURCE Based on data from the Organisation for Economic Co-operation and Development.

real income levels. Minimal productivity gains and high wage settlements increased unit labour costs and put further pressure on final product prices (Table 6-4). In comparison with other countries, the increases in average wages in Canadian manufacturing were not the highest, though they were greater than in the United States and West Germany. However, those countries with the highest annual wage increases have experienced persistent balance-of-payments difficulties and currency depreciation. Increases in unit labour costs in Canadian manufacturing have been consistently higher than those in the United States over the past four years¹⁰ and seem to have deteriorated further in all sectors this year (Table 6-5). To some degree, movements in the exchange rate of the Canadian dollar aggravated or offset this unfavourable cost position. For instance, the appreciation of the Canadian dollar relative to the U.S. dollar in 1974 worsened our short-run competitive position in manufacturing, whereas the depreciation of the Canadian dollar in 1975 more than offset the higher domestic increase in unit labour costs in Canada relative to U.S. manufacturers. The renewed strength of the Canadian dollar in 1976 again hindered the competitiveness of our manufactured exports in the U.S. market where we have been selling about half those products.

¹⁰ Each country's average unit labour cost was computed in terms of its own currency. The measure changes if account is taken of variations in the exchange rates of Canadian and U.S. dollars.

Table 6-4

International Comparison of Hourly Compensation and Unit Labour Costs in Manufacturing, 1974 and 1975, and Destination of Canadian Manufactured Exports, 1972-75

	Ho compe in na curr	urly nsation tional ency	Unit I co in U dol	abour sts J.S. lars	Share of Canada's manufacturing exports
	1974	1975	1974	1975	(average, 1972-75)
	(Aı	nnual perce	ntage char	nge)	(Per cent)
Canada	12.4	16.4	15.0	10.2	
United States	9.9	11.2	14.4	11.0	48.7
Japan	31.5	15.4	20.1	16.9	1.4
France	21.7	17.9	19.4	38.4	0.6
Germany	15.7	11.6	12.9	13.7	0.9
Italy	25.1	28.0	6.3	32.8	0.5
United Kingdom	18.8	26.8	14.1	22.1	3.6

SOURCE U.S. Bureau of Labor Statistics.

Table 6-5

Change in Wage Rates and Labour Costs, Canada and United States, 1976

	Index of wage rate of contrac	f average increases ets in force	Labour unit of	costs per output
	First quarter	Second quarter	First quarter	Second quarter
	(Y	ear-over-year pe	ercentage increa	ise)
Canada United States	11.8	12.0	10.0	16.4
United States	8.3	8.6	2.5	4.1

SOURCE Based on data from the Anti-Inflation Board.

Price Developments in Canada

Over the years, the widely varying pattern of price movements in Canada has taken on many dimensions. Agricultural prices, sometimes lagging behind other prices during the 1960s, have risen dramatically in the 1970s and have more than doubled since 1971 (Table 6-6). By 1974, the implicit price indexes for labour-intensive activities such as public administration, services, and construction had risen by between 25 and 40 per cent of their 1971 levels. However, prices in heavily capitalized sectors such as public utilities, transportation, and manufacturing rose by only 15 to 25 per cent during the same period.

Table 6-6

Implicit Price Index, by Industry, Selected Years, 1961-74

	1961	1966	1972	1974
		(1971	=100)	
Agriculture	81.6	107.7	118.0	239.3
Forestry	88.1	87.8	110.1	157.4
Fishing	54.6	72.5	117.0	168.5
Mining	88.7	104.2	105.0	180.3
Manufacturing	89.0	91.1	105.8	127.2
Construction	62.0	77.9	109.1	142.6
Transportation	85.5	88.5	105.6	116.3
Public utilities	87.9	89.3	97.8	116.7
Trade	77.5	82.6	107.8	128.9
Finance	77.9	81.0	105.1	121.7
Services	58.5	71.6	107.0	126.3
Public administration	54.6	71.1	106.4	128.8
All industries	75.2	83.5	106.6	131.2

SOURCE Based on data from Statistics Canada.

Normally, one would assume that rising relative prices would encourage more-than-proportionate increases in supply. That this has not occurred in fishing or agriculture is largely the result of physical limitations but, in the service and public administration sectors, where productivity increases are acknowledged to be low, there has indeed been more-than-proportionate growth (although measurements of output for these sectors are crude). In manufacturing, proportionately, there has been a downward output trend, coinciding with the upward year-toyear trend in prices.

Chart 6-4 compares year-over-year price changes in the main components of the GNE price deflator. Throughout the 1970-75 period, the prices of goods and services paid for by governments increased more rapidly than those associated with private spending. There are a number of explanations, not the least of which is the respective composition of public and private expenditures and the fact that government spending is directed much more heavily towards services, where relative prices have risen the most. Nevertheless, it does seem to confirm that the federal and provincial governments, which benefited from the inflationary bias in tax revenues described in Chapter 5, were not exercising sufficient restraint over their expenditures.

Chart 6-4

Selected Components of the GNE Implicit Price Deflator, 1970-76 (Annual percentage change, by quarter)



SOURCE Based on data from Statistics Canada.

Price and Cost Developments 89

Overall, service prices have constituted the most inflationary component of personal expenditures in the 1970s. Sparked by the advance of food prices, however, the strong surge in nondurable goods prices triggered the inflationary strains of 1972, which then spread to durable goods in 1973. In the capital goods sector, strong demand provoked increases of 8.5 and 15.8 per cent in 1973 and 1974, respectively, led by a cost surge in the construction sector. The 1975 business downturn was marked by a general deceleration of capital goods prices. Indeed, some deceleration of prices took place in all components of gross national expenditure. This downward trend persisted through the first half of 1976.

Food Prices

In contrast with the 1950-72 period, when farm surpluses were common and farm incomes were well below those of the average wageearner, food prices moved up strongly from 1972 on, spurred by international shortages. Indeed, the strong increase in world demand for

Chart 6-5

Food Prices Paid by Consumers and Received by Farmers, 1950-75 (1950=100)



SOURCE Based on data from Statistics Canada.

farm products, coupled with declining production, generated serious strains on the cereal, feed grain, and oilseed markets. Despite good wheat crops in the 1973-74 and 1974-75 seasons, inventories were low, and wheat prices remained relatively high. High wheat prices soon extended to foodstuffs, bakery and dairy products, oils and fats, meat, fish and poultry, and fruits and vegetables.

Between 1972 and 1974, costs and prices at the farm level increased much faster than those in the food processing and distribution industries. But, by 1975, with prices of basic commodities easing somewhat, many food prices to the consumer continued to increase because of higher transportation, storage, packaging, and distribution costs. The overall trend has been in this direction (Chart 6-5).

Among the components of the consumer price index, food accounts for roughly one-quarter of household budget expenditures (Table 6-7). Originally subject to the scrutiny of the Food Prices Review Board, food prices now lie outside the controls mandate of the Anti-Inflation Board (AIB), although the Board continues to monitor their progress. After lagging slightly behind industrial prices through most of the 1960s, food prices increased by roughly 15 per cent in 1973, 16 per cent in 1974, and 13 per cent in 1975. They declined in the first half of 1976 but may well rise again in 1977, despite an excellent grain harvest this year.

Housing and Other Costs

Shelter costs constitute a second major item in the consumer price index, accounting for almost one-third of household expenditures. Since 1967, the housing price index has grown faster than the general CPI, but less rapidly than food costs since 1972. Furthermore, most components of ownership costs — new houses, mortgage interest, repairs, and dwelling insurance — have risen more rapidly than the general housing index and more rapidly than rents. Electricity and heating costs have climbed rapidly since the initial OPEC decision to raise international oil prices in 1973.

The measure of housing costs in the CPI incorporates the expenditures of families who own their homes or have lived in them for many years; thus it is not intended to be an estimate of the purchase costs of new or existing houses, which in urban areas embody very high land values.¹¹ Nor does it capture the significant reduction that has taken place in the average size of new homes, which has been reflected in the shift in residential construction to condominiums and townhouses. Even the average new, single detached dwelling financed under the National Housing Act (NHA) is 15 per cent smaller today than a decade ago.

11 Much the same type of statistical discrepancy applies to the index of rental costs, which, according to the CPI, in December 1975 were only 15 per cent above 1975 levels.

Table 6-7

Contribution to Change in Consumer Price Index, by Component, 1974-76

						Average annual	č	c			
		Annu	al perce	ntage cl	nange	percentage change,	cor	hare of isumer	change price in	in dex	Average share,
		Jan.	Jan.	Jan.	Aug.	Jan. 1974 to	Jan.	Jan.	Jan.	Aug.	Jan. 1974 to
	Weights	1974	1975	1976	1976	Aug. 1976	1974	1975	1976	1976	Aug. 1976
Food	.25	15.9	16.3	8.3	-0.5	12.2	44.0	33.7	21.7	-2.1	28.7
Housing	.31	7.0	10.2	11.4	10.9	9.8	24.1	26.1	36.7	54.4	30.8
Clothing	11.	7.4	0.6	4.4	6.1	7.2	9.1	8.2	5.1	10.7	7.8
Transportation	.15	7.7	10.6	13.3	8.8	11.0	12.8	13.1	20.7	21.2	16.5
Health and personal care	.05	6.5	10.8	10.5	7.9	9.8	3.6	4.5	5.5	6.3	4.9
Recreation and reading	.07	5.3	11.8	7.9	5.6	8.8	4.1	.6.8	5.8	6.3	6.0
Tobacco and alcohol	.06	1.2	13.2	6.4	7.2	8.3	0.8	9.9	4.0	6.9	4.9
Total ²	1.00	9.0	12.1	9.6	6.2	10.2	100.0	100.0	100.0	100.0	100.0

Figures may not add up to 100 because of rounding.
 SOURCE Based on data from Statistics Canada.

From 1971 to the end of 1975, the cost of NHA-financed single detached dwellings rose by 73 per cent; and, in Ottawa, Toronto, Montreal, Edmonton, Winnipeg, and Calgary, a recent survey on the prices of new houses revealed rates of growth varying from 72 to 124 per cent.¹² By late 1974, the speculative boom in housing was effectively broken in most of Canada by the imposition of federal and provincial capital gains tax on land development and, subsequently, by the introduction of rent controls in some provinces. The exceptions are Edmonton and Calgary, which continue to record very rapid price increases.

After showing only modest increases between 1969 and 1973, transportation costs rose at a rate of 10 per cent in 1974 and by over 12 per cent in late 1975. For all other household budget items, including clothing, health, recreation, and education, the surge in price increases decelerated somewhat in 1975.

Variations in price movements have income, as well as cost, effects, which may help or hurt different regions simultaneously. Increases in agricultural prices obviously helped farmers, particularly grain farmers and cattle ranchers in the Prairie provinces, but added to the household food budgets of city dwellers and others. The oil boom contributed to the prosperity of Alberta but substantially increased the energy costs borne by other provinces. In short, while rising prices are borne by consumers throughout Canada, the relative income advantage may accrue to certain sectors or regions only.¹³

Production Costs

The gross domestic product (GDP) measures the value of output produced within the borders of Canada, whether the factors used are domestic or foreign. If GDP is expressed in constant dollars to derive a measure of volume, the resulting deflator — the implicit price of GDP can then be interpreted as a measure of the cost per unit of output for the Canadian economy as a whole. In general, changes in the GDP price deflator — a measure of the cost borne by the producer — parallel closely those of the GNE deflator, which measures the price paid by the consumer, including indirect taxes.

Exclusive of taxes, a firm's costs per unit of output include its employee payroll, its repayment obligations on borrowed capital, the maintenance and depreciation of its equipment, and the profit set aside before taxes for

- 12 It is perhaps worth observing that, since 1971, construction costs per square foot for NHA-financed single detached dwellings have increased faster than the average prices of building materials or the union wage rates of the various construction trades. This suggests that either house-builders have increased their profit margins or they are less efficient than before.
- 13 The regional impact of the recent inflation is a highly complex issue. Some aspects of this question are presently under study at the Council and will be reported on next year within the framework of a study of the goals of regional policy.

dividend payments to shareholders and for retained earnings. When these are related to production, they involve labour costs (wages, salaries, and fringe benefits) and financial input costs (all charges associated with the use of plant and equipment, fuel, etc.) per unit of output, as well as profits per unit of output. Usually these calculations are made on a value-added basis, thus excluding the costs of purchased raw materials.¹⁴

Unit costs of both labour and financial input are also strongly affected by cyclical factors and business expectations, which in turn determine the amount of output linked to certain expenditure levels. In general, output per person employed — the usual measure of productivity — falls to its lowest level as the cycle reaches its trough, and attains its maximum as the cycle approaches its peak. It follows that, during a recovery, with output, productivity, and profits rising, the annual increases in unit labour costs tend to slow down. Profits usually begin to decline at the peak of the cycle and reach their minimum just before the bottom of the cycle, whereas unit labour costs tend to accelerate during the downswing.

The complex interaction of these various elements can be observed in Chart 6-6. During the 1970 slowdown, for instance, unit labour costs increased by 5.7 per cent, while profits per unit of output declined by 22 per cent. In 1973, profits climbed considerably, but the growth of unit labour costs did not even match the rate of inflation. In 1974 and 1975, wage costs advanced strongly as workers sought to catch up to their former level of real increases and to anticipate further inflationary pressures; however, by 1975, with business activity again at a low ebb and prices continuing to climb rapidly, profits per unit of output fell dramatically.

In the aggregate, increases in financial input costs per unit of output fluctuated within fairly narrow bounds, averaging less than 3 per cent a year until the early 1970s. But, by 1972, with aggregate demand intensifying, firms pressing against capacity, and interest rates escalating, they moved substantially upward. In the process, the prime business lending rate, reflecting short-term interest rates, advanced from 6.5 per cent in 1971 to over 11 per cent in 1974, dropped to 9 per cent in 1975, and has averaged over 10 per cent in 1976. With many of these costs built into the overhead commitments of enterprises, the result in 1975 was that

14 In the National Accounts, wages, salaries, and supplementary labour income, including military pay and allowances, account for roughly 62 per cent of the cost calculations that enter GDP (which excludes indirect taxes). This share has been growing with the relative decline in the number of farms and unincorporated businesses. Items other than wages and salaries and pre-tax profits account for about 26 per cent of overall GDP and include interest and other investment income, net income of farm operators and of nonfarm unincorporated business, capital consumption allowances, miscellaneous valuation adjustments, inventory adjustments, investment income, and dividends paid to nonresidents. Apart from farm and unincorporated business income, most of these components are related in some way to capital financing; for the sake of simplicity, we refer to them all here as financial input costs. Profits account for 12 per cent of GOP.

Chart 6-6



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

financial input costs per unit of output grew by 31.1 per cent. The direct relationship between productivity and profits per unit of output and the inverse relationship with unit labour costs over the course of a business cycle are not quite so apparent in the case of other unit costs, since most of the latter have to do with plant expansion, the installation of new equipment, and the availability of financial capital.

In sum, labour costs and profits per unit of output are directly dependent upon the level of economic activity. They are linked to variations in productivity levels during the cycle, whereas financial input costs per unit of output are linked mainly to interest rates and only indirectly to the level of activity and investment. All costs, of course, are affected by the general price level and by exogenous factors such as the energy crisis or changes in indirect taxes. The relative role played by labour, financial input, and profits in rising total unit costs over the years is evident from Table 6-8.

Table 6-8

	-	Share of:		Increase
	Labour	Financial inputs	Profits	in total unit costs
		(Per d	cent)	
Average,				
1961-65	60.0	-13.3	53.5	1.5
1966-70	84.2	31.6	-15.8	3.8
1971-75	60.7	21.3	18.0	8.9
1971	62.2	5.4	32.4	3.7
1972	59.1	7.6	33.3	6.6
1973	45.7	14.1	40.2	9.2
1974	61.4	4.7	33.9	12.7
1975	70.7	55.3	-26.0	12.3

Relative Contribution of Factor Costs to Increases in Total Unit Costs, All Sectors, 1961-75

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

Each sector within the economy, of course, is confronted with its own unique pattern of cost and price developments and economic activity, depending on its specific structural characteristics, the buoyancy of demand at each point of the cycle, and international competition. The implicit price index measures total unit costs, excluding taxes; and these are compared with annual changes in real output, by sector, in Chart 6-7. In general, the most cyclically volatile of the major industries are mining,

Chart 6-7

Real Domestic Product and Implicit Prices, by Sector, 1962-75 (Annual percentage change)



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

manufacturing, and construction. Peaks and troughs in prices and output in the mining sector tend to precede those in manufacturing and construction. Normally, public utilities and service industries stand out as stabilizing sectors in downturn periods. But growth in public utilities has declined heavily since the energy crisis. Only the service and related sectors appear to operate outside the orbit of cost-related economic conditions. Whereas output in the majority of sectors declined in 1975, the level of output in the service and public administration sectors advanced by 4 per cent.

There is no clear relationship between total unit costs, as measured by the implicit price index, and real output. In some sectors such as agriculture, year-over-year changes in the implicit price index and real output ran roughly parallel, though sometimes lagged, until the 1970s, when prices and costs rose dramatically and real output fell. In manufacturing, there has generally been an inverse relationship, as the upward movement of the implicit price index tends to grow and as rates of real output growth tend to fall. Somewhat the same observation can be made for the service sector. In construction and public administration, lagged interrelationships are evident between implicit price and real output changes but, in both cases, the rate of implicit price increases accelerated sharply during the 1970s.

Up to this point, we have based most of our analysis of costs and prices on the national accounts of GDP, which excludes indirect taxes. However, as businessmen and consumers know, indirect taxes contribute significantly to costs. Using figures based on GNP, which includes indirect taxes, we find that, over the years, indirect taxes have lost ground as a source of total government revenues but that, as a proportion of GNP and therefore as a cost item to enterprises and consumers, they have grown slightly, averaging about 13 per cent of GNP in 1975, with the downturn in business activity. (To some degree, of course, this increase has been offset by subsidies.) By and large, year-over-year increases in provincial indirect taxes have exceeded those of either the federal or local governments (Chart 6-8).

To a considerable degree, indirect taxes are specifically assigned to programs affecting the well-being and future security of individuals, as in the case of unemployment insurance or Canada Pension Plan contributions.¹⁵ Most provincial sales taxes do not apply to essential services, foodstuffs, or children's wear. However, the base on which they apply as a proportion of overall spending has declined; hence their incidence as an added cost to the items on which they do apply has grown. A recent study

¹⁵ In the National Accounts, unemployment insurance and Canada and Quebec Pension Plan contributions are considered separately from indirect taxes. Nonetheless, to the employer, they represent a payroll tax that adds to costs.

Chart 6-8

Contribution of Indirect Taxes, Unemployment Insurance Contributions, and CPP and QPP Contributions to Cost per Unit of National Output, 1950-75





for the C. D. Howe Research Institute, for instance, indicates that, on these items, indirect taxes accounted for 33 per cent of total unit costs in 1956 and 46 per cent in 1973.¹⁶ We estimate that the costs of indirect taxes per

16 D.A.L. Auld, Issues and Government Expenditure Growth, Canadian Economic Policy Committee (Montreal: C. D. Howe Research Institute, 1976). unit of output have grown at an annual average rate of between 4.0 and 4.5 per cent — substantially less than the average growth rates of the other major components of costs per unit of output (Table 6-9).

Table 6-9

Selected Cost Components of the GNP Price Index, 1965-75

	1965-	70	1970-	75
	Average annual rate of change	Share	Average annual rate of change	Share
		(Per	cent)	
Indirect taxes per unit of output ¹	4.2	13.2	4.3	12.8
Federal	-1.0	4.7	1.8	4.0
Provincial	7.1	8.6	5.4	8.7
Labour costs per unit of output Corporate profits (before taxes)	5.5	54.1	9.0	55.4
per unit of output Financial input costs per unit of	-0.7	10.5	14.0	11.1
output ²	3.2	22.0	6.7	20.8
Total costs per unit of output	4.1	100.0	8.4	100.0

I Indirect taxes, less subsidies.

2 Unlike the costs referred to in the discussion on the cost of domestic product, financial input costs here include investment income received from nonresidents and exclude investment income paid to nonresidents.

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

Conclusion

We have seen that the recent inflation experience reflected an initial international surge of industrial output and trade, followed by unanticipated rounds of increases in food and industrial commodity prices, and by the OPEC energy shock. The consequence was a dramatic increase in the cost of living in almost all western countries, an accommodating monetary policy, and a continuous realignment of foreign exchange rates, all occurring sequentially and thus reinforcing cost and price pressures. Attempts by workers to catch up and to achieve real income gains brought about substantial wage increases. Employers, too, secured higher prices and profits. As a result, the increase in total unit costs in Canada accelerated from 3.7 per cent in 1971 to 12.3 per cent in 1975 — a development that, if maintained, could well jeopardize our ability to compete in international trade markets.

7 Trade

Much of the viability of the Canadian economy as a major trading entity depends on its ability to compete in export markets. Traditionally, this country has relied upon its natural endowment as the main source of exports — mineral ores, concentrates and alloys, grain, lumber, pulp and paper, petroleum, and fish — and it has sought out foreign capital to finance its growing industrial base. In recent years, it has shared in the production of motor vehicles and automotive parts with the United States; it has become more selective about foreign investments and corporate takeovers; and it is now a net exporter of equity capital.

At the same time, however, the Canadian economy has been wrestling with low rates of productivity and rising unit costs. Canada's trade performance has deteriorated steadily since 1970, as the result of a swing from a fairly strong surplus to a deficit in merchandise trade. Consequently, it has been impossible to offset Canada's traditional deficit on services and transfers, which results largely from the net outflow of dividends, interest payments, and repayments of foreign investment; and the overall current account deficit has had to be financed by additional net foreign borrowing.

This raises a number of important questions. Have Canadians in fact developed the industrial strength and maturity necessary to shed their role as exporters of staples and importers of capital? Are we now closer to being internationally competitive across a broad range of industrial products? And are we at last almost free of our chronic reliance on foreign capital as a source of stability for our balance of payments? As this chapter shows, the answers to these questions are far from reassuring.

A Perspective on Canada's Trade Performance

While the devaluation of the Canadian dollar and the renewal of defence-production-sharing arrangements with the United States in the early 1960s provided a competitive impetus to Canada's manufacturing exports, they also raised prices of imported materials and parts. As the

102 Trade

economy approached full capacity in the mid-1960s,¹ unit costs rose and the trade competitive index² fell. It recovered again later in the decade, primarily as a result of automotive-product exports and the relative buoyancy of the U.S. market. However, the price index of Canadian manufactured goods, relative to U.S. goods and measured in U.S. dollars, has risen steadily since 1965 (Table 7-1). Our manufactured goods have become less competitive in world markets and, as a result, Canada's current account balance has deteriorated from 1970 onward, with the deficit reaching some 3.3 per cent of GNP in 1975 - a situation unparalleled since the foreign exchange crisis and recession of 1959-61 (Table 7-2).

Table 7-1

Unit Costs of Compensation in Canada and the United States,	Selected Y	ears, 1960-7	5			
	1960	1965	1970	1975		
	(U.S. dollars, 1970=100)					
Prices of manufactured goods						
Canada	89.6	85.1	100.0	164.6		
United States	85.9	87.4	100.0	155.3		
	(Canada/U.S. indexes)					
Ratio for unit costs of compensation in						
manufacturing	04.3	97.4	100.0	106.0		

Price Indexes for Manufactured Goods, and Index Ratio for

1 The price indexes are the Canadian aggregate industry selling price index for which 1960 is estimated (it begins in 1961) and the U.S. wholesale price index for manufactured goods. U.S. cost data are from the recently revised series.

SOURCE Based on data from Statistics Canada, the U.S. Department of Commerce, and the U.S. Department of Labor.

Following the commodity price boom of 1972-74, Canadian exports rose more rapidly in dollar than in volume terms (discounted for price increases). While exports continued to grow, imports of goods grew even more rapidly, with the result that the export volume, as a percentage of imports, dropped to about four-fifths of the 1971 ratio, despite relatively favourable terms of trade. The improvement in the terms of trade obscured

2 The trade competitive index measures changes in the direction and volume of trade relative to Canada's real spending on goods and the industrial output of OECD countries (see Chart 7-2).

¹ The overall rate of capacity utilization in nonagricultural-goods industries reached 95 per cent in 1965. This average conceals higher rates in some industries - 97 per cent in mining and 98 to 99 per cent in utilities. Above the average, most industries are likely to run into production bottlenecks and to incur increasing supply costs from industries that are near capacity.

Table 7-2

	Average						
	1951-61	1964-66	1969-71	1973	1974	1975	
	(Billions of current dollars)						
Merchandise	-0.1	0.4	2.2	2.7	1.5	-0.8	
Services and transfers	-1.1	-1.3	-2.0	-2.7	-3.2	-4.3	
Total	-1.2	-0.9	0.2	0.0	-1.7	-5.1	
		(Percentag	ge of GNF)		
Merchandise	-0.3	0.6	2.5	2.3	1.1	-0.5	
Services and transfers	-2.8	-2.2	-2.3	-2.3	-2.3	-2.8	
Total	-3.2	-1.6	0.2	0.0	-1.2	-3.3	

Balance of Payments on Current Account, Selected Years, 1951-75

SOURCE Based on data from Statistics Canada.

the decline in the export volume and may have led some observers to underestimate the gravity of the competitive decline and to attribute the worsening balance-of-payments position in 1974 and 1975 solely to cyclical developments in Canada and abroad. In fact, however, the decline in the trade competitive index between 1970 and 1975 suggests the presence of serious structural problems that may well have deterred investors from expanding capacity at higher rates.

Most dramatic in this process has been the pattern of trade in crude petroleum. In 1973 and 1974, oil was a source of strength in Canadian trade, because Canada was a net exporter of this product, with a surplus of more than \$900 million in 1974. In 1975, however, the oil trade showed a net deficit of nearly \$300 million — a swing of \$1.2 billion between the two years — accounting for over half the deterioration of the merchandise trade balance in that period.

Over the long term, Canada's export sales are strongly influenced by the rates of economic activity and industrial growth in the United States and other OECD member countries; similarly, our purchases of foreign goods reflect increases in real income and real spending in Canada (Table 7-3).³ These general relationships are, however, subject to wide variations. In the 1960s, both our export and import performances were strong, with exports holding an edge. In the 1970-75 period, these relationships reversed, and the rate of growth in merchandise trade slowed, following the pattern observed in the 1950s. In volume terms, Canadian exports barely kept pace with the expansion of OECD industrial production from 1970 to 1975.

³ Very roughly, for every increase of 1 percentage point in industrial growth in OECD, Canadian exports tend to grow by 1.5 per cent. Similarly, for every increase of 1 percentage point in real spending on goods in Canada, imports rise by roughly 1.5 per cent.

104 Trade

Table 7-3

Average Annual Growth Rates of OECD Industrial Production, Canadian Merchandise Trade, and Real Spending on Goods in Canada, 1960-75

	1960-70	1970-75	
	(Per cent)		
Industrial production of OECD countries ¹ Canadian exports of goods	5.1	3.3 3.0	
Other manufactured goods	46.7	9.1	
Real spending on goods in Canada ³ Canadian imports of goods Automotive goods ² Other manufactured goods	4.2 7.6 15.4 6.7	6.2 9.3 13.5 9.0	
Ratio of Canadian exports to OECD industrial production	1.98	0.91	
Ratio of Canadian imports to Canadian real spending on goods	1.81	1.50	

1 A weighted average of the industrial production indexes of the United States, the EEC, and Japan.

 Primarily road motor vehicles and parts.
 The government spending component is calculated by subtracting government wages and salaries deflated by the CP1 - from total government spending in real terms.

SOURCE Based on data from the CANDIDE databank, the Bank of Canada Review, and Statistics Canada.

Table 7-4

Canadian Exports as a Percentage of World Exports,1 Selected Years, 1966-75

	1966	1969	1972	1974	First half	
					1974	1975
Canada's share of world exports to:						
All countries United States	4.9 23.5	5.3 27.8	5.1 25.6	4.0 21.8	4.0 22.5	3.9 22.6
Japan	4.5	4.6	4.7	3.9	4.2	3.9
Canada's share of adjusted exports ² to:						
All countries United States Western Europe	6.8 22.0 4.7	6.4 22.1	5.9 20.4 3.4	4.8 18.4 2.7	4.8 18.9 2.6	4.7 18.9
Japan	4.5	4.6	4.7	3.9	4.2	3.9

1 Expressed in U.S. dollars.

2 World exports have been adjusted arbitrarily by excluding some major trade flows that occur under special agreements. The adjusted figures exclude trade within the EEC-plus-EFTA group in Europe, and they also exclude trade between the centrally planned or communist countries. The adjusted data also exclude world and Canadian exports of road motor vehicles and parts to the United States. World (and Canadian) exports to the world exclude exports of other countries to Canada. SOURCE Based on data from the U.N. Monthly Bulletin of Statistics.

Despite the relatively rapid rise in Canadian export prices for agricultural and resource-based materials over the 1970-75 period, Canada's share of the value of world exports has declined (Table 7-4). This drop becomes even more striking when the European Economic Community (EEC), the European Free Trade Association (EFTA), and the centrally planned economies of Eastern Europe are viewed as single economic entities and when the trade arising out of the Canada–United States Automotive Agreement in 1965. is excluded. The figures show that Canada's share of world exports of manufactured goods (excluding automotive products) has been declining more or less steadily since the mid-1960s and that much of the dynamism of Canada's export trade in the 1960s resulted from the automotive agreement.

Table 7-5

Merchandise Imports as a Percentage of Spending on Goods in Canada,¹ Selected Years, 1960-75

	1960	1965	1970	1973	1974	1975
Proportion of imports	20.5	22.5	26.1	29.8	33.3	32.9

1 In current dollars.

SOURCE Based on data from Bank of Canada Review and from Statistics Canada.

Together, then, a declining competitiveness in almost all lines except primary materials and foodstuffs, a growing reliance on imported fuel, and the rising share of real goods spending on imports (Table 7-5), all constitute increasing evidence of the deterioration of Canada's merchandise trade position in recent years (Chart 7-1).

It is helpful to compare the various aspects or components of the trade competitive index for all goods (Chart 7-2). While the bulk of Canada's exports are still composed of naturally endowed staples, a substantial portion is at least partially processed in Canada. If this is included in manufacturing, then manufactured goods account for a high proportion of Canadian trade — over two-thirds of exports and five-sixths of imports and they have largely shaped Canada's competitive performance since the mid-1960s. In manufacturing other than automotive, however, our trade competitiveness in volume terms tumbled from a peak index of over 108 in 1962, following devaluation, to a trough of almost 80 in 1973. This downward trend for nonautomotive manufacturing sectors represents a serious weakening of Canada's economic structure. Much of this faltering competitiveness, as the Council showed in its report on commercial policy,⁴ results from a decline in productivity and an increase in unit costs relative to those in the United States.

Increased Canadian spending and changes in relative prices have also encouraged imports. Since 1970, real spending on goods by Canadians has

⁴ Economic Council of Canada, Looking Outward: A New Trade Strategy for Canada (Ottawa: Information Canada, 1975).
106 Trade

Chart 7-1

Economic Indicators and Trade Competitive Index, 1960-75 (1971=100)



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

Chart 7-2

Trade Competitive Indexes for All Goods and Manufactured Goods, 1960-75 (1971 = 100)Manufactured goods, -- Volume, including price effects excluding auto products Volume only All manufactured goods -112--104--96--88--80-75 75 1960 70 1960 70 SOURCE Based on data from Statistics Canada and estimates by the Economic Council of Canada.

substantially outpaced GNE growth. About two-thirds of this currentdollar increase is accounted for by personal spending and by expenditures on machinery and equipment — types of spending with a significant, rising, import content.

Had Canada been more competitive in international markets in recent years, it seems likely that investment in new plant capacity and equipment would have been higher. Moreover, since the level and growth of output per person employed — the crude, but customary, measure of productivity — are typically higher in manufacturing than the average for the whole economy,⁵ the inability of this sector to bring about a vigorous expansion in export sales is a factor that tends to retard the overall growth of productivity in the Canadian economy.⁶

- 5 See "Chart Story: Manufacturing In Canada," *Canadian Business Review* (Spring 1976): 8-9.
- 6 The trade balance in manufactured goods, which had become moderately positive by 1970, deteriorated to a deficit equivalent in magnitude to about 22 per cent of the current value of manufacturing output in Canada (i.e., manufacturing GDP at factor cost) by 1975. There was some recovery in the merchandise trade account during the first three quarters of 1976, but this resulted mainly from a relative decline in merchandise imports. Export growth was modest.

108 Trade

Of course, rising costs and currency appreciation have also eroded the competitive position of some overseas suppliers of manufactured products. Despite this erosion, however, countries such as West Germany and Japan remain keenly and aggressively competitive, with annual productivity increases that are far higher than those in Canada. Moreover, it is clear that, except in the mineral fuels sector, the United States has outperformed Canada as an exporter in recent years.

In short, despite favourable terms of trade and healthy markets for raw and processed materials and grains, the deterioration in Canada's trade performance during the first half of the 1970s was massive. It led to lower real output than the world business cycle warranted and added to the incidence of idle capacity in the goods-producing industries. If Canada's international trade competitiveness had been within 10 percentage points of its 1971 level, total output would have been higher by 1.7 percentage points in 1974 and 0.8 percentage point in 1975.

Looking ahead, despite growing interest in Canadian products in Europe and the developing nations, it is difficult to discern any systematic change in the direction of our trade flows, apart from the obvious phasingout of oil exports destined almost entirely for the U.S. market. The recent rise in the value of Canadian exports to developing countries is attributable largely to agricultural products, and it does not constitute exceptional performance in the world context. Canada has not significantly increased its share of world exports to developing countries during the 1970s, and it seems clear that our country is locked more or less into the export patterns of the early 1970s, both in terms of commodity composition and destination.

Over the next decade, Canada's declining ability to export crude oil will adversely affect its balance-of-payments position. This situation will be offset to some extent by the growth in the supply of coal, uranium, and natural gas. On balance, however, the adverse impact on the volume of Canadian trade will be substantial. Estimates of the future trade volume of energy materials show that exports will decline to 1980, while imports will resume an upward trend in 1977-78 (Chart 7-3). Although government policy aims at phasing out exports and directing domestic supplies to the Canadian market, the combination of consumption growth and declining domestic production will create a growing net import balance for oil, which will strongly influence trade patterns for energy materials as a whole. The size of the nominal trade deficit for crude oil, which will be heavily influenced by price developments, is likely to reach at least several billions of current dollars in the mid-1980s. Other energy products, such as natural gas, uranium, and perhaps coal, will provide surpluses that will reduce, but not eliminate, the larger deficit attributable to trade in crude oil. In addition to the merchandise deficit, there will be substantial net costs for the transport of crude oil to Canada by sea and by pipeline through U.S. territory.

Index of Exports and Imports of Energy Materials, in Constant Dollars, 1973-85 (1975=100)

Chart 7-3



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

This adverse trade pattern implies a substantial brake on future improvements in Canada's terms of trade. Continued high or rising relative prices for resource-based products, such as grains, metals, and forest products, will provide some cushion for the Canadian balance of payments. It would not be prudent for Canada to rely heavily upon such a cushion, however, since favourable movements in the terms of trade for primary products may quickly be reversed with the emergence of new supply sources elsewhere, or with the occurrence of bumper world crops.⁷

7 A rise in Canadian export prices relative to import prices can be considered "favourable" only in certain circumstances — usually when the relative price increase is caused by global shortages of the products concerned. A rise in the price of Canadian advanced manufactured goods relative to foreign prices would entail unfavourable consequences for Canada's competitiveness and balance of payments. 110 Trade

The anticipated growth patterns of real spending on goods in Canada, and industrial production in the OECD, however, indicate that some of the adverse factors operating against the Canadian merchandise trade balance between 1970 and 1975 will be reversed between 1975 and 1980. This suggests an opportunity for Canada to improve its trade balance despite a deteriorating oil situation. The extent to which Canada takes advantage of this opportunity will depend largely on the supply competitiveness of Canadian secondary manufacturing, including its ability to increase capacity as markets expand.

We have considered in the past the implications of wage rates in manufacturing approaching parity — indeed, in some industries, exceeding parity — with wages in the same industries in the United States, despite generally lower productivity levels in Canadian manufacturing firms.⁸ It seems clear that the increase in incomes made possible by the favourable terms of trade for resource exports in the early 1970s helped to accommodate the relatively faster increase in Canadian manufacturing wages without a corresponding adjustment in exchange rates. More recently, the heavy inflow of debt capital from abroad helped to sustain the value of the Canadian dollar at a premium relative to the U.S. dollar and to offset the relative weakness of our current account. It was not until the final months of 1976 that the Canadian dollar began to weaken.

The deficit in Canada's nonmerchandise current account in 1975 and the first half of 1976 was roughly 2.8 per cent of GNP (Table 7-2); given the repayment obligations attached to present foreign borrowings, it could well go beyond that level in future years. Yet it is difficult to foresee how the economy will be able consistently to generate an offsetting merchandise surplus. Consequently, it seems likely that we shall continue to need substantial net capital inflows throughout most of the next decade.

In general, it may be assumed that, given the present system of managed floating exchange rates, a continuing deterioration in our trade competitiveness or the continued presence of inflation rates in excess of those of our major trading partners will prompt a slackening of net capital inflows. The process of adjustment has already begun to occur through a weakening of the Canadian dollar. Nonetheless, it would be folly to expect an easy or early current account surplus, even though the exchange value of the Canadian dollar is dropping. While devaluation will provide at least a short-term fillip to import-competing and export industries, it will also fuet inflation by raising the prices of imported consumer goods and industrial inputs, as well as many export prices expressed in Canadian dollars. By itself, devaluation represents a temporary palliative; the longer-term solution involves a strengthening of the competitive efficiency and productivity of our industries.

8 Economic Council. Looking Outward.

Canada's Performance on Capital Account

Basically, Canada is like most chronic debtors — continuously borrowing on long-term loans to pay off immediate debts. Indeed, over the last two decades, Canada deviated from its traditional current-accountdeficit position only at the onset of the 1970s, as the result of an initial surge of overseas industrial expansion combined with slowing imports, followed by a sharp increase in primary export prices. The deficits result not so much from excessive imports, despite the deterioration of the merchandise account, but rather from the chronic overhang of debt service arising from past borrowings. Canada's net international indebtedness totaled \$43.3 billion in 1975, and the net interest and dividend payments on foreign investments reached roughly \$2 billion in that year. Despite Canada's growing affluence as a nation and despite rates of personal savings that are roughly double their level a generation ago, our foreigndebt repayment obligations as a proportion of income are no lighter today than they were then.

The offsetting financing of the current account has primarily been through long-term capital flows. Direct investments and portfolio transactions in stocks (equity) and bonds (debt) are the two main components of long-term capital flows. Throughout the 1950s and early 1960s, direct investment provided the major part of capital inflows, followed by Canadian stock purchases by foreign investors. By the 1970s, however, the importance of these flows in the overall capital account had started to decline. From a peak in 1971, foreign direct investment in Canada has fallen off by more than 50 per cent, undoubtedly reflecting some waning of foreign confidence in the competitive potential of Canadian industries. By the same token, increasing amounts of Canadian equity capital have been directed abroad, with the result that Canada is now a net exporter of such capital, principally to the United States.

Moreover, since the mid-1960s, debt-financing (bonds and debentures) has progressively replaced equity-financing as the main net contributor to the capital accounts. A major factor affecting this form of capital flow is the yield differential between Canada and the United States. In absolute terms, this differential widened significantly between mid-1974 and the third quarter of 1976, thus rendering our long-term securities more attractive to U.S. investors. While Canada has recently been taking advantage of other financial markets abroad, more than 80 per cent of the claims on the Canadian economy are held by U.S. investors. It is also interesting to note that, whereas federal government issues, the railways, and utilities were originally the main sources of bonds purchased by foreign investors during the early stages of Canada's economic development, these types of securities have now largely been replaced by provincial and municipal bonds.

112 Trade

Chart 7-4

Canada's International Performance on Current and Capital Accounts, 1950-75 (Billions of dollars)





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

114 Trade

Short-term capital movements respond to more immediate financial opportunities and tend to be quite volatile. Since the late 1960s, the volume and speed of these movements have been facilitated by the development and sophistication of short-term money markets, especially the Eurodollar market, and by the general freeing of exchange rates. Between 1966 and 1973, Canada was a net exporter of short-term capital, largely in response to the higher yields available in the Euro-dollar market. The large reverse flow of short-term capital since 1974 has been prompted by a considerable amount of speculative activity; by interest rates that reached higher levels in Canada than in the United States and many European countries; and, until very recently, by a relatively strong Canadian dollar, which made Canada an attractive place to invest short-term funds.

Conclusion

Essentially, we may conclude from this brief review that Canadians have generally been too optimistic and too profligate in their foreign spending. In recent years, Canada's international competitiveness in manufactured goods vis-à-vis that of the United States has deteriorated and shows no sign of improving. In 1973 and 1974, we rode the upward surge in commodity prices with its consequent improvement in dollar terms of trade for our exports and in our foreign exchange structure. World market demands and rising export prices led Canadian decision-makers to focus their attention on additional resource developments and helped to push up domestic incomes. They encouraged strong growth in domestic demand for goods and services — including public services — and for corresponding increases in the money supply. But, as commodity prices receded to more normal levels and the international boom soured, the magnitude of domestic inflationary pressures and trade imbalances in Canada became apparent. Only by heavy borrowing abroad has Canada been able to balance the ledger. This condition is likely to persist into the foreseeable future, particularly if productivity levels in Canada continue to lag behind those of our major international competitors.

The situation could deteriorate even further if inflation rates continue to increase faster in Canada than elsewhere. The changing energy scenario for the 1980s adds further cause for concern. Devaluation of the Canadian dollar can ease the balance-of-payments pressures but cannot resolve the underlying problems. In the process, Canada's trade competitiveness will undoubtedly benefit if rates of inflation can be slowed down by the wage and price controls and by a balanced tightening of monetary policy and fiscal spending. Moderating wages and prices, together with

Conclusion 115

the existence of excess capacity and with renewed economic recovery abroad, could lead to a reallocation of resources back towards those manufacturing sectors that have positive import-replacement, or export, potential.

In its *Twelfth Annual Review*, the Economic Council proposed a set of performance indicators, or quantitative targets, that were considered to represent desirable and attainable economic achievements for Canada over the 1974-78 period.¹ Since the policies vary and the potential of the economy changes with circumstances, our approach to the indicators allows for the annual reassessment of such targets. Our findings take into account the most recent developments and, if necessary, any adjustments in the growth path designed to maintain or bring the economy back to a high-employment trend over the medium term. In this chapter, we first examine recent performance and then provide a new set of target indicators for the years 1975 to 1979.

Individual Indicators and Recent Performance

The medium-term targets presented last year took account of the fact that the economy's resources in 1974-75 had been underutilized. Indeed, on the basis of preliminary National Accounts statistics, it was expected that Canada would experience a negative real growth rate of 0.5 per cent of gross national expenditure (GNE) in 1975. The targets were designed to reduce the slack in the economy over the years ahead and lower the unemployment rate to about 4.5 per cent of the labour force by 1978. It was assumed that exports would be stimulated by a steady recovery in the United States and overseas, and that fiscal incentives would be provided to accelerate the growth of both consumption and investment.

In mid-1976, Statistics Canada released a substantial revision of National Accounts. This changed some of the aggregate items and somewhat modified our view of the extent of the 1974-75 recession. The revision does not permit a direct comparison of the new values with those used in deriving the performance indicators. The revised real rate of

¹ Economic Council of Canada, Twelfth Annual Review: Options for Growth (Ottawa: Information Canada, 1975).

Table 8-1

Performance Indicators, 1974-78, and	
Actual Values and Expected Growth for	1975

	Proposed Council's annual estimate averages, of growth 1974-78 ¹ for 1975	Actual, 1975		
		estimate of growth for 1975	Unrevised National Accounts ²	Revised National Accounts
	(1)	(2)	(3)	(4)
	(Per cent)			
Gross national expenditure	5.2	-0.5	0.2	0.6
Consumer expenditure	5.5	2.7	3.7	4.9
Total fixed investment	5.4	-2.4	1.6	2.4
Machinery and equipment	7.9	J.9	2.5	1.1
Nonresidential construction	6.0	6.0	7.4	10.0
Residential construction	0.6	-22.8	-10.7	-7.4
Government current				
expenditure	4.3	5.9	5.1	3.8
Exports	4.2	-7.4	-6.7	-7.1
Imports	4.8	-7.4	-2.6	-2.5
Real disposable income per				
capita	4.8	0.5	2.6	4.1
Output per person employed	2.2	-1.8	-1.7	
Output per person employed				
in manufacturing	3.4	-2.6	-1.3	
Employment	3.1	1.3	1.9	
	(Percentage points)			
Differential between Canadian				
and foreign price changes ³	± 0.5	-0.6	0.3	
	(The	(Thousands of units)		
Housing starts	240	188	231	
	1978 1975		75	
	(Percentage of labour force)			
Unemployment rate	4.5	7.6	6.9	

1 For gross national expenditure and its components, as well as real disposable income and productivity, the targets are average annual percentage changes calculated in constant dollars. The employment indicator measures the percentage change in the number of persons employed.

2 Substantial National Accounts Revisions covering the period from 1971 to 1975 were released in mid-1976. Since the projections were built from the unrevised data, only the rates in column (3) are directly comparable with the rates in columns (1) and (2). Column (4) is presented to give the order of magnitude of the revisions.

3 Absolute difference between the percentage change in the CPI in Canada and the percentage change in the weighted index of consumer prices in the United Kingdom, the United States, West Germany, Japan, France, and Italy.

SOURCE Economic Council of Canada, Twelfth Annual Review: Options for Growth (Ottawa: Information Canada, 1975), pp. 89 and 176, and estimates based on data from Statistics Canada. growth of 0.6 per cent in GNE for 1975 indicates, however, that the economy performed slightly better than we anticipated when writing the *Twelfth Annual Review* (Table 8-1).

A comparison of the Council's estimates for 1975 with the economy's actual performance² indicates that employment increased somewhat more rapidly than we had anticipated. Real disposable income per capita and consumer expenditure also advanced faster than projected. The decline in imports was less pronounced than expected, as a result of the better performance of business investment and consumer spending. The actual reduction in exports was also slightly less than anticipated. On the price front, instead of keeping abreast of our main trading partners, the Canadian situation deteriorated significantly. The relative price indicator — consisting of the difference in price changes between Canada and the main industrial countries — showed that the Canadian economy was inflating at a rate slightly higher than that of our main trading partners.³

Gross National Expenditure

A review of recent developments based on the revised data shows that the relative strength of domestic demand in 1975 counterbalanced the weakness of net external demand and was the driving force in the move towards recovery. The decline in activity came to an end in the second quarter of 1975, when GNE rose for the first time in almost a year. Although the recovery continued through the first part of 1976 (Chart 8-1), with gross national product (GNP) expanding strongly during the first quarter of the year, progress has been relatively moderate in comparison with similar phases of previous business cycles.

Consumer Expenditure

Despite the slack in the economy in 1975, real disposable income per capita continued to advance at a sustained pace. As a result, consumer expenditure grew by 4.9 per cent in 1975, about the same rate as in 1974 (Chart 8-2).

A deceleration in real spending on nondurable goods was offset by a fairly strong progression in the other main components of consumer

- 2 Strictly speaking, a comparison of our projections for 1975 with actual performance is possible only if unrevised data are used. Our general conclusions apply equally, however, when revised National Accounts data are used:
- 3 The value of the price differential for 1975 is estimated at 0.3, indicating only a slight deterioration in our price performance compared with that of the other countries. On a quarterly basis, however, the deterioration appears to be much stronger (Chart 8-16).

Chart 8-1

Gross National Expenditure, 1971-76 (Billions of 1971 dollars)



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

Chart 8-2

Consumer Expenditure, 1971-76 (Billions of 1971 dollars)



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

spending; in particular, expenditures on semidurable goods increased by 7.3 per cent. Also, the upsurge in the sales of new and used cars helped to sustain real spending on durable goods, which grew by 7.1 per cent in 1975.

Investment

Although fixed capital formation slowed down considerably in 1975 (Chart 8-3), business fixed investment remained relatively strong throughout the recession. This strength reflected, to a large extent, the importance of energy-related investment, which is much less influenced by cyclical factors than other types of capital outlays. Investment in other areas has not been especially strong, and surveys of business investment intentions for 1976 indicate that energy-related investment is about the only area where sizable outlays are planned.

Chart 8-3

Total Fixed Investment, 1971-76 (Billions of 1971 dollars)



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

In contrast to preceding years, investment in nonresidential construction increased faster than investment in machinery and equipment in 1975 (Charts 8-4 and 8-5). During 1973, firms had tended to accelerate their

Chart 8-4

Investment in Nonresidential Construction, 1971-76 (Billions of 1971 dollars)



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

Chart 8-5

Investment in Machinery and Equipment, 1971-76 (Billions of 1971 dollars)



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

purchases of machinery and equipment in order to benefit from a fiscal provision for a two-year tax write-off of purchase costs. Although the fiscal incentive was maintained in 1974 and 1975, continued installations were discouraged by the slowing-down of economic activity. On the other hand, the relative strength of nonresidential investment contrasted with the relatively weak growth of this sector during the early 1970s.

Chart 8-6

Housing Starts, 1971-76 (Thousands of units)



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

Although housing starts totaled 231,000 units in 1975 (Chart 8-6) — a 4 per cent increase over 1974 — real investment in residential construction declined by 7.4 per cent (Chart 8-7). This development in part reflected the drop in starts recorded in 1974, which carried over into a corresponding 40,000-unit drop in housing completions during 1975. And, because the upsurge in house building was concentrated in the second half of 1975, the full impact of the ensuing spending was delayed until early in 1976.

Exports and Imports

Exports in constant dollars declined in 1975 (Chart 8-8). This outcome was essentially the result of the extension of the world recession in 1974

Chart 8-7

Investment in Residential Construction, 1971-76 (Billions of 1971 dollars)



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

Chart 8-8

Exports of Goods and Services, 1971-76 (Billions of 1971 dollars)



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

and the slow recovery in 1975. Part of the difficulty, as we have seen, was the turnaround in the net Canadian trading position as both an importer and exporter of crude petroleum, along with the sharp decline in many of our other traditional exports. Moreover, with consumer spending showing strength, imports declined to a lesser extent than exports (Chart 8-9).

Chart 8-9

Imports of Goods and Services, 1971-76 (Billions of 1971 dollars)



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

In dollar terms, a commodity trade deficit of about \$0.6 billion, combined with an expanded deficit in nonmerchandise transactions in 1975, resulted in a current account deficit of close to \$5 billion compared with \$1.5 billion in 1974. As discussed in Chapter 7, this deterioration in Canada's current account position was not only attributable to adverse cyclical factors but also to a persistent decline since 1970 in our competitive position as an international trader of manufactured goods.

Government Current Expenditure

Government current expenditure on goods and services rose by 3.8 per cent in 1975 – a rate that represents a substantial slowing-down from the 6.8 per cent real growth recorded in 1974 (Chart 8-10). This achievement

reflected the shift to fiscal restraint implemented over the course of the year by both the federal and provincial governments, accompanied by a relatively modest employment growth in the public sector.⁴

Chart 8-10

Government Current Expenditures, 1971-76 (Billions of 1971 dollars)



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

Real Disposable Income per Capita

After having decelerated in 1974, the growth of real disposable income per capita remained stable in 1975 (Chart 8-11). This stabilization of real income in a period of recession could be partly attributed to changes introduced in the transfer payment system during the first half of the 1970s. In fact, the current-dollar increase of 23 per cent in transfer payments in 1975 was among the highest recorded during the postwar period. The indexation of the personal income tax system, some additional tax relief, and the overall slower advance of the main components of personal income resulted in a deceleration in the annual growth rate of personal

4 Variations in public service employment are a major determinant of fluctuations in government current spending, since the wage bill accounts for more than 50 per cent of government current expenditure on goods and services.

income tax receipts, from 21.6 per cent in 1974 to 11.6 per cent in 1975, allowing in turn a positive growth in disposable income.

Chart 8-11

Real Disposable Income per Capita, 1971-76 (Thousands of 1971 dollars)



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

Productivity

Productivity suffered in 1975, as it does in most recession periods when output decelerates while employers in several sectors maintain their work force; output per employed worker for the entire economy dropped 1.7 per cent (Chart 8-12). In the manufacturing sector, the deterioration in productivity was slightly less pronounced (Chart 8-13) because, in the face of slowing output, manufacturing employers laid off proportionately more of their employees than did employers in most of the other sectors.

Labour Market

Total employment grew by 1.9 per cent in 1975, in contrast with the experience of the previous three years when the annual rate of expansion exceeded 3 per cent (Chart 8-14). However, the additional employment was far from uniformly distributed among the various industrial sectors.

Chart 8-12

Output per Person Employed, 1971-76 (Thousands of 1971 dollars)



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

Chart 8-13

Index of Output per Person Employed in Manufacturing, 1971-76 (1971=100)



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

Chart 8-14





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

Employment declined in the export-oriented industries, reflecting the cyclical downturn of world markets, and continued to increase steadily in the service industries.

Between 1974 and 1975, the participation rate rose from 60.5 to 61.1 per cent of the total working-age population. The annual growth in the total labour force continued to be strong at 3.6 per cent, somewhat below the 4.1 per cent increase of 1974. Since the overall growth in the labour force exceeded the increase in employment, the unemployment rate rose from 5.4 per cent in 1974 to 6.9 per cent in 1975 (Chart 8-15).

Relative Price Performance

The rate of price increases in Canada in 1975 moved ahead of those in most other industrial countries, particularly in the second and third quarters, prior to the introduction of the anti-inflation controls program (Chart 8-16). Overall, with the decrease in the growth of commodity prices beginning to make its impact on prices of finished and semifinished goods, the rate of price increases, measured by the GNE price deflator, dropped

Chart 8-15

Aggregate Rate of Unemployment as a Percentage of Labour Force, 1971-76



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

from 14.3 per cent in 1974 to 10.7 per cent in 1975. Nevertheless, the increase in consumer prices remained at close to 11 per cent.

The Prelude to Controls

What bearing did these developments have on the issues that concern us in this Review? During 1970-72, increases in the Canadian consumer price index remained below those in other OECD countries. Canadian workers achieved significant gains in real wages — greater than the overall increase in productivity. A steady expansion of the female work force took up the expanded number of jobs available. The result was an increase in real family incomes that was much greater than the average rise in wage rates alone. Although real family incomes continued to increase, by 1973 rising prices had caught up with the average weekly wage gains for most workers covered by collective agreements. The same thing occurred in 1974, when both prices and money wages increased by roughly 11 per cent. But, by 1975, the demands for wage catch-up by organized labour became more pressing. In many areas of the public sector, for example, money wage settlements moved to new plateaus, thus generating even higher expec-

Chart 8-16





NOTE This chart records the absolute difference between year-to-year changes in the Canadian consumer price index and year-to-year changes in the weighted average index of the consumer price indexes of the principal OECD countries: United States, United Kingdom, West Germany, France, Japan, and Italy. The weights used for the latter are the proportions that each country's total bilateral import and export trade with Canada represents of the total import and export trade of the six countries combined with Canada. The trade weights are based on 1968-71 data.

SOURCE Organisation for Economic Co-operation and Development, Main Economic Indicators (Paris: OECD, various years); and estimates by the Economic Council of Canada.

tations and demands. Perhaps even more critical was the fact that in both 1974 and 1975 productivity declined.

Whereas corporate profits in 1970 and 1971 were relatively modest, they rose to record levels in 1973 and 1974, coinciding with the peak in the business cycle. Following this, economic activity in the United States and elsewhere slowed down. Overall industrial capacity utilization in Canada fell from 96 per cent in the first quarter of 1974 to 83 per cent in the final quarter of 1975. Nonetheless, prices continued to rise, as each participant in the economy sought to protect or enhance his purchasing power. The Department of Finance estimates that, in the process, the increase in the price deflator for final sales (GNE plus imports) attributable to rising labour income grew from roughly 26 per cent in 1973 to about 57 per cent in 1975. The part attributable to corporate profits and inventory valuation fell from 13 per cent in 1973 to slightly more than 4 per cent in 1975. Imports accounted for about one-third of the increase in 1973 and

1974 but only one-quarter in 1975. Unincorporated income and capital consumption allowances accounted for the balance.⁵

Stagflation also had its effects on government incomes and expenditures. High unemployment and slowing output resulted in sharply curtailed government revenues in 1975. Indexation of the major social programs, combined with the indexation of income taxes, effectively locked the federal government into a situation where any significant expenditure increase could be accommodated only by incurring a deficit or by increasing taxes. Increasing the federal deficit could have accentuated the inflationary pressures; raising taxes, by discouraging private spending, could have delayed the recovery. Provincial and municipal governments and their enterprises inevitably had to increase their borrowing to finance mounting deficits. For the three levels of government, the overall deficit in 1975 exceeded \$4 billion, in sharp contrast to the surplus of \$2.6 billion recorded in 1974 (Chart 8-17).

It might be argued that the government deficits were a natural consequence of the recession, which by mid-1975 had generally reached its trough. But in Canada the recession had been relatively less severe than in the United States, and wage demands and settlements had not declined but had grown at record levels, despite the idle human and industrial capacity and all the other indicators of economic malaise. In September 1975, the federal and provincial governments were confronted not only with industrial disputes of major magnitude in the postal, education, and other public service sectors, but also with indicators for the first half of the year that showed deteriorating GNP and declining industrial production and productivity. Unemployment levels were still rising; prices still increased at double-digit levels; and wage settlements in the second quarter averaged more than 18 per cent.

The Implementation of the Controls Program

Such, then, was the setting for the anti-inflation program tabled in the House of Commons on October 14, 1975, by the Minister of Finance, outlining among other things a new prices and incomes policy for Canada, and including the establishment of an Anti-Inflation Board. A principal aim of the controls program was to alter expectations and thus act as a buffer for the economy in preference to the very severe fiscal and monetary restraints that would otherwise have been necessary to hold down inflation and that, by themselves, would likely have slowed the growth of real output. In December, also, the president of the Treasury Board announced a series of reductions amounting to \$1.5 billion in planned federal

⁵ Canada, Minister of Finance, *Economic Review*, April 1976 (Ottawa: Supply and Services Canada, 1976).



Chart 8-17





¹ Including Canada and Quebec Pension Plans, and hospitals. SOURCE Based on data from Statistics Canada.

expenditures for 1976-77. The Budget of May 1976 maintained the earlier stance of fiscal policy in that it contained no major change in the aggregate revenue or expenditure plans. Its main features included taxation changes aimed at increasing energy exploration, a tightening of eligibility for unemployment insurance benefits, and a modification of the price and profit aspects of the anti-inflation program in order to make it more effective.

In the move towards overall restraint, the Bank of Canada raised the interest rate on advances to chartered banks from 81/4 to 9 per cent in September 1975 and, later in the year, the Governor of the Bank announced his intention to hold the rate of expansion in the narrowly defined money supply (currency and demand deposits) within a range of 10 to 15 per cent over the coming year.⁶ A further increase in the bank rate in March 1976 reaffirmed the intention of monetary authorities to hold down the amount of monetary expansion. And indeed, over the twelve-month period ending in June 1976, the Bank did succeed in keeping the expansion of the narrowly defined money supply at the lower end of the target range. More recently, the target range was further lowered, and this was accompanied by a modest reduction in the bank rate.

One the foreign exchange market, the Canadian dollar, after weakening against the U.S. dollar over a period ending with the third quarter of 1975, regained strength and remained above par until late in 1976 (Chart 8-18). This buoyancy of the Canadian dollar, as we have seen, was the result of heavy capital inflows, encouraged by the relatively high yields available in Canadian financial markets.

In summary, real output recorded no increase in 1975; productivity dropped for the second consecutive year; the rate of price increases continued to be uncomfortably high; and the level of unemployment rose significantly. The recovery, which started in the second quarter of 1975, has progressed at a relatively moderate rate. Monetary and fiscal policies were shifted into a more restrictive stance during the second half of 1975, in support of the federal anti-inflation policy; this restrictive posture was maintained throughout 1976.

According to OECD projections, economic recovery in the United States and other major western nations will continue to be gradual. This will limit our export prospects, despite the depreciation of the Canadian dollar, which in turn will put further pressure on consumer prices and costs. Special measures may be necessary to stimulate investment and employment. The prospects, it seems, call for a finely balanced strategy of market encouragement and restraint.

⁶ Governor of the Bank of Canada, Annual Report to the Minister of Finance (Ottawa: Bank of Canada, 1976), p. 9.

Chart 8-18

Canadian Exchange Rate, 1971-76



SOURCE Based on data from the Bank of Canada.

Performance Indicators for 1975-797

The performance indicators that we outline here may be considered medium-term objectives. They specify a transition from the current situation to a future growth path consistent with the long-term goals of the Canadian economy. These goals are stable economic growth, a viable balance of payments, a high level of employment, reasonable price stability, and an equitable distribution of rising incomes. Over the medium term, of particular importance in our view is the labour market situation. For the terminal year 1979, the unemployment target is set at a maximum of 4.5 per cent of the total labour force, and the rate for the prime labour force is set at 3 per cent — a situation defined here as "full employment." The other intermediary targets are adjusted in concert with this ultimate labour market objective and in the light of expected demographic and international economic developments.⁸

^{7 1975} is the base year; 1976 and 1977 are years of transition for calculation purposes; and 1978 and 1979 are the years to which the indicators apply for policy purposes.

⁸ Revised National Accounts data have been taken into account in the evaluation of the rates of growth discussed below.

The performance indicators are calculated in two steps.⁹ First, a reference solution is built with the CANDIDE econometric model for the period covered by the indicators. The reference solution is then used as a base for determining how close the economy is to meeting its longer-term objectives. Second, the calculations are modified to give a directional character to the projection, which then becomes the route recommended by the Council to get the economy back to "full employment," in keeping with events expected over the next few years. However, the expectation adopted about economic activity abroad, which in turn determines the level of export sales, is the same as in the reference solution.

The Reference Solution

The medium-term reference solution for 1975-79 is an extension of the extreme as during recent years. After having almost tripled in 1974 and base year 1974 is dropped from the calculation of the average rate of growth, and data for the year 1979 are added. Since the overall growth between 1974 and 1975 was very slow and the year 1979 is likely to remain in line with the expected recovery of the Canadian economy, the average rates of growth are shifted upwards.

In addition to the change in the period analysed, several modifications to the assumptions for the future period lead to an upward revision of the rates of growth. The main changes involve the economic policy measures adopted in the future, the external environment, and expected price variations in foreign markets.

It is assumed that the U.S. economy will progress next year, in line with the current recovery, and then grow at a slower pace in 1978 and 1979. The U.S. gross national product in constant dollars is expected to grow at an average rate of 4.5 per cent from 1975 to 1979. Industrial production overseas is assumed to increase at a rate of 7.6 per cent in real terms for the same period.

As for monetary and fiscal policies, the efforts currently being made to strengthen the effects of the anti-inflation program are expected to continue throughout our forecast period. Monetary policy will not become overexpansive, and the growth of government current expenditure will not accelerate substantially.

External inflationary pressures on domestic price levels will not be as extreme as during recent years. After having almost tripled in 1974 and having increased by 23.5 per cent in 1975, the import price of fuel will grow by an average rate of 6.6 per cent from 1975 to 1979. Also the average rate of growth in the U.S. GNP deflator will not exceed 6.1 per cent for the same period.

9 Economic Council, Twelfth Review, p. 84.

10 Economic Council, Twelfth Review, p. 89.

Internal sources of inflation are expected to weaken significantly as a result of the anti-inflation program. However, since the program has taken hold slowly, since it exercises only indirect control over prices, and since it covers only major nonfood producers and distributional firms, we assume in this forecast that the degree of effectiveness of the program will be 50 per cent in 1976 and 75 per cent in 1977 and 1978. We also assume that, after the controls end, there will be some lags before major price and wage increases occur and that, in 1979, the program will still have about half the effectiveness of the preceding year.

The combined effects of the recovery abroad and the efforts undertaken to curb domestic inflation will generate a relatively high rate of growth of real GNP in Canada and a moderate rate of increase in the consumer price index. The reference solution yields a real gross national expenditure that grows by an average of 5.7 per cent in 1975-79 (Table 8-2 and Table A-12). It suggests that real GNE will be sustained by exports at the beginning of the period, and that exports will later be replaced as the main source of expansion by investment, which will increase by 6.6 per cent in 1977 and 8.3 per cent in 1978. Although the consumer price index will decelerate from 7.8 per cent in 1976 to 5.3 per cent in 1978, the growth of real disposable income per capita will not reach the rates of the early 1970s. On average, this measure of real income will barely exceed 3 per cent annually, mainly because inflation will continue to erode the nominal income gains in the years ahead. The year 1979 is particularly critical, since it is assumed that only the lag effects of the anti-inflation controls will dampen the renewal of cost-push pressures within the economy. Nevertheless, the recovery process will be such as to generate an average annual employment growth rate of 3.2 per cent from 1975 to 1979; as a result, the overall unemployment rate will drop from the current 7 per cent level to 4.8 per cent in the terminal year 1979.

Proposed Performance Indicators

The performance indicators that will result in an unemployment rate of 3 per cent for prime-age males and 4.5 per cent overall in 1979 are shown in Table 8-2, and the growth paths corresponding to the average rates are presented in Table A-13. The growth pattern of the indicators is slightly different than that of the reference solution. It is based on the assumption that government incentives will be granted to support recovery in plant, and machinery and equipment, expenditures. Consequently, investment outlays in these categories grow faster in 1978 and do not decelerate in 1979. In particular, the rate of increase in spending on machinery and equipment could reach 14.9 per cent in constant dollars in 1978 and 15.6 per cent in 1979. At a higher level of aggregation. total fixed

Table 8-2

Performance Indicators, 1975-791

	Reference solution	Proposed performance indicators	
<u></u>	(Average annual percentage change) ²		
Gross national expenditure	5.7	5.8	
Consumer expenditure	4.8	4.9	
Total fixed investment	6.0	6.9	
Machinery and equipment	8.2	10.7	
Nonresidential construction	8.3	8.4	
Residential construction	1.3	1.4	
Government current expenditure	5.5	5.5	
Exports	6.5	6.5	
Imports	5.5	5.9	
Real disposable income per capita	3.1	3.2	
Output per person employed Output per person employed in	2.6	2.6	
manufacturing	4.3	4.4	
Employment	3.2	3.3	
	(Percentage points)		
Differential between Canadian			
and foreign price changes ³		±0.5	
	(Annual average in thousands of units, 1976-79)		
Housing starts	255	256	
	(Percentage of labour force in 1979)		
Unemployment rate	4.8	4.5	
Rate for males aged 25-54	3.3	3.0	

1 1975 is the base year to which the average annual percentage changes apply; 1976 and 1977 are years of transition for calculation purposes; 1978 and 1979 are the years to which the indicators apply for policy purposes.

2 For gross national expenditure and its components, as well as real disposable income and productivity, the targets are average annual percentage changes calculated from data expressed in constant dollars. The employment indicator measures the percentage change in the number of persons employed.

3 Difference between the percentage change in the consumer price index in Canada and the percentage change in the weighted index of consumer prices in the United Kingdom, the United States, West Germany, Japan, France, and Italy.

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

investment in real terms increases by 6.9 per cent, on average, from 1975 to 1979, compared with 6.0 per cent in the reference solution.

As the result of a more sustained recovery of investment, real GNE grows by an average rate of 5.8 per cent from 1975 to 1979. Employment increases, on average, by 3.3 per cent, and the total unemployment rate decreases to 4.5 per cent in 1979 — the target proposed by the Council since its Ninth Annual Review. The lower unemployment rate is not obtained at the cost of stronger inflation in the final year 1979, but reflects the assumption of a stronger investment recovery, which would forestall any upward pressure on supply prices resulting from capacity constraints.

Since imports tend to increase with additional investment expenditures, a recovery sustained by investment could have a negative effect on the external trade balance. This possible outcome is reflected in the performance indicator solution, where total imports in constant dollars grow by 5.4 per cent in 1979, compared with 4.2 per cent in the reference solution. For the same year, in the absence of a major exchange rate adjustment, the current account deficit could amount to as much as 2.3 per cent of GNP.

When compared with the reference solution, the performance indicators show that, with slightly more vigorous investment activity in 1978 and 1979, the economy could reach the "full-employment" target of 95.5 per cent of the labour force. The recovery, therefore, would not need to be supported by a high rate of growth in government expenditure and hence would be compatible with the current federal government program of monetary and fiscal restraint. In this context, the total government budgetary deficit is expected to decrease progressively, and a surplus of \$849 million could be recorded, on average, over the 1976-79 medium-term period.

The credibility of the performance indicators depends mainly, of course, on developments abroad and on economic policies in Canada. If, as the latest OECD projections imply, the economic recovery abroad is not as vigorous as expected, or if domestic investment does not provide the reinforcement to consumption and exports necessary to sustain GNE growth, then more stimulus than suggested here will be necessary if the Canadian economy is to reach the "full-employment" target by 1979.

9 The Challenges Ahead

We have examined Canada's performance during 1975 against a set of medium-term targets designed to chart our economic progress, and we have looked at recent wage and price developments in Canada in the light of international movements of commodity prices, trading patterns, and foreign exchange fluctuations. We have also considered how accelerating inflation affects the income and expenditure patterns of households, firms, and governments; alters the value and distribution of assets; and changes the duration and form of collectively negotiated agreements. In this chapter, we turn to the measures that federal and provincial governments have taken to slow the rate of inflation, including the creation of the Anti-Inflation Board, and we discuss the prospects of an early and successful return to a more normal market situation.

Towards the 1980s

The worst phase of the recent business cycle downturn is now over in most industrialized western nations. The U.S. economy, which was subjected to a more severe recession than Canada's, has since shown a strong recovery, and real output growth in the United States this year could exceed 6 per cent. In Canada, the recovery is likely to be more modest — somewhat in excess of 5 per cent. But the inflation rate has dropped substantially from the record levels of 1974 and 1975 and, for the whole year, will be about 7.5 per cent. And, although unemployment levels remain high, it is expected that they too will drop somewhat in 1977. These processes will be helped internationally by the momentum of expanding trade throughout the OECD, as each country's recovery reinforces the recovery of others. One of the challenges for Canada, then, is to maintain the momentum of our present recovery within bounds that are reasonably consistent with stable economic growth and moderate price increases.

As we look ahead to the 1980s, we see that other no less fundamental issues will have to be faced. If there is no significant change in productivity

142 The Challenges Ahead

growth, the reduced numbers of new labour force entrants will lead to a decline in the potential growth rate of the economy to approximately 4 per cent, compared with an average of over 5 per cent during the two preceding decades. Already we are becoming increasingly dependent upon imported oil, and exports as a percentage of GNE are not growing as fast as imports. And, while we are somewhat more optimistic about Canada's export potential than we were last year, balance-of-payment pressures are likely to persist in the years ahead.

Our estimates suggest that proportionately more of Canada's total resources will have to be directed towards investment if this country is effectively to enhance its competitive position, improve productivity, maintain balanced growth among its regions, and provide a more satisfying environment for Canadians of all generations. And, if more investment is to take place without a substantial increase in foreign control or foreign indebtedness, Canadians must save more of their domestic resources for modernization and capital needs. In order that the economy may develop a resilient and vigorously competitive private sector without jeopardizing other necessary social and economic development, governments may have to re-examine the mix of their expenditure obligations.

Over the past few years, Canadians have become more aware of the boundaries limiting some of their economic and social objectives. Indeed, we cannot completely shield ourselves from changes in world trading patterns and prices. Our ability to contain the inflationary shocks generated by movements in world prices is closely linked to similar efforts by our trading partners. And, until we are able to develop alternative sources of energy, we will be affected increasingly by world oil prices. Canadians generally have come to expect continuously rising prices, costs, rents, aggregate taxes, government spending, and social benefits, all of which grow upward in ratchet fashion but strongly resist downward pressures. Governments, no less than individuals, have come to take for granted regular increases in revenues and have developed a tolerance for regularly rising expenditures and prices. These are elements that can be contained, if we have a proper sense of purpose.

In the long run, the real income of the individual cannot increase faster than overall productivity without provoking a corresponding decrease in the real incomes of others in society. Much of the controversy and bargaining in industrial relations thus hinges on the issue of how real productivity gains should be shared between labour, on the one hand, and management and shareholders, on the other. Equally compelling is the question of achieving a fair distribution of real gains among the organized and unorganized, among producers and nonproducers (including pensioners), and among the public and private sectors. The issue of income distribution is a legitimate one, which may have to be investigated more deliberately and consciously in the future and certainly with more information at hand than in the past. For, as each group competes for a greater share of GNP, the resulting pressures are accommodated by enlarging the supply of money and credit and letting inflation sort out the real shares. When real output per employee expands very slowly, these competitive cost-push pressures become even more acute, and selecting an appropriate mix of monetary and fiscal instruments in response to them becomes increasingly difficult and costly.

This is not to say that workers and their families cannot improve their situation substantially. Indeed, family incomes in Canada, in both money and real terms, have been rising much more quickly than income per worker, as a result of the increased entry or re-entry of married women and dependents into full-time or part-time jobs. By themselves, these gains were noninflationary, since they were achieved through more work. Overall, allowing for the increased number of workers per family, family incomes in real terms grew during the 1960s and early 1970s at a rate of approximately 6 per cent per year, compared with an average productivity increase of about 2 per cent. Even in late 1974 and in 1975, when unemployment rose and average productivity actually decreased, family incomes in real terms continued to rise. How long the participation rates of married women and young people will continue to climb is uncertain, but they are expected to level off over the next few years. As family units, therefore, Canadians may well have acquired expectations about the continuing growth of their real income that go beyond what the economy can provide.

Much the same can be said for Canadians in their respective roles as workers, educators, corporate managers, and elected or appointed government officials. Prior to, and even since, the introduction of wage and price controls, the wage and related demands of some union locals have borne little relationship to the working efficiency of their members. While workers may reasonably hope that their after-tax incomes will at least keep pace with the cost of living, organized labour in Canada has certainly not displayed the same kind of restraint as in the United States or in some European countries. By the same token, in the public sector, including the field of education, it is not at all clear that increases in wages have always been accompanied by corresponding increases in individual efficiency or quality of output. In addition, when our overall productivity growth rates persistently fall below those of most of our OECD competitors. when our manufacturers lose out internationally, and when we lean increasingly on foreign capital and initiative to develop our enterprises, it is our corporate managers who should reflect and take remedial action. Finally, the tremendous growth in the relative share of GNE assumed by the three levels of government, as well as past rates of growth in the money supply that have been higher in Canada than in the United States, have fueled and accommodated foreign and domestic inflationary pressures.
We have learned also that achievement of the very legitimate goals and aspirations shared by all Canadians — in such areas as education and occupational training, health care, income security for the unemployed and the aged, and more stable and balanced regional development — entails an ultimate cost in taxes and government regulation. Many of the programs aimed at achieving these goals were implemented by governments because private enterprise and organized labour could not adequately meet the needs of all Canadians and because competitive market practices, when applied to the aged, the sick, the unemployed, and the poor, violated our concepts of equity and humanity. However, it has become increasingly apparent that many of these programs have been a source of inflexibly rising expenditures, creating new taxing requirements but resulting in little, if any, redistribution towards the weaker groups in our society, and often at the price of considerable bureaucratic expansion.

Indeed, government spending, including transfer payments, has accounted for fully half the increase in gross national expenditure since 1965. Very extensive capital investments and subsequent expenditures have been made by federal and provincial governments on universities and community colleges, hospitals, medicare, manpower programs, and regional development. Taking into account the Canada and Quebec Pension Plans, over 25 per cent of the increase in government spending has consisted of transfers to persons. Where these have been genuinely directed to the needs of the poor and less fortunate in our society, such as social assistance payments and old age pensions, there can be little quarrel. But, in other areas, lack of selectivity has meant that substantial resources have been expended out of proportion to their need. Some have gone to persons who could afford to borrow and repay — as in the case of higher education — or to persons who have accepted them as entitlements without any sense of constraint or reciprocal responsibility. In the process, other worthwhile resource allocations have been inhibited.

A final, not unrelated, point is the knowledge that the productivity and international competitiveness of Canadian industry must be revitalized. This will undoubtedly call for a combination of adequate investment opportunities, entrepreneurial initiatives, and labour rewards. While revitalization and increased productivity usually generate new employment, they may also require the shutdown of unproductive operations or enterprises, resulting in a loss of jobs. Since growth does not necessarily occur uniformly in all regions, almost inevitably areas of labour market tightness and relative stagnation will coexist. It is ironic, for example, that in areas such as rural Alberta or the Niagara peninsula, which owe much of their emergent development to specialized farming — cattle-ranching in the first case, and fruit-growing in the second — employers now face chronic shortages of qualified labour, despite the persistence of high rates of unemployment in other parts of Canada. The key to improved productivity in Canadian secondary industry is the challenge of wider markets, competition, and international specialization. Given that Canada lags badly in industrial research and development, this challenge is not easy to meet, particularly in times of slow growth, because it involves domestic readjustments of production and employment. As the Council pointed out in its report on Canada's commercial policy, the quicker this country can move to reallocate its resources to uses with high, rather than low, earnings potential, the more advantageous it will be for all its citizens.¹

Inflation and Its Consequences

We have focused in this Review primarily on the consequences, rather than the causes, of inflation, in order to determine which sectors or groups in society benefit, and which lose, as a result of these pressures. As seen in Chapter 6, what is experienced during inflation is a cycle in which relative prices are constantly changing, some price and wage increases precede others, costs follow prices, thus justifying further price hikes in progressive rounds of increases, catch-ups, and competitive jousting. Throughout, consumers, businessmen, and governments are constantly readjusting their patterns of earnings, expenditures, debt management, and asset holdings. In the process, the inflationary chain of events is not adequately anticipated by some; as a result, there is a substantial redistribution of wealth among borrowers and lenders, and among buyers and sellers. In the public mind, this inevitably appears to be a substantial net loss. As one author has described it, "the gainers attribute their gain to their own perspicacity, energy and virtue; the losers attribute their losses to inflation."2

With the budget position of each participant constantly changing as he seeks to improve his net position, we have had to explore many avenues in order to identify the winners and the losers from inflation. Given the state of continuous adjustment in prices, spending, saving, investment, and effort, the traditional techniques employed by economic analysts give only a partial picture of the whole process and must be interpreted with some caution. Budgetary comparisons of individuals, business firms, and governments at some point in time provide a "snapshot" view of the differences between them but fail to capture the dynamic readjustment processes that occur. While time-trend analysis links perceived responses with certain "explanatory" phenomema, it lacks precision when the causes

¹ Economic Council of Canada, Looking Outward: A New Trade Strategy for Canada (Ottawa: Information Canada, 1975).

² Robert M. Solow, "The Intelligent Citizen's Guide to Inflation," *The Public Interest*, no. 38 (Winter 1975).

and effects are interrelated and interacting. Another difficulty in arriving at a clear-cut conclusion about who wins and who loses from inflation is that it depends on the origin of inflationary pressures. But, whatever their origin, the aggregate price level will rise only if the pressures are ultimately accommodated by monetary expansion. As we have seen, since mid-1975 the Bank of Canada has set for itself a lower and more stable growth target for the years ahead.

Perhaps the main conclusion to be drawn from our examination of some of the effects of inflation on households, enterprises, and governments is that escalating inflation is a difficult and undesirable experience for almost everyone. It causes uncertainty and frustration among individuals and tension within society. It redistributes wealth in ways that may reflect group power rather than effort or productivity. Individual gainers in the process are those who can best protect themselves, shift income sources, transfer assets, and adjust expenditures. The losers tend to be those who have little or no access to alternative income sources, who have relatively fixed incomes or nominally fixed savings, such as pensions, and who have rising expenditure obligations.

In examining the situation of households, we have concluded that perhaps the best shield against inadvertent transfers of wealth is a strong and vigorous economy. If inflation is driven by aggregate demand, more induced employment and income opportunities may accrue to the principal or secondary breadwinners. On the income side, demandinduced inflation results in substantial improvement in the position of lowincome working families and, in absolute terms, real income gains for virtually all groups with a labour force attachment. The increase in multiple-earner families, while consistent with more equality in the middle-income group, also partly explains the growth at the upper end of the income spectrum. However, the income situation of those with no labour force attachment — pensioners and welfare recipients — is undermined by inflation, save for compensating increases in transfer payments by the various levels of government. Our findings suggest that, in recent years, the poorest households have gained primarily through increased transfer income and occupational shifts, whereas higher-income households have suffered because of a decline in the real value of their investment income. Inflation has hit the household expenditures of lowerincome groups a little harder than those of upper-income groups. In terms of assets and debts, inflation has tended to favour middle-income groups; many of these households gained through higher home values and fixed mortgage rates, whereas both low- and high-income groups suffered net losses. Indeed, taking into account the impact of inflation on households overall, middle-income groups tended to be the main gainers, while the highest-income groups were the main losers. Among the poor, much depended on whether they were students, working families, or pensioners living off accumulated assets. On the whole, evidence has supported the traditional view that rising inflation tends to compromise the future, in that it encourages spending and speculation and tends to penalize persons or organizations that save.

Inflation similarly affects businesses through their incomes, expenditures, and debt/asset positions. It alters their cash flow, their corporate tax liabilities, and the real value of their net assets. The evidence shows that inflation has caused a large cash drain from nonfinancial businesses to government, primarily as a result of corporate tax payments on higher, inflation-induced inventory profits. However, some of this loss has been offset by gains from the inflation-eroded value of their long-term debts.

A critical issue confronting households and businesses during inflation pertains to the relative liquidity of their assets. Must they sell their holdings at deteriorated book-value prices, or can they retain them until such time as prices return to normal? This dilemma is particularly acute for old people and small businesses.

Both the federal and provincial governments benefit from a favourable inflationary bias in personal income and corporate taxes, whereas local governments tend to lose as a result of lags in property assessments. In all cases, government expenditure commitments appear to be ratcheted upwards, the critical issue being the pace at which the increases occur. After intergovernmental transfers have been calculated, provincial governments appear to be the most profligate spenders. However, the federal government has been the beneficiary of increases in the money supply, and bank reserves and notes on which no interest is paid. All government levels, of course, have benefited as net debtors from rising inflation rates — a condition that may reverse as prices and interest rates begin to decelerate. Table 9-1 summarizes the inflation-induced gains and losses to households, firms, and government.

In the *Twelfth Annual Review*, we reached the conclusion that the economic situation was seriously deteriorating and that "additional new policy instruments were required."³ However, we did not pass judgment on the actual program adopted by the government last year. We were able only to speculate on the role of the Anti-Inflation Board in administering the guidelines laid down with respect to profits, prices, dividends, and wages; and we emphasized that the success of price policies would depend at least partly on similar price developments in major trading countries. Before considering the present anti-inflation controls in Canada, therefore, it is perhaps appropriate to examine parallel initiatives in other OECD countries faced with the combined crises of persistent inflation and higher-than-normal levels of unemployment.

3 Economic Council of Canada, Twelfth Annual Review: Options for Growth (Ottawa: Information Canada, 1975), p. 120.

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Summary of Inflation-Induced Gains and Losses to Households, Business, and Government, 1969-75

Inflation		Inflation gains by:	
losses by:	Households	Business	Governments
Households	Debtors gained from creditors. The proportion of multi-earner families in the labour force grew, and their income increased more than single-earner	Households holding short- and long-term corporate bonds, stocks, and securities lost; firms issuing liabilities gained. Pensioners lost on the eroded value of	Households lost through personal income taxes that were not fully indexed; federal and provincial governments gained.
	families. As a result. middle-age families did better than young or old families, even though young families, more heavily in debt, were helped by inflation on both their liabilities and income.	their pensions; corporate borrowers from pension plans gained. Households with cash balances and demand deposits lost to banks.	Households lost on their holdings of Canada Savings Bonds and other federal, provincial, and local debt. All levels of government gained.
	Home owners did better than renters.		
Business	Corporate holders of long-term house- hold debts, such as real estate mortgages, lost: mortgagors gained.	Financial sector gained from the manufacturing and nonmanufacturing sectors through its short-term liabilities and holdings of client demand deposits.	Business lost in corporate taxes because of the required use of historical cost accounting for capital cost allowances.
		Financial sector lost to other business sectors on its holdings of their long-term securities.	Business also lost in corporate taxes because of the required method of accounting for inventory valuation.
		Corporate borrowers gained from	In both cases, the federal and provincial governments gained.
		funds in amounts roughly equal to their unfunded pension liabilities.	Banks lost on their holdings of federal notes and reserves; the federal government gained.

148 The Challenges Ahead

governments lost because of lags in Property owners gained and local property assessment. Governments

Indexation of personal income taxes and transfers represented a gain to households and a loss to the federal and provincial governments.

relief introduced as a direct result of the Households gained in real terms through enriched or new expenditures or extra tax extra inflation-induced federal and provincial revenues.

Corporate borrowers gained from tax allowances on their debt interest payments; federal and provincial governments lost.

and local governments lost through lags Corporate property holders gained in property assessment.

as households, from extra government Corporations gained in the same way expenditures and subsidies resulting directly from the higher inflationinduced tax revenues.

Federal government lost to the provinces borrowing from the Canada Pension Plan.

Provincial governments benefited from transfers directly attributable to extra enlarged shares of federal-provincial inflation-induced revenues.

similarly enlarged provincial transfers Local governments benefited from and federal expenditures.

The International Experience with Incomes Policies

In the continuing debate as to their usefulness, there is a tendency to consider Canada's initiatives with anti-inflation controls as somehow unique, separate not only from other elements such as fiscal and monetary restraints, but also from similar programs that have been adopted by other governments. The last two years have been marked by a severe international recession in which much of the impetus to higher prices has come from the cost side. Consequently, a number of countries have turned to prices and incomes policies to contain rising costs directly, while simultaneously attempting to promote the growth that will move them back towards full utilization of their capacity and resources. Countries that, over the years, have employed controls of one kind or another, with varied success, include the United States, the United Kingdom, Sweden, Norway, the Netherlands and, on a more modest scale, France, Italy, and Japan. In most cases, the prices and incomes policies were developed in concert with, and as part of, a package of tax, expenditure, and monetary initiatives, within a framework of discussion and consultation with labour and management. Retrospectively, it seems clear that the success of the schemes depended largely on the degree to which labour and management were involved in them, accepted them, and voluntarily responded to them.

The United States

The United States first introduced wage/price controls in 1971, applied them in four phases, and terminated them officially in April 1974. These controls were brought in at a time when prices in the United States were rising at rates of between 5 and 6 per cent annually. Designed to curb what was then regarded as wage-push inflation, the controls were considered relatively successful during the first two phases and were accompanied initially by a reduction in the U.S. cost-of-living index to about 3.3 per cent in 1972. In the autumn of 1972, with the controls still in effect, the U.S. government shifted to a more expansive monetary policy and allowed the federal deficit to grow. The controls were loosened during Phase III, from January to June 1973, but were tightened again during Phase IV. They were effectively negated, however, by the upward surge of commodity and oil prices and were subsequently abandoned. Consumer price increases averaged 6.2 per cent in 1973 but jumped to 11 per cent in 1974.

The U.S. government created a Cost-of-Living Council to monitor and administer the program, and to work closely with the private sector to stimulate productivity and contain excessive wage demands. An unusual amount of public analysis and discussion surrounded the hearings held by the Cost-of-Living Council, and this contributed to moderate wage/price

The International Experience 151

expectations among the public at large. In the process, the government demonstrated that it could effectively dampen pressures in some sectors of the economy, particularly in construction, where spiraling competitive wage claims were brought under more systematic control. But, once the effects of the worldwide inflationary pressures and buoyant expenditures mounted, it became increasingly impossible to hold back price and wage pressures.

In general, according to U.S. analysts, the voluntary co-operation of the private sector was excellent throughout, although its responsiveness appeared to diminish over time. Indeed, as prices drifted upwards, organized labour in particular became restive with the 5.5 per cent wage ceiling that applied through the first three phases of the program. Within the government as well, there were considerable political misgivings about the program. In any event, perhaps the most important lesson of the U.S. experience has been that wage and price controls must be supported by restrained monetary and fiscal policies. It is unrealistic to expect prices and incomes policies to work if they are isolated from, or in conflict with, traditional demand-management measures.

In retrospect, the U.S. program also seems to affirm the need for carefully planned decontrol measures, to prevent a massive price bulge at the conclusion of the program. The timing of decontrols is particularly important; in the United States, unfortunately, it coincided with a period of very expansive demand and external price shocks, which escalated the consumer price index by almost 5 percentage points.

The United Kingdom

The United Kingdom has also relied on prices and incomes policies, with varied success. In November 1972, the government announced an absolute freeze on pay, rents, and dividends, and on prices of everything but fresh fruits and imported goods. Early in 1973, it established a Price Commission and a Pay Board to administer controls, under which pay settlements could average no more than 8 per cent annually and prices could rise in line with "pass-through" costs subject to profit margin controls and safe-guards. Stage III, a year later, accommodated increases in earnings and prices of up to 11 per cent, with additional compensation linked to increases in the retail price index. Other modifications on the prices side were introduced to encourage investment.

Although the controls remained against a background of continuing tripartite discussions, they foundered in the wake of international price developments. In 1974, under a new government, statutory wage controls were abolished, with the government relying on a voluntary social contract with the unions. This was followed by a sharp acceleration in wage rates.

By the fourth quarter of 1974, wage rate increases were running at an annual rate of close to 40 per cent; the increase in Britain's consumer expenditure deflator averaged 24 per cent at annual rates in the first half of 1975. With union acceptance, the British government subsequently launched a new rigorous counter-inflation policy aimed at reducing the annual rate of price increases to less than 10 per cent by the end of 1976. This called for maximum pay increases of roughly \$600 per year, with no increase for those in income brackets above \$16,000, along with certain transitional arrangements. Coupled with this were increased food and rent subsidies and extended controls on prices, dividends, and insurance premiums. Very extensive government deficits continued, however, and contributed to a substantial depreciation of the pound. In the spring of 1976, the British government adopted even more stringent measures and, with the co-operation of trade unions and business firms, further reduced allowable wage increases to less than 5 per cent of the base rate.

As in other cases, the British experience affirmed the difficulty of balancing fiscal and monetary decisions, and prices and incomes controls, in an economic situation very seriously inhibited by slow growth. Faced with declining foreign trade, rising unemployment, and soaring prices, successive British governments have relied on a combination of measures to contain prices, maintain employment, and stimulate exports through the devaluation of the pound, even though this last policy has increased the cost of Britain's imports and added to cost-push pressures.

Scandinavia

Less populated but equally or more dependent on trade — and thus under even greater external price pressures — several of the Scandinavian countries have, interestingly enough, managed to contain inflation during the past few years much more effectively than most other industrial countries in Europe or North America. Both Norway and Sweden have long traditions of centralized collective bargaining and tripartite economic planning and, in both countries, there are clear links between incomes policies and the industrial relations systems. This has encouraged a form of social partnership which, in contrast to the North American tradition of decentralized local labour/management confrontations without government intervention, has facilitated what the OECD has termed "socially responsible wage policies."⁴ Such policies have the effect of enlisting organized labour's agreement to specific limitations on wage increases in return for managerial concessions on profit margins and investment

4 Organisation for Economic Co-operation and Development, Socially Responsible Wage Policies and Inflation (Paris: OECD, 1975).

strategies and for government monetary, fiscal, and social measures aimed at increasing real earnings in both the private and public sectors while maintaining systematic economic growth.

Prices are also subject to controls. Norway, for instance, applied a price freeze in 1972, abolished it in 1973, and then alternated between surveillance and temporary freezes on profit margins in certain sectors of the economy. These measures have been coupled with food subsidies, adjustments in the value-added tax, and some reductions in social security contributions. Throughout the period, labour and employer organizations carried out, within a broader but less formal framework, central wage negotiations that have resulted in relatively moderate increases in average hourly rates of pay and automatic indexation to the cost of living. In the fall of 1975, the Norwegian government allowed wages to increase by only 30 per cent of the inflation rate, but granted additional fringe benefits and appropriate tax cuts.

Sweden is among the few OECD countries whose economic performance did not coincide with the overall business cycle affecting most industrial countries. Following a downturn in 1973, employment in Sweden expanded strongly during most of 1974 and 1975, despite a deceleration in the growth of real output in 1975. Centralized wage bargaining with blueand white-collar workers' unions provided for stipulated wage increases of roughly 7 per cent throughout the early 1970s and 11 to 14 per cent from 1975 on, along with certain tolerances covering the upward drift in wages as workers' occupations or activities become redefined. These measures were combined with price controls on basic food products, with periodic freezes, and with some increases in food subsidies. In the course of charting its prices and incomes strategy, the Swedish government has also employed selective fiscal policies - including value-added and personal income tax adjustments — as well as an investment stabilization program that sterilizes a substantial share of profits for subsequent investment, as the economic situation dictates.

The Netherlands

The Netherlands is another country that employs a tripartite system of wage determination and economic planning and that, despite strong external price pressures, has managed to keep its inflation rates substantially below those of its European trading partners. Of course, this is partly because most of its trade is with West Germany, which has managed to keep its own price increases the lowest of all leading European countries. Nonetheless, price controls have been in existence throughout the 1970s, and all large companies are obliged to provide at least one month's notification of price increases. The government exercises substantial discretionary powers with respect to central wage determination and, in

1975, concluded agreements that combined a series of transfer payments and income tax cuts with limitations on real wage increases to well below that country's average growth in productivity.

West Germany

In contrast to the foregoing, successive West German governments have consistently eschewed controls on either prices or wages and have preferred to employ vigorous demand-management measures to contain inflation and maintain growth, while accepting some higher unemployment and placing curbs on the recruitment of foreign manpower. Traditionally, it refrains from intervening in the collective bargaining process, and the autonomy of trade unions and employer associations is well recognized. At the same time, there is a strong tradition of social partnership in West Germany, and it is customary for the various industrial and white-collar unions, and corresponding employers' associations, to negotiate wage settlements within a general economic policy framework that is based upon regular discussions between the government, the central bank, the unions, the employers, and an independent council of economic experts. In the process, West Germany has combined a policy of participatory management at the plant level, with tripartite planning at the national level, and perhaps the most stringent monetary policy of all OECD countries.

The Canadian Anti-Inflation Policy

From the foregoing review of wage and price controls elsewhere, it is evident that this type of government intervention in the free market is neither unusual by foreign standards nor incompatible with democratic traditions or economic growth. But it is equally evident that, if they are to succeed, prices and incomes policies must be implemented in a climate of understanding, with the co-operation of organized labour and business and, in Canada's case, all levels of government. In Canada, unlike in most European systems, the decentralized nature of local collective bargaining, subject usually to provincial jurisdiction, does not lend itself to a pattern of uniform restraint. The same observation applies to the myriad of individual pricing decisions. Hence, in an inflationary situation, tensions almost inevitably mount between the parties to collective bargaining in the private and public sectors, and there are feelings of frustration and uncertainty on all sides. When announcing the anti-inflation program, the Minister of Finance stated:

Inflation is a dynamic process which feeds upon itself.... The problem is not just to get over the worst of our current troubles, difficult as that is likely to prove. It is to reduce inflation in ways that do not store up further trouble for the future, and to find ways of improving the structure of our economy so that the same troubles do not reoccur.... The full participation of provincial governments and of the major interest groups in the community will be essential to the success of this program of action.⁵

The federal government's present prices and incomes policies, embodied most notably in the legislation and regulations of the Anti-Inflation Board, but also in the regulation of prices and costs in sectors not bound by the Board, represents for Canadians an experiment in federal-provincial cooperation that is unique in peacetime. The constitutional legitimacy of the program, nonetheless, has been upheld by the Supreme Court of Canada. The program's stated objectives are to reduce inflation in Canada to no more than 8 per cent in 1976, 6 per cent in 1977, and 4 per cent in 1978, without forestalling the efficiency and competitiveness of Canadian industry or the economic growth necessary to absorb our growing labour force and to substantially reduce unemployment. Accompanying the program have been measures to increase the supply of low- and mediumpriced housing and to initiate rent review systems in all Canadian provinces. There have also been initiatives to provide for the orderly pricing of energy and essential foodstuffs.

The Anti-Inflation Board has now been in operation for one year, and it is appropriate to consider its effectiveness, bearing in mind that the prices and wage controls are only part of the larger package of anti-inflationary initiatives. Indeed, in these complementary areas, the government has generally followed its own prescription. Apart from the abnormality caused by the postal strike, growth in the money supply has been kept close to, and sometimes below, the lower bounds set by the Bank of Canada last year,⁶ a strategy of monetary stability in line with recommendations contained in the Economic Council's *Tenth* and *Eleventh Annual Reviews*. The federal and provincial governments have attempted to constrain the growth of their expenditures, and they have worked together to achieve more satisfactory levels of housing and rental costs and more orderly pricing in

6 Governor of the Bank of Canada, Annual Report to the Minister of Finance (Ottawa, 1975).

⁵ Attack on Inflation: A Program of National Action, Policy Statement tabled in the House of Commons by the Honourable Donald S. Macdonald, Minister of Finance, October 14, 1975 (Ottawa: Government of Canada, 1975).

sectors not subject to AIB regulation. We expect the inflation rate in 1976 to be less than 8 per cent, compared with 11 per cent in 1975. On the broadest front, therefore, the objectives of the overall program are being served. How much of this development results from the controls program and how much would have occurred in the normal course of business recovery with the easing of international price pressures is an open question. As a former U.S. Assistant Secretary of Commerce remarked about the U.S. controls program, "empirical analysis will never prove the success or failure of controls because it is impossible to determine retroactively what would have happened without them."⁷

The AIB price and wage controls are not universal; it is estimated that they cover only about 50 per cent of the economic activity in Canada. Foodstuffs are exempt, although they are under continuing surveillance and, in many cases, are subject to regulatory pricing linked to the guidelines. Imports are exempt, as are the prices of services administered by public agencies. Export prices are exempt, although the Board has undertaken to review the prices of export products sold in Canada. On the wages side, some provinces have retained authority to control wages in some or all of the public sectors; Quebec also retains authority to control wages in the construction industry. Federal and provincial regulatory agencies in various sectors — such as the Canadian Transport Commission or the Canadian Maritime Commission — retain similar responsibilities. And, of course, the whole area of rent review is one that lies with the provinces.

The most publicized area of AIB intervention has been that of collective bargaining. Given the pattern of widely varying, and sometimes extreme, wage settlements that preceded the establishment of controls, it was inevitable that, in order to be equitable, the Board in its early decisions would have to accept some historical relationships and legitimate catch-up entitlements significantly exceeding the maximum of 12 per cent laid down in the guidelines for 1976.⁸ Moreover, the task of the Board was not made easier during the initial period by management, who in some cases granted large wage increases in the knowledge that the agreements would subsequently be reviewed and the negotiated terms probably rolled back by the Board. Nor is it clear what will be the effect of the decision of the Canada Labour Relations Board, which in September 1976 ruled that

7 Sidney L. Jones, "The Lessons of Wage and Price Controls," *The Canadian Business Review* 1, no. 3 (Summer 1974).

8 As defined in the Minister of Finance's initial statement, the arithmetic guidelines are the sum of three elements: a "basic protection factor," which is set at 8 per cent for 1976; a "national productivity factor" of 2 per cent; and an "experience adjustment factor," which may vary between -2 and +2 per cent, depending on a group's experience relative to the rise in the consumer price index over the past two or three years. Thus the 1976 arithmetic guideline for any particular group varied between 8 and 12 per cent.

strikes by union locals against wage roll-backs ordered by the AIB were legal.

By late September 1976, the contractual agreements submitted to the AIB totaled 16,674, covering approximately 2.4 million workers. The majority of these settlements, covering close to 46 per cent of the employees involved, were at, or below, the arithmetic guidelines worked out by the Board. The average proposed increase for the others ran considerably above the guidelines, but many of these cases involved initial catch-ups.9 Overall, approved increases for both the public and the private sectors were above the arithmetic guidelines, but well below the proposed increases (Table 9-2). If agreements between teachers and school boards across the country were excluded from the total submitted to the AIB, the approved increases for the public sector would have averaged 11.2 per cent similar to the average approved for private sector employees. Moreover, with the passage of time, the number of exceptional cases has diminished. Of decisions made to the end of May 1976, the average approved increase was 14 per cent — 3.7 percentage points above the arithmetic guidelines; by September the average approved increase had dropped to within 2 percentage points above the applicable arithmetic guidelines. As the basic adjustment factor drops in 1977, so too is the average level of approved wage increases expected to drop.

Table 9-2

	Cases	Employees	Average percentage increase proposed	Average increase approved	Arithmetic guidelines
Public sector	1,132	248,000	15.7	12.2	10.1
Private sector	1,802	491,702	13.0	11.0	9.4
Total	2,934	739,707	13.9	11.6	9.6

Distribution and Disposition of Wage Settlements Submitted to the Anti-Inflation Board by October 1976

Source Data from the Anti-Inflation Board, November 1976.

Less visible, but no less important, has been the Board's control over profits and prices. The Board restricted its initial purview to the profits and prices of firms employing more than 500 employees, and of construction, longshoring, trucking, shipping, and grain-handling firms that engage in association bargaining. But, given the variety of goods and services on the

9 Anti-Inflation Board, First Year Report (Ottawa: Minister of Supply and Services, 1976), p. 5.

market and the intricate complexity of the production process, the Minister of Finance announced in June 1976 that the Board would no longer attempt to control prices but would concentrate instead on corporate profit margins. The AIB reserves the right to require corporations to justify price changes, and it can order a roll-back of price increases if it considers them excessive. The Board has taken the view that, by controlling profit margins, it can contain unwarranted price increases in the sectors under its surveillance. There is good reason for this view, since most firms faced with the choice of restraining profits by holding down prices or paying fines to the government would favour their customers.

The profit controls have been modified several times since the introduction of the program. The limit to profit was initially set at 95 per cent of each firm's average pre-tax net profit margin during the preceding five fiscal years. Draft regulations issued in June 1976 called for a lowering of the net margin to 85 per cent and the application of this criterion to overall profits and to individual product lines. Distribution firms were allowed 95 per cent of the overall level and 100 per cent of the base-period margin on product lines. Each enterprise could choose as its base period either the five fiscal years prior to October 1975 or the fiscal year 1975-76. Following discussions with businessmen and the receipt of submissions from various groups, the Minister announced in September 1976 that these rules would take effect at the corporate level only and would not apply at the product level. All firms would also be permitted to earn a minimum rate of return of 8 per cent on their equity investment. The Minister also announced that firms in the nondistributional sector would be permitted to deduct half their new investment expenditure from any net earnings exceeding the 85 per cent limit, up a to maximum of 10 per cent of allowable profits.

Among the many shortcomings of profit controls is the elimination of the incentive for firms to undertake potentially profitable new investments or to introduce productivity improvements. By putting the onus on firms to demonstrate unusual productivity gains, the original AIB rules were excessively restrictive. The 85 and 95 per cent limits now on profits in the nondistributional and distributional sectors mean that, in general, firms cannot reap additional profits by applying standard markups to increased costs. The application of the single net margin test at the firm level, rather than on each product line, substantially simplifies the controls process, eliminates the onerous reporting of prices and profits for each individual product line, and avoids the heavy hand of bureaucratic surveillance and intervention at this level. The 8 per cent minimum rate of return on equity seems just as reasonable and administratively simple. The investment credit hopefully will encourage new productive initiative and innovation and will contribute to the kind of economic recovery that our performance indicators suggest is possible.

At this juncture, it is not clear to what extent the combination of profit limitations and wage controls has contributed to squeezing prices, but the deceleration of nonfood prices in the consumer price index is encouraging. It was to be expected that, in the course of business recovery, aggregate gross profits, including inventory valuation adjustments, would improve substantially from 1975 onwards. During the first half of 1976, they increased by less than 6 per cent over the same period in 1975 — a rate somewhat lower than that recorded during previous business recovery periods. At the same time, the increase in average weekly wages over the preceding year was in the order of 13 per cent, which represented an increase of about 3.7 per cent in real terms.

How close can the anti-inflation measures come to achieving their objectives? The rate of price increase in 1976 has fallen below the target levels. The targets for 1977 are a 6 per cent increase in the CPI and wage increases of no more than 8 per cent, except in the remaining legitimate catch-up cases. Much will depend upon the federal government's vigour, consistency, and sensitivity in applying the controls, along with other measures of fiscal and monetary restraint. Controls in the United States were reasonably effective during the first year, when they commanded public support and voluntary co-operation from business and labour groups. Thereafter, as the government responded to other priorities and indeed adopted fiscal and monetary strategies that ran counter to the controls, the public and many government officials lost confidence in them. The overall Canadian program was designed, and is being administered, along reverse lines. The wage constraints have been considerably less severe than those of the U.S. program during its first year but will become increasingly stringent. So, too, has been the course of monetary policy, and governments at all levels are exercising caution and restraint with respect to their spending.

We are aware that Canadians in their separate roles as consumers, employers, or employees may have ambivalent attitudes towards controls. Businesses find it irksome and costly to complete and file complex forms, and to undergo the uncertainty of initial or appealed decisions directly affecting their profit margins and market opportunities. Additional personnel are required to interpret the AIB technicalities and rules — which have undergone substantive revisions since the initiation of the program and to prepare and submit various reports on employee compensation and on compliance to price, profit, and dividend guidelines, as well as supporting documentation and appeals to the Administrator or the Anti-Inflation Tribunal. We know that limitations on profit margins may weigh differentially, and sometimes onerously, on different firms, depending on previous profit performance, the amount of capital and labour employed, the need to modernize, and the like. Similarly, we understand how

frustrating it must be for union locals to reach agreement with management on a package of wage and fringe benefits, only to see some of their gains negated. It is particularly so for union locals locked into long-term contracts that did not anticipate the actual extent of inflation. There can be no doubt that the Anti-Inflation Board represents a restraining presence at the bargaining table, affecting the outcome of negotiations in ways that, to organized labour, may seem grossly unfair. On the other hand, the tangible benefits that consumers derive from controls — i.e., costs and prices that are lower than they would otherwise be — are more subtle and indirect.

Evidently, the AIB has found it difficult to accommodate legitimate variations from, or within, the guidelines, between occupations, industries, and even neighbouring firms. The Board is caught in an intractable dilemma. Given the number of decisions it must make and the need to appear consistent, it must follow relatively standard guideposts. As internal and external conditions change, however, exceptions may be required, which in turn may lead to more criticism that the Board is not ruling evenhandedly.

It is natural, therefore, for business enterprises and representatives of organized labour to complain when the Board's rulings run counter to their immediate interests. The frequency of such complaints may simply attest to the fact that the controls are biting. Alternatively, it may reflect increasing frustration with bureaucratic interference and with the apparent unfairness of some of the rulings of the AIB. An important criterion of success is whether the overall moderation of prices is sufficient to reassure both labour and management that the program is helping to preserve the real value of their wage gains and profits.

It takes time for the leads and lags of negotiated wages or prices, or monetary and fiscal initiatives, to pass through the economic system. If the anti-inflation program is to succeed at all, its various components, some of which are now administered at different government levels, must continue to work in reasonable harmony. All levels must restrain their spending and borrowing, and the Bank of Canada must refrain from prematurely expanding the supply of currency and credit. Success requires also the continuance of moderate international prices and orderly growth, as well as the absence of sudden external shocks to the economic system. More critical, however, is the need for a broadly based acceptance of the program within Canada.

The lowering of public expectations and the relearning by all parties of the virtues of self-restraint also take time. It is for this reason that the Council supports the continued vigorous application of the anti-inflation program, even though some of us who have felt first-hand the frustrations wrought by the controls look forward to their dismantlement at the earliest practical opportunity. For it seems clear to us that, despite the inevitable criticism from various interest groups and individuals, the anti-inflation program continues to command widespread support from the public, as well as from most of the provincial governments that have joined with the federal government in its effort to combat inflation. It is clear that the present government is pressing ahead, roughly on schedule, with the combination of mandatory controls and traditional economic restraints. If the government should continue to implement the program with energy and determination, it may achieve even higher real gains next year. However, if the government cannot maintain a political consensus in favour of the controls program, it will then have to dismantle them.

Circumstances inevitably change, as does public and government thinking on the proper balance between various social and economic priorities. If the anti-inflation program works well, bringing the rate of inflation in Canada down to, or below, the government's target rates, and if management and labour are voluntarily and positively involved, the government might well consider altering its combination of policies. At any rate, there will be numerous occasions during 1977 for a thorough reexamination and accounting of the program. The first will occur when the federal government and the provinces review their anti-inflation agreements in March. A second opportunity is likely to arise as the program approaches the end of its second year and the Minister of Finance reports on the program to Parliament. Along with most Canadians, we will be watching these developments with interest.

This brings us to the question of decontrols. As the experience in the United States shows, the timing of decontrols is as important as the need to balance the decontrol process with carefully measured fiscal and monetary policies. Much will depend upon business conditions and attitudes in Canada. In Chapter 8, we examined Canada's medium-term prospects and targets under certain assumptions about the controls program. We ran a number of other simulations with the CANDIDE econometric model, assuming alternative views on the effectiveness of the controls, on the foreign trade environment, and on the possible effects that the controls might have on the potential productivity of firms.¹⁰ The simulations did suggest some cause for concern. For, even if the controls program were 100 per cent successful during its years of operation, our projections show that, under circumstances in which unemployment would decline to 5 per cent or lower by the early 1980s, partly because of slower labour force growth, the cost of living could rise to disturbing levels once again. Continuing restraint on all fronts will be necessary if we are to escape new rounds of inflationary pressures and wage catch-up demands. At the same time, such restraint will need to be balanced by initiatives that will maintain the nation's economic recovery and growth. A critical issue will be our com-

10 See T. T. Schweitzer, "Simulations of AIB Regulations with CANDIDE 4.2M," Economic Council of Canada Discussion Paper (forthcoming).

petitiveness compared with that of the United States. If our productivity levels continue to lag behind those of other industrial countries, and if domestic inflation rates run ahead of those of our major trading partners, we will almost certainly be faced again with severe economic difficulties and a further depreciation of the Canadian dollar.

Organized Labour and the Controls

We would be remiss here if we ignored organized labour's strong opposition to the entire controls program. It seems clear that the antipathy of the Canadian Labour Congress (CLC) towards the role of the Anti-Inflation Board reflects as much a concern about the longer-run implications for collective bargaining and national economic management as about the Board's more immediate effect on wages and labour's share of national income. In a "manifesto" proclaimed in May 1976,¹¹ the CLC criticized the controls on the grounds that "free collective bargaining has been suspended," and that "one of the results of the anti-inflation programme will be a reduction in the price of labour and consequently an increase in the return on capital." It also declared that

wage and price controls have been and are being used by the government as a political and not an economic weapon. They are the vehicle by which it intends to transform the institution of Canada. It is only in this context that the full implications of controls can be understood – they are the launching pad for the future.

The manifesto gives an indication of the longer-run aspirations of the CLC — borrowing possibly from European experience — in the statement that

Our movement faces a twofold challenge – to defeat wage controls and to mobilize our strength behind the task of creating a more equitable and just society in the wake of that defeat....

If we do have the power to resist wage controls, then we also have the power to create social democracy. But for this result to occur, organized labour needs to develop national bargaining power to deal with the national economy managers and a national social and economic programme – a bargaining position.... The price of labour's future support must be an equal share in the economic and social decision-making on a national basis with the other partners – business and government.

Clearly, therefore, the opposition of the Canadian Labour Congress to the anti-inflation program must be viewed as a part of its longer-run strategy,

¹¹ Canadian Labour Congress, Labour's Manifesto for Canada (Ottawa: CLC, 1976). (Italics in the original.)

Organized Labour and the Controls 163

aimed at enabling labour to play a larger role in the economic planning and management of the nation. It is understandable that organized labour would want to have a stronger, direct voice in the broad decisions of governments with respect to economic and social policies. Indeed, we also believe that the labour movement, and Canadians generally, would benefit from closer working co-operation on these broad fronts; it must be recognized, of course, that the lines of political responsibility ultimately run through normal parliamentary processes and the democratically elected representatives of all Canadians.

We agree with the Canadian Labour Congress that it is important for the major economic participants to be involved not only in the decontrol decisions, but also in a continuing critical appraisal of our national priorities and achievements. While decisions on the timing and method of decontrols are, in the final analysis, matters for government decision based on political judgments, we are of the opinion that a mechanism is required for regular high-level consultation involving the representatives of various interest groups. This presupposes, of course, a sense of agreed purpose rather than confrontation — a sense of mutual trust rather than a forum in which to score debating points. Even if the dangers of inflation were no longer matters of national concern, we believe that the federal government has an obligation to proceed with a sense of urgency and purpose in resolving some of the longer-term issues before it and particularly in improving the consultative machinery, so as to render the process more widely sensitive to, and credible for, the broader public. Consultation implies that a candid exchange of views and information on policy issues takes place before final decisions are made. While some groups naturally have a particularly strong interest in certain policy issues and less in others, there is a need for a coherent system for the delivery of messages to the government and through which the government can respond.

We are aware, of course, that a large amount of consultation already takes place at the initiative of members of Parliament, through periodic meetings of cabinet ministers and interest groups concerned about specific problems, through the parliamentary committee system, through advisory committees attached to individual departments, and frequent federalprovincial conferences, to name only a few of the existing methods of consultation. In fact, the Economic Council was one of several groups established during the 1960s to analyse complicated policy problems and to advise Government and the general public. Of late, there have been a number of special efforts undertaken to encourage more direct participation by Canadians in the legislative and regulatory process. Among these were the issuing of the federal government's Green Paper on Immigration and the Special Parliamentary Committee that met in cities throughout Canada to hear the views of interested parties; the dialogue between the Minister of Finance and business and other representative

groups prior to the substantive revisions in the AIB controls regulations last September; the consultations that have surrounded the preparation of revisions to the Bank Act; the hearings of the Senate Committee on Textile Policy; and so on. The National Economic Conference organized by the Economic Council in 1973 and 1974 was a different type of consultative experiment, which might have been more successful had it focused on a narrower range of issues and had government officials and ministers been more enthusiastic in their support.

Hence, the Economic Council can support the CLC view that we should go beyond the ad hoc consultative mechanism that the government has already developed and used. The process of consultation that we have in mind must learn from these past experiments and must involve a somewhat more permanent commitment by governments to their participation in, and support of, that process. We believe that there is a need for consultation on all the broad fronts of government policy, involving not only organized labour and business management, but also representatives of unorganized labour, consumers, ethnic groups, farmers and fishermen, and the professions, as well as representatives of provincial and municipal agencies. We see value in arrangements that would enable ministers and members of Parliament to confer with various groups as a prelude to decisions by the government and by Parliament. Better consultative machinery could be used not only to get reactions to proposed new legislation, but also to seek from ministers and departments a more thorough accountability for the programs that they administer.

The Broader View

The Economic Council has attempted to give substance to the concept of economic planning, to clarify the economic issues affecting our everyday lives, and to promote a clear and open discussion of the options accessible to Canadian economic policy. In the process, we have argued for measures that would promote stable economic growth and an equitable sharing of the real gains that growth generates. We have supported the broad objectives of justice, equity, and a greater sense of social cohesion and partnership in the economic management of the nation. The challenge for all of us is to determine how to achieve these wider goals — how to put in train the policies and institutions that will lead us in the right direction.

The Council, in its structure and mandate, was designed to enlist the full participation of labour, business, and other interest groups across the country as a consultative and advisory body that would contribute to the major economic policy decisions developed for Canada and all Canadians. In its Annual Reviews and studies, the Council has advanced numerous recommendations to promote the goals mentioned above. Indeed, over the past two years, we have probed deeply into areas of national concern such as, Canada's commercial policy and international competitiveness; unemployment and labour market developments; the efficiency of financial institutions; and, in this Review, the inflation dilemma. Shortly, we shall be releasing a study on the factors that shape our regional economic growth and disparities. The Council has thus provided decision-makers with the mechanism through which objective research findings and the diverse views of representative interests have been organized, related, and reconciled; and we have been available to governments and to Parliament to aid in determining the policy implications of our studies and recommendations. The Council looks forward to the continuation of its role, so that Canadians will be better informed of, and thus able to meet, the complex issues that lie ahead.

	asi	incial	Real	estate	Other	assets	Total	assets	D	ebt	Net a	issets
	Dollars	Per cent										
Income class												
Less than \$2,000	2,239	14.3	7,030	44.9	6,385	40.8	15,655	100.0	1,047	6.7	14,608	93.3
\$2,000 - \$3,999	2,991	18.8	7,801	49.2	5,072	32.0	15,864	100.0	1,144	7.2	14,720	92.8
\$4,000 - \$5,999	3,624	22.1	8,483	51.7	4,295	26.2	16,402	100.0	2,005	12.2	14,397	87.8
\$6,000 - \$7,999	3.215	18.8	10,864	63.6	2,995	17.6	17,073	100.0	3,480	20.4	13,593	79.6
\$8,000 - \$9,999	3,592	17.4	13,751	66.5	3,316	16.1	20,658	100.0	4,650	22.5	16.008	77.5
\$10,000 - \$11,999	4,762	18.8	16,419	64.7	4,184	16.5	25,364	100.0	5,515	21.7	19,849	78.3
\$12,000 - \$13,999	5,405	18.7	18,606	64.3	4,938	17.0	28,949	100.0	5,884	20.3	23,065	79.4
\$14,000 - \$19,999	9,732	25.0	23,266	59.7	5,982	15.3	38,980	100.0	7,072	18.1	31,908	81.9
\$20,000 and over	29,653	23.3	43,182	34.1	54,076	42.6	126,911	100.0	10,557	8.3	116,353	61.7

Balance Sheet Structure of Households, in Nominal Terms, by Income Class, 1970

Table A-I

Table A-2

Balance Sheet Structure of Households, in Nominal Terms, by Age Group, 1970.

	Fina	ancial										
	asi	sets	Real	estate	Other	assets	Total	assets	Ď	ebt	Net	assets
	Dollars	Per cent										
Under 25	859	18.1	2,402	50.5	1,498	31.4	4,758	100.0	2,660	55.9	2,098	44.1
25-34	2,088	13.9	8,714	58.1	4,192	28.0	14,993	100.0	5,039	33.6	9,954	66.4
35-44	2,543	13.9	12,059	66.4	3,569	19.7	18,170	0.001	4,336	23.9	13,834	76.1
45-54	6,092	17.6	17,922	51.8	10,603	30.6	34,617	100.0	4,306	12.4	30,312	87.6
55-64	9,348	26.8	16,608	47.6	8,957	25.6	34,913	0.001	2,453	7.0	32,460	93.0
65 and over	9,972	34.9	14,241	49.9	4,339	15.2	28.553	100.0	696	2.4	27,856	97.6

1 As a percentage of total assets. SOURCE Based on data from Statistics Canada and estimates by the Economic Council of Canada.

170 Appendix

Table A-3

Distribution of Assets Held by Private Trusteed Pension Funds, 1965 and 1974

	1965		1974	
	\$ Million	Per cent	\$ Million	Per cent
Bonds	2.211	54.9	3,212	31.7
Stocks	846	21.0	3,637	35.9
Mortgages	368	9.1	1.047	10.3
Real estate lease-backs and				
miscellaneous	179	4.5	981	9.7
Pooled funds	411	10.2	1,235	12.2
Mutual funds	10	0.3	25	0.2
Total	4.025	100.0	10,137	100.0

SOURCE Statistics Canada, Trusteed Pension Plans - Financial Statistics, 1974.

Table A-4

	Manufacturing corporations	Nonmanufacturing corporations	Finance
		(Millions of constant \$ 19	974)
1965	-273.8	-251.7	-4.5
1966	-256.7	-250.4	-5.4
1967	-241.6	-251.0	-6.4
1968	-129.5	-359.8	6.7
1969	-487.9	-337.6	-7.6
1970	261.4	-12.7	=7.3
1971	-440.6	-658.5	-7.1
1972	-665.0	-667.3	5.2
1973	-1.673.3	-1.445.8	-5.1
974	-2.952.1	-1,967.7	n.a.

Adjustments to Net Book Profits Resulting from Inventory Valuation Adjustments for Inflation

n.a. not available.

SOURCE Glenn P. Jenkins, Inflation: Its Financial Impact on Business in Canada, Economic Council of Canada (forthcoming).

Table A-5

Estimates of Depreciation Expense, 1965-74

	Capital cost all	owance based on:	
	Historical costs (1)	Current replacement prices (2)	Ratio (2)/(1)
	(Millions of c	constant \$ 1974)	
Manufacturing			
1965	2.580.7	3.614.3	1.40
1966	2.738.9	3.846.7	1.40
1967	2 547 5	3 440 2	1 35
1968	2 149 4	2 799 2	1.30
1969	2 155 7	2 858 1	1 33
1970	2 270 7	3 059 8	1.35
1971	2 348 5	3 194 8	1.36
1972	2,540.5	3 618 9	1.30
1973	2 965 1	4 204 9	1.42
19741	2 908 5	4 621 7	1 59
Nonmanufacturing	(excluding finance and pub	lic utilities)	1.07
1965	1,/2/.1	2,256.9	1.31
1966	2,080.8	2,736.7	1.32
1967	2,217.9	2,899.2	1.31
1968	2,231.4	2,892.9	1.30
1969	2,448.6	3,239.6	1.32
1970	2,463.5	3,276.9	1.33
1971	2,794.1	3,843.2	1.38
1972	2,964.8	4,157.9	1.40
1973	3,552.7	5,208.9	1.47
1974	2,011.6	2,981.7	1.48
Finance ²			
1965	230.2	267.8	1.16
1966	309.2	373.3	1.21
1967	326.4	399.1	1.22
1968	390.3	467.0	1.20
1969	448.7	551.9	1.23
1970	480.6	588.4	1.22
1971	484.7	608.I	1.25
1972	664.6	872.2	1.31
1073	834.2	1 135 2	1 36

1 Because of the absence of published statistics, depreciation expense claimed for income tax purposes during 1973 and 1974 has been estimated from the published data on book depreciation expense in those years ond on the historical relationship between book and tax depreciation. The financial information for nonmanufacturing for 1974 does not include some of the corporations in transportation and communication, and retail trade, that are included in the data for previous years.

2 The finance sector includes banks and other deposit-taking institutions; security brokers and dealers; and insurance and real estate companies, agencies, and operators. The data for "Other investment companies" are not available for the years 1973 and 1974 and thus are not included in the aggregated finance sector for any of the years from 1965 to 1974.

SOURCE Glenn P. Jenkins, Inflation: Its Financial Impact on Business in Canada, Economic Council of Canada (forthcoming).

172 Appendix

Table A-6

Inflation Tax on Cash Balances,1 1965-74

	Manufacturing	Nonmanufacturing (excluding finance and public utilities)	Finance ²
	(Millions of constant \$ 1974	4)
1965	41.0	62.2	161.6
1966	45.1	88.8	217.0
1967	43.3	75.3	194.7
1968	29.1	64.2	176.1
1969	44.8	82.9	239.6
1970	40.4	86.3	208.1
1971	30.4	65.8	149.0
1972	43.2	118.4	296.3
1973	62.7	165.3	516.4
1974	90.7	134.9	n.a.

n.a. not available.

 Inflation tax on cash = cash holdings of sector x growth rate of implicit expenditure deflator.
 The money holdings of commercial banks consist of deposits in the Bank of Canada; holdings of Bank of Canada notes; coin: and cheques in transit. Finance excludes "other investment companies" for 1972 and 1973.

SOURCE Glenn P. Jenkins. Inflation: Its Financial Impact on Business in Canada, Economic Council of Canada (forthcoming).

Table A-7

	Expected inflation premium on net short-term debt	Decrease in value from actual inflation	Net gain or loss (–) from unanticipated inflation
	(N	Aillions of constant \$ 19	74)
Manufacturing			
1965	45.5	58.7	13.2
1966	90.2	107.8	17.6
1967	108.4	105 3	-31
1968	69.8	57.6	-12.2
1969	106.9	127 1	20.1
1970	143.8	158 1	14.2
1971	121.8	94 7	_27.1
1972	106.4	130.4	24.0
1973	138.4	195.5	57.2
1974	284.6	484.9	200.4
Nonmanufacturin	g (excluding public util	lities and finance)	
1965	115.1	148.4	33.4
1966	144.9	173.1	28.2
1967	156.6	152.1	-4.5
1968	154.6	127.6	-27.0
1969	173.8	206.6	32.7
1970	223.4	245.5	22.1
1971	210.0	163.3	-46.8
1972	231.3	283.6	52.3
1973	319.6	451.6	132.1
1974	465.3	793.0	327.7
Finance			
1965	-88.0	302.2	390.2
1966	-72.5	452.0	524.5
1967	-288.9	197.6	486.5
1968	-33.4	398.2	431.7
1969	-3.9	601.9	605.8
1970	19.5	607.7	588.3
1971	-60.2	438.8	499.0
1972	5.3	862.4	858.3
1973	211.5	1.501.8	1 290 3

Income Transfers Resulting from Impact of Unanticipated Inflation on Net Short-Term Debt, 1965-75

Excludes the category "other investment companies."
 SOURCE Glenn P. Jenkins, Inflation: Its Financial Impact on Business in Canada, Economic Council of Canada (forthcoming).

174 Appendix

Table A-8

Income Transfers Resulting from Impact of Unanticipated Inflation on Net Long-Term Debt, 1965-74

	Expected inflation premium on net long-term debt	Decrease in net real debt liability from inflation	Net gain or loss (-) from inflation on net long-term debt
	(M	illians of constant © 1	074)
Manufasturing	(141	intons of constant 5 i	5/4)
Manufacturing			
1965	83.7	164.8	81.2
1966	99.7	230.3	130.6
1967	125.1	243.7	118.6
1968	137.2	207.1	69.9
1969	133.3	287.5	154.2
1970	155.0	324.4	169.3
1971	165.8	219.3	53.5
1972	164.6	347.6	183.1
1973	167.0	492.0	325.0
1974	237.1	797.8	560.7
Nonmanufacturin	ng (excluding public utili	ties and finance)	
1965	185.7	365.9	180.2
1966	211.5	483.3	271.8
1967	244.3	462.8	218.5
1968	269.2	383.5	114.3
1969	300.7	609.6	308.9
1970	400.7	756.7	356.0
1971	469.8	549.4	79.6
1972	471.7	875.8	404.1
1973	516.5	1,304.3	787.7
1974	383.3	1,277.4	894.1
Finance			
1965	269.0	-530.1	-261.0
1966	17.8	-40.6	-22.9
1967	52.2	-98.9	-46.7
1968	45.9	-65.4	-19.5
1969	41.7	-84.6	-42.9
1970	42.6	-80.5	-37.9
1971	68.4	-80.0	-11.6
1972	179.3	-333.0	-153.6
1973	173.7	-438.7	-265.0

Excludes the category "other investment companies."
 SOURCE Glenn P. Jenkins, Inflation: Its Financial Impact on Business in Canada, Economic Council of Canada (forthcoming).

Table A-9

	Manufacturing	Nonmanufacturing (excluding finance and public utilities)	Finance
		(Millions of constant \$ 197	4)
1965	64.6	150.4	178.5
1966	95.5	178.2	45.1
1967	118.5	200.4	170.5
1968	107.6	211.9	39.6
1969	124.4	237.3	22.8
1970	157.8	312.0	11.6
1971	154.7	316.1	64.3
1972	117.4	319.9	80.9
1973	133.3	401.3	+17.1
1974	208.9	407.4	n.a.

Value of Tax Reduction¹ from Expensing of Anticipated Inflation Component of Nominal Interest Rate, 1965-74

n.a. not available.

A negative figure indicates a tax increase.
 SOURCE Glenn P. Jenkins, Inflation: Its Financial Impact on Business in Canada, Economic Council of Canada (forthcoming).

Table A-10

Tax and Transfer Effects of Inflation on the Business Sector, 1965-741

			Income changes	resulting from:				
		Additional taxes	6	Jr	ansfers to borrowe	rs	Net real in	icome effect
	Depreciation expense (1)	Inventory valuation (2)	Interest on anticipated inflation (3)	Tax on cash (4)	Short-term net liabilities (5)	Long-term net liabilities (6)	Current (Cols. 1 to 5)	Long-term (Cols. 1 to 6)
				(Millions of c	constant \$ 1974)			
Manulactu	ring							
1965	516.8	=136.9	64.6	41.0	13.2	81.2	616.9	535.8
1966	553.9	218.4	95.5	45.1	17.6	129.6	614.3	484.7
1967	446.3	120.8	118.5	43.3	3.1	115.0	495.0	380.0
1968	324.9	64.8	107.6	29.1	12.2	61.7	323.4	261.7
1969	351.2	244.0	124.4	44.8	20.1	145.7	495.4	349.7
1970	-394.5	130.7	157.8	40.4	14.2	152.6	393.5	240.9
1971	423.2	220.3	154.7	30.4	27.1	31.8	546.3	-514 5
1972	387.7	266.0	117.4	43.2	24.1	160.4	555.4	395.0
1973	495.9	-669.3	133.3	62.7	57.2	297.2	1.037.5	740 3
1974	-685.3	1.180.8	208.9	90.7	200.4	561.6	1.547.6	986.0
Nonmanufa	acturing (excluding p	oublic utilities an	d finance)					
1965	264.9	125.9	150.4	62.2	33.4	180.2	2693	1 08
1966	327.9	125.2	178.2	88.8	28.2	271.8	335.5	637
1967	340.7	125.5	200.4	75.3	4.5	218.5	345 5	1221
1968	330.8	-179.9	211.9	64.2	27.0	114.3	390.0	275 X
1969	390.5	168.8	237.3	82.9	32.7	308.9	372.2	633
1970	-406.7	6.4	312.0	-86.3	22.1	356.0	209.4	146.6
1271	487.8	306.2	316.1	65.8	46.8	79.6	590.4	510.8
1972	542.9	303.6	319.9	118.4	52.3	404.1	592.7	188.6
1973	795.0	694.0	401.3	165.3	132.1	787.7	1,120.9	333.7
19/4	465.7	944.5	407.4	134.9	327.7	894.1	810.0	6 4 2

232.0	204.8	35.2	154.9	245.1	273.2	213.4	230.6	379.1
29.0	227.7	81.9	174.4	288.0	311.1	225.0	384.2	644.1
261.0	22.9	46.7	-19.5	42.9	37.9	11.6	-153.6	-265.0
390.2	524.5	486.5	431.7	605.8	588.3	499.0	858.3	1,290.3
161.6	217.0	194.7	-176.1	-239.6	208.1	149.0	- 296.3	-516.4
=178.5	45.1	-170.5	39.6	-22.8	=11.6	64.3	80.9	17.1
2.3	2.7	3.2	3.3	3.8	3.6	3.3	2.4	-2.4
-18.8	-32.0	36.2	-38.3	51.6	-53.9	57.4	94.5	144.5
1965	1966	1967	1968	1969	0261	1201	1972	1973

A negative figure indicates an income loss for the owners of business firms.
 Corporation income tax rates used: manufacturing, 1965 to 1971 — 50 per cent, and 1972 to 1974 — 40 per cent; nonmanufacturing and finance. 1965 to 1971 — 50 per cent. 1972 – 46.5 per cent. 1973 – 45.5 per cent. and 1974 – 48 per cent.
 Source Glenn P. Jenkins. Inflation: Its Financial Impact on Business in Canada. Economic Council of Canada (forthcoming).

178 Appendix

Table A-11

Response of Some Government Expenditures and Revenues to Alternative Shocks, Using Reference Solutions of CANDIDE 1.2M, 1976-85¹

$\begin{tabular}{ c c c c } \hline Increase in export and import prices in wages in wages in wages in wages in wages encoded wages and salaries in wages effects e$			Туре с	of shock	
Partial effects2Full effects3Full effects3Full effects3effects3Federal government expenditures(-)(-)(+)(+)Federal wages and salaries(+)(+)(+)(+)Federal wages and salaries(+)(+)(+)(+)(+)(+)(+)Federal wages and salaries(+)		Increa export import	ase in rt and prices	Incr in w	ease ages
Federal government expendituresDefence(-)(-)(*)(+)Hospital depreciation(-)(*)(-)(-)Federal wages and salaries(+)(+)(+)(+)(+)Other expenditures(+)(+)(+)(+)(+)Total goods and services(+)(+)(+)(+)(+)Residential construction(+)(+)(+)(+)(+)Federal buildings(+)(+)(+)(+)(+)Highways(-)(+)(+)(+)(+)Other engineering(-)(+)(+)(+)(+)Machinery and equipment(-)(-)(-)(-)(-)Total gross fixed capital formation(+)(+)(+)(+)(+)Transfers to persons(-)(-)(-)(-)(-)Total expenditures(-)(-)(-)(-)(-)Federal revenues(+)(+)(+)(+)(+)Federal rowenues(-)(-)(-)(-)(-)Indirect taxes(-)(-)(-)(-)(-)Other investment income(+)(+)(+)(+)(+)Total revenue(-)(-)(+)(+)(+)Nonfederal government expendituresCapital consumption allowances(-)(-)(-)(+)Nonfederal government expenditures(-)(-)(-)(+)(+)(+) <th></th> <th>Partial effects²</th> <th>Full effects</th> <th>Partial effects²</th> <th>Full effects</th>		Partial effects ²	Full effects	Partial effects ²	Full effects
Defence (-) (-) (+) (+) Hospital depreciation (-) (+) (+) (+) Federal wages and salaries (+) (+) (+) (+) Other expenditures (+) (+) (+) (+) Total goods and services (+) (+) (+) (+) Residential construction (+) (+) (+) (+) Federal buildings (+) (+) (+) (+) Highways (+) (+) (+) (+) Other engineering (-) (+) (+) (+) Machinery and equipment (-) (-) (-) (-) Total gross fixed capital formation (+) (+) (+) (+) Transfers to persons (-) (-) (-) (-) Total gross fixed capital formation (+) (+) (+) (+) Total gross fixed capital formation (+) (+) (+) (+) Total gross fixed capital formation (+) (+) (+) Total expenditures	Federal government expenditures				
Hospital depreciation (-) (+) (-) (-) Federal wages and salaries (+) (+) (+) (+) Other expenditures (+) (+) (+) (+) Total goods and services (+) (+) (+) (+) Residential construction (+) (+) (+) (+) Residential construction (+) (+) (+) (+) Residential construction (+) (+) (+) (+) Highways (+) (+) (+) (+) (+) Other engineering (-) (-) (-) (-) (-) Machinery and equipment (-) (-) (-) (-) (-) Transfers to governments (-) (-) (+)	Defence	(-)	(-)	(*)	(+)
Federal wages and salaries(+)(+)(+)(+)Other expenditures(+)(+)(+)(+)Other expenditures(+)(+)(+)(+)Residential construction(+)(+)(+)(+)Federal buildings(+)(+)(+)(+)Federal buildings(+)(+)(+)(+)Federal buildings(+)(+)(+)(+)Highways(-)(-)(+)(+)Other engineering(-)(-)(-)(-)Total gross fixed capital formation(+)(+)(+)(+)Transfers to persons(-)(-)(-)(-)Total expenditures(-)(-)(-)(+)Federal revenuesPersonal income tax(+)(+)(+)(+)Corporate and business tax(-)(-)(-)(-)Indirect taxes(-)(-)(-)(+)Total revenue(+)(+)(+)(+)Nonfederal government expendituresCapital consumption allowances(-)(-)(-)Nonfederal government expendituresCapital consumption allowances(-)(-)(-)Hospital wages and salaries(-)(-)(+)Others(+)(+)(+)(+)Provincial medicare(-)(-)(-)Total goods and services(-)(-)(+)Hospital wages and salaries(-)(-)	Hospital depreciation	(-)	(*)	(-)	(-)
Other expenditures(+)(+)(-)(+)Total goods and services(+)(+)(+)(+)(+)Residential construction(+)(+)(+)(+)(+)Rederal buildings(+)(+)(+)(+)(+)Highways(+)(+)(+)(+)(+)Other engineering(-)(+)(+)(+)Machinery and equipment(-)(-)(-)(-)Total gross fixed capital formation(+)(+)(+)(+)Transfers to persons(-)(-)(-)(-)Total expenditures(-)(-)(-)(-)Total expenditures(+)(+)(+)(+)Federal revenuesPersonal income tax(+)(+)(+)(+)Corporate and business tax(-)(-)(-)(-)Indirect taxes(-)(-)(-)(+)Total revenue(+)(+)(+)(+)Nonfederal government expendituresCapital consumption allowances(-)(-)(-)Nonfederal government expendituresCapital wages and salaries(-)(-)(-)Hoy budges and salaries(-)(-)(+)Yenovincial wages and salaries(-)(-)(+)Others(-)(-)(-)(+)Total goods and services(-)(-)(+)Total goods and services(-)(-)(+)Hother	Federal wages and salaries	(+)	(+)	(+)	(+)
Total goods and services(+)(+)(+)(+)(+)Residential construction(+)(+)(+)(+)(+)Residential construction(+)(+)(+)(+)(+)Highways(+)(+)(+)(+)(+)Other engineering(-)(+)(+)(+)(+)Machinery and equipment(-)(-)(-)(-)(-)Total gross fixed capital formation(+)(+)(+)(+)(+)Transfers to persons(-)(-)(-)(-)(-)Total expenditures(+)(+)(+)(+)(+)Federal revenuesPersonal income tax(+)(+)(+)(+)(+)Federal revenuesPersonal income tax(-)(-)(-)(-)(-)Indirect taxes(-)(-)(-)(-)(-)Other investment income(+)(+)(+)(+)(+)Total revenue(+)(+)(+)(+)(+)Nonfederal government expendituresCapital consumption allowances(-)(-)(-)(-)(+)Municipal wages and salaries(-)(-)(-)(+)(+)Capital wages and salaries(-)(-)(-)(+)(+)Municipal wages and salaries(-)(-)(-)(+)(+)Others(-)(-)(-)(+)(+)(+)Provincial medic	Other expenditures	(+)	(+)	(-)	(+)
Residential construction(+)(+)(+)(+)(+)Federal buildings(+)(+)(+)(+)(+)Highways(+)(+)(+)(+)(+)Other engineering(-)(+)(+)(+)Machinery and equipment(-)(-)(-)(-)Total gross fixed capital formation(+)(+)(+)(+)Transfers to persons(-)(+)(+)(+)Total expenditures(-)(-)(-)(-)Total expenditures(+)(+)(+)(+)Federal revenues(+)(+)(+)(+)Federal revenues(+)(+)(+)(+)Formation tax(+)(+)(+)(+)Corporate and business tax(-)(-)(-)(-)Indirect taxes(-)(-)(-)(-)(+)Nonfederal government expenditures(-)(-)(+)(+)Capital consumption allowances(-)(-)(-)(-)Nonfederal government expenditures(-)(-)(-)(-)School wages and salaries(-)(-)(-)(+)(+)(+)(+)(+)(+)(+)(+)(+)Others(-)(-)(-)(-)(+)(+)Municipal wages and salaries(-)(-)(-)(+)(+)(-)(-)(-)(-)(+)(+)(+)Other	Total goods and services	(+)	(+)	(+)	(+)
Federal buildings (+) (+) (+) (+) Highways (+) (+) (+) (+) Machinery and equipment (-) (+) (+) (+) Machinery and equipment (-) (-) (+) (+) (+) Transfers to persons (-) (-) (-) (-) (-) Transfers to governments (-) (-) (-) (+) (+) Total expenditures (+) (+) (+) (+) (+) Federal revenues (+) (+) (+) (+) (+) (+) (+) Federal revenues (+) (+) (+) (+) (+) (+) (+) (+) (+) Other investment income (+) (+) (+) (+) (+)	Residential construction	(+)	(+)	(+)	(+)
Highways (+) (+) (+) (+) (+) Other engineering (-) (+) (+) (+) (+) Machinery and equipment (-) (+) (+) (+) (+) Machinery and equipment (-) (-) (-) (-) (-) Transfers to governments (-) (+) (+) (+) (+) Total expenditures (+) (+) (+) (+) (+) Federal revenues (+) (+) (+) (+) (+) Corporate and business tax (-) (-) (-) (-) (-) Indirect taxes (-) (-) (-) (-) (+) (+) (+) Nonfederal government expenditures Capital consumption allowances (-) (-) (+) (+) (+)	Federal buildings	(+)	(+)	(+)	(+)
Other engineering(-)(+)(+)(+)Machinery and equipment(-)(-)(-)(-)Total gross fixed capital formation(+)(+)(+)(+)Transfers to persons(-)(-)(-)(-)Transfers to governments(-)(-)(-)(+)Total expenditures(+)(+)(+)(+)Federal revenuesPersonal income tax(+)(+)(+)(+)Corporate and business tax(-)(-)(-)Indirect taxes(-)(-)(-)(-)Other investment income(+)(+)(+)(+)Total evenue(+)(+)(+)(+)Nonfederal government expenditures(-)(-)(+)(+)Nonfederal government expenditures(-)(-)(-)(+)Municipal wages and salaries(-)(-)(+)(+)Municipal wages and salaries(-)(-)(-)(+)Others(-)(-)(-)(+)(+)Provincial medicare(-)(-)(-)(+)Others(-)(-)(+)(+)(+)Provincial medicare(-)(-)(+)(+)Corporation(+)(+)(+)(+)Machinery and equipment(-)(-)(+)(+)Total goods and services(-)(-)(+)(+)Total goods and services(-)(-)(+) <td< td=""><td>Highways</td><td>(+)</td><td>(+)</td><td>(+)</td><td>(+)</td></td<>	Highways	(+)	(+)	(+)	(+)
Machinery and equipment(-)(-)(-)(-)Total gross fixed capital formation(+)(+)(+)(+)Transfers to persons(-)(+)(+)(+)Transfers to governments(-)(-)(-)(+)Total expenditures(+)(+)(+)(+)(+)Federal revenuesPersonal income tax(+)(+)(+)(+)Federal revenuesPersonal income tax(+)(+)(+)(+)Unemployment insurance(+)(+)(+)(+)Corporate and business tax(-)(-)(-)(-)Indirect taxes(-)(-)(-)(-)(+)Total revenue(+)(+)(+)(+)(+)Nonfederal government expendituresCapital consumption allowances(-)(-)(+)(+)Nunicipal wages and salaries(-)(-)(+)(+)School wages and salaries(-)(-)(+)(+)Others(+)(+)(+)(+)(+)Provincial medicare(-)(-)(-)(+)(+)Total goods and services(-)(-)(+)(+)Others(-)(-)(+)(+)(+)Municipal wages and salaries(-)(-)(+)(+)Others(-)(-)(-)(+)(+)Others(-)(-)(+)(+)(+)Highways <td< td=""><td>Other engineering</td><td>(-)</td><td>(+)</td><td>(+)</td><td>(+)</td></td<>	Other engineering	(-)	(+)	(+)	(+)
Total gross fixed capital formation $(+)$ <	Machinery and equipment	(-)	(-)	(-)	(-)
Transfers to persons (-) (+) (-) (-) Transfers to governments (-) (-) (-) (+) Total expenditures (+) (+) (+) (+) Federal revenues (+) (+) (+) (+) Federal revenues (+) (+) (+) (+) Personal income tax (+) (+) (+) (+) Unemployment insurance (+) (+) (+) (+) Corporate and business tax (-) (-) (-) (-) Indirect taxes (-) (-) (-) (-) (-) Other investment income (+) (+) (+) (+) (+) Nonfederal government expenditures Capital consumption allowances (-) (-) (+) (+) Nonicial wages and salaries (-) (-) (+) (+) (+) Municipal wages and salaries (-) (-) (+) (+) (+) School wages and salaries (-) (-) (-) (-) (+) Others<	Total gross fixed capital formation	(+)	(+)	(+)	(+)
Transfers to governments (-) (-) (-) (+) Total expenditures (+) (+) (+) (+) Federal revenues Personal income tax (+) (+) (+) (+) Unemployment insurance (+) (+) (+) (+) Unemployment insurance (+) (+) (+) (+) Corporate and business tax (-) (-) (-) (-) Indirect taxes (-) (-) (-) (-) Other investment income (+) (+) (+) (+) Total revenue (+) (-) (+) (+) Nonfederal government expenditures Capital consumption allowances (-) (-) (+) Nonfederal wages and salaries (-) (-) (+) (+) Municipal wages and salaries (-) (-) (+) (+) Municipal wages and salaries (-) (-) (-) (+) Others (+) (+) (+) (+) (+) Provincial medicare (-) (-)	Transfers to persons	(-)	(+)	(-)	(-)
Total expenditures (+) (+) (+) (+) (+) (+) Federal revenues Personal income tax (+) (+) (+) (+) (+) Personal income tax (+) (+) (+) (+) (+) (+) Unemployment insurance (+) (+) (+) (+) (+) (+) Corporate and business tax (-) (-) (-) (-) (-) (-) Indirect taxes (-) (-) (-) (-) (+) (+) Other investment income (+) (+) (-) (+) (+) (+) Total revenue (+) (-) (+) (+) (+) (+) (+) Nonfederal government expenditures Capital consumption allowances (-) (-) (+) (+) (+) Nunicipal wages and salaries (-) (-) (+) (+) (+) (+) Municipal wages and salaries (-) (-) (-) (-) (-) (-) Others (+) (+) (+)	Transfers to governments	(-)	(-)	(-)	(+)
Federal revenues Personal income tax (+) (+) (+) (+) (+) Unemployment insurance (+) (+) (+) (+) (+) Corporate and business tax (-) (-) (-) (-) Indirect taxes (-) (-) (-) (-) (-) Other investment income (+) (+) (+) (+) (+) Total revenue (+) (-) (+) (+) (+) (+) Nonfederal government expenditures (+) (+) (+) (+) (+) Nonfederal government expenditures (-) (+) (+) (+) (+) Nonfederal government expenditures (-) (+) <td>Total expenditures</td> <td>(+)</td> <td>(+)</td> <td>(+)</td> <td>(+)</td>	Total expenditures	(+)	(+)	(+)	(+)
Personal income tax (+) (+) (+) (+) (+) Unemployment insurance (+) (+) (+) (+) (+) Corporate and business tax (-) (-) (-) (-) (-) Indirect taxes (-) (-) (-) (-) (-) Other investment income (+) (+) (-) (+) (+) Total revenue (+) (-) (+) (+) (+) (+) Nonfederal government expenditures	Federal revenues				
Unemployment insurance (+) (+) (+) (+) (+) Corporate and business tax (-) (-) (-) (-) Indirect taxes (-) (-) (-) (-) Other investment income (+) (+) (-) (+) Total revenue (+) (-) (+) (+) Nonfederal government expenditures (-) (+) (+) (+) Nonfederal government expenditures (-) (-) (+) (+) Municipal wages and salaries (-) (-) (-) (-) Others (-) (-	Personal income tax	(+)	(+)	(+)	(+)
Corporate and business tax (-) (-) (-) (-) Indirect taxes (-) (-) (-) (-) Other investment income (+) (+) (-) (+) Total revenue (+) (-) (+) (+) Nonfederal government expenditures (-) (+) (+) (+) Nonfederal government expenditures (-) (+) (+) (+) Municipal wages and salaries (-) (-) (+) (+) Municipal wages and salaries (-) (-) (-) (+) School wages and salaries (-) (-) (-) (+) Municipal wages and salaries (-) (-) (-) (-) Municipal wages and salaries (-) (-) (-) (+) Others (-) (-) (-) (+) (+) Provincial medicare (-) (-) (+) (+) (+) Total goods and services (-) (-) (+) (+) (+) School construction (+) (+)	Unemployment insurance	(+)	(+)	(+)	(+)
Indirect taxes (-) (-) (-) (-) Other investment income (+) (+) (-) (+) Total revenue (+) (+) (-) (+) Nonfederal government expenditures Capital consumption allowances (-) (+) (+) Provincial wages and salaries (-) (-) (+) (+) Municipal wages and salaries (-) (-) (+) (+) School wages and salaries (-) (-) (-) (+) Motification medicare (-) (-) (-) (+) Others (+) (+) (+) (+) Provincial medicare (-) (-) (+) (+) Total goods and services (-) (-) (+) (+) School construction (+) (+) (+) (+) Highways (+) (+) (+) (+) Other engineering (-) (-) (-) (-) Machinery and equipment (-) (-) (+) (+) (+)	Corporate and business tax	(-)	(-)	(-)	(-)
Other investment income (+) (+) (-) (+) Total revenue (+) (-) (+) (+) Nonfederal government expenditures Capital consumption allowances (-) (+) (+) Provincial wages and salaries (-) (-) (+) Municipal wages and salaries (-) (-) (+) School wages and salaries (-) (-) (+) Others (-) (-) (+) Provincial medicare (-) (-) (+) Others (+) (+) (+) Provincial medicare (-) (-) (+) Total goods and services (-) (-) (+) School construction (+) (+) (+) Highways (+) (+) (+) Other engineering (-) (-) (-) Machinery and equipment (-) (-) (-) Total fixed capital formation (+) (+) (+) Transfers to persons (-) (-) (-)	Indirect taxes	(-)	(-)	(-)	(-)
Total revenue(+)(-)(+)(+)Nonfederal government expendituresCapital consumption allowances(-)(+)(+)Provincial wages and salaries(-)(-)(+)(+)Municipal wages and salaries(-)(-)(+)(+)School wages and salaries(-)(-)(-)(+)Hospital wages and salaries(-)(-)(-)(+)Others(-)(-)(-)(+)Provincial medicare(-)(-)(+)(+)Total goods and services(-)(-)(+)(+)School construction(+)(+)(+)(+)Highways(-)(-)(-)(-)(-)Total fixed capital formation(+)(+)(+)(+)Transfers to persons(-)(-)(-)(-)(-)	Other investment income	(+)	(+)	(-)	(+)
Nonfederal government expendituresCapital consumption allowances(-)(+)(-)(+)Provincial wages and salaries(-)(-)(+)(+)Municipal wages and salaries(-)(-)(+)(+)School wages and salaries(-)(-)(-)(+)Hospital wages and salaries(-)(-)(-)(+)Others(-)(-)(+)(+)Provincial medicare(-)(-)(+)(+)Total goods and services(-)(-)(+)(+)School construction(+)(+)(+)(+)Highways(-)(-)(-)(-)(-)Total fixed capital formation(+)(+)(+)(+)Transfers to persons(-)(-)(-)(-)(-)	Total revenue	(+)	(-)	(+)	(+)
Capital consumption allowances(-)(+)(-)(+)Provincial wages and salaries(-)(-)(+)(+)Municipal wages and salaries(-)(-)(+)(+)School wages and salaries(-)(-)(-)(-)Hospital wages and salaries(-)(-)(-)(-)Others(-)(-)(-)(+)(+)Provincial medicare(-)(-)(+)(+)Total goods and services(-)(-)(+)(+)School construction(+)(+)(+)(+)Highways(+)(+)(+)(+)Other engineering(-)(-)(-)(-)Total fixed capital formation(+)(+)(+)(+)Transfers to persons(-)(-)(-)(-)(-)	Nonfederal government expenditures				
Provincial wages and salaries(-)(-)(+)(+)Municipal wages and salaries(-)(-)(+)(+)School wages and salaries(-)(-)(-)(-)Hospital wages and salaries(-)(-)(-)(-)Others(+)(+)(+)(+)(+)Provincial medicare(-)(-)(-)(+)Total goods and services(-)(-)(+)(+)School construction(+)(+)(+)(+)Highways(-)(-)(-)(+)(+)Other engineering(-)(-)(+)(+)Machinery and equipment(-)(-)(-)(-)Total fixed capital formation(+)(+)(+)(+)Transfers to persons(-)(-)(-)(-)(-)	Capital consumption allowances	(-)	(+)	(-)	(+)
Municipal wages and salaries(-)(-)(+)(+)School wages and salaries(-)(-)(-)(-)Hospital wages and salaries(-)(-)(-)(-)Others(+)(+)(+)(+)(+)Provincial medicare(-)(-)(-)(+)(+)Total goods and services(-)(-)(+)(+)School construction(+)(+)(+)(+)Highways(+)(+)(+)(+)Other engineering(-)(-)(-)(-)Machinery and equipment(-)(+)(+)Transfers to persons(-)(-)(-)(-)	Provincial wages and salaries	(-)	(-)	(+)	(+)
School wages and salaries $(-)$ $(-)$ $(-)$ $(-)$ $(-)$ Hospital wages and salaries $(-)$ $(-)$ $(-)$ $(-)$ $(+)$ Others $(+)$ $(+)$ $(+)$ $(+)$ $(+)$ Provincial medicare $(-)$ $(-)$ $(+)$ $(+)$ Total goods and services $(-)$ $(-)$ $(+)$ $(+)$ School construction $(+)$ $(+)$ $(+)$ $(+)$ Highways $(+)$ $(+)$ $(+)$ $(+)$ Other engineering $(-)$ $(-)$ $(-)$ $(-)$ Machinery and equipment $(-)$ $(-)$ $(-)$ $(-)$ Total fixed capital formation $(+)$ $(+)$ $(+)$ $(+)$ Transfers to persons $(-)$ $(-)$ $(-)$ $(-)$	Municipal wages and salaries	(-)	(-)	(+)	(+)
Hospital wages and salaries $(-)$ $(-)$ $(-)$ $(-)$ $(+)$ $(+)$ Others $(+)$ $(+)$ $(+)$ $(+)$ $(+)$ $(+)$ Provincial medicare $(-)$ $(-)$ $(-)$ $(+)$ $(+)$ Total goods and services $(-)$ $(-)$ $(-)$ $(+)$ $(+)$ School construction $(+)$ $(+)$ $(+)$ $(+)$ Highways $(+)$ $(+)$ $(+)$ $(+)$ Other engineering $(-)$ $(-)$ $(-)$ $(-)$ Machinery and equipment $(-)$ $(-)$ $(-)$ $(-)$ Total fixed capital formation $(+)$ $(+)$ $(+)$ $(+)$ Transfers to persons $(-)$ $(-)$ $(-)$ $(-)$	School wages and salaries	(-)	(-)	(-)	(-)
Others $(+)$ $(+)$ $(+)$ $(+)$ $(+)$ Provincial medicare $(-)$ $(-)$ $(-)$ $(+)$ $(+)$ Total goods and services $(-)$ $(-)$ $(-)$ $(+)$ $(+)$ School construction $(+)$ $(+)$ $(+)$ $(+)$ $(+)$ Highways $(+)$ $(+)$ $(+)$ $(+)$ $(+)$ Other engineering $(-)$ $(-)$ $(-)$ $(-)$ $(-)$ Machinery and equipment $(-)$ $(-)$ $(-)$ $(-)$ $(-)$ Total fixed capital formation $(+)$ $(+)$ $(+)$ $(+)$ Transfers to persons $(-)$ $(-)$ $(-)$ $(-)$	Hospital wages and salaries	(-)	(-)	(-)	(+)
Provincial medicare $(-)$ $(-)$ $(+)$ $(+)$ Total goods and services $(-)$ $(-)$ $(+)$ $(+)$ School construction $(+)$ $(+)$ $(+)$ $(+)$ Highways $(+)$ $(+)$ $(+)$ $(+)$ Other engineering $(-)$ $(-)$ $(+)$ $(+)$ Machinery and equipment $(-)$ $(+)$ $(-)$ $(-)$ Total fixed capital formation $(+)$ $(+)$ $(+)$ $(+)$ Transfers to persons $(-)$ $(-)$ $(-)$ $(-)$	Others	(+)	(+)	(+)	(+)
Total goods and services $(-)$ $(-)$ $(+)$ $(+)$ School construction $(+)$ $(+)$ $(+)$ $(+)$ Highways $(+)$ $(+)$ $(+)$ $(+)$ Other engineering $(-)$ $(-)$ $(+)$ $(+)$ Machinery and equipment $(-)$ $(-)$ $(-)$ $(-)$ Total fixed capital formation $(+)$ $(+)$ $(+)$ $(+)$ Transfers to persons $(-)$ $(-)$ $(-)$ $(-)$	Provincial medicare	(-)	(-)	(+)	(+)
School construction $(+)$ $(+)$ $(+)$ $(+)$ $(+)$ Highways $(+)$ $(+)$ $(+)$ $(+)$ $(+)$ Other engineering $(-)$ $(-)$ $(-)$ $(+)$ $(+)$ Machinery and equipment $(-)$ $(-)$ $(-)$ $(-)$ $(-)$ Total fixed capital formation $(+)$ $(+)$ $(+)$ $(+)$ Transfers to persons $(-)$ $(-)$ $(-)$ $(-)$	Total goods and services	(-)	(-)	(+)	(+)
Highways $(+)$ $(+)$ $(+)$ $(+)$ Other engineering $(-)$ $(-)$ $(+)$ $(+)$ Machinery and equipment $(-)$ $(+)$ $(-)$ $(-)$ Total fixed capital formation $(+)$ $(+)$ $(+)$ $(+)$ Transfers to persons $(-)$ $(-)$ $(-)$ $(-)$	School construction	(+)	(+)	(+)	(+)
Other engineering $(-)$ $(-)$ $(+)$ $(+)$ Machinery and equipment $(-)$ $(+)$ $(-)$ $(-)$ Total fixed capital formation $(+)$ $(+)$ $(+)$ $(+)$ Transfers to persons $(-)$ $(-)$ $(-)$ $(-)$	Highways	(+)	(+)	(+)	(+)
Machinery and equipment $(-)$ $(+)$ $(-)$ $(-)$ Total fixed capital formation $(+)$ $(+)$ $(+)$ $(+)$ Transfers to persons $(-)$ $(-)$ $(-)$ $(-)$	Other engineering	(-)	(-)	(+)	(+)
Total fixed capital formation $(+)$ $(+)$ $(+)$ $(+)$ Transfers to persons $(-)$ $(-)$ $(-)$ $(-)$	Machinery and equipment	(-)	(+)	(-)	(-)
Transfers to persons (-) (-) (-) (-)	Total fixed capital formation	(+)	(+)	(+)	(+)
	Transfers to persons	(-)	(-)	(-)	(*)

(cont'd.)

Table A-11 (concl'd.)

Response of Some Government Expenditures and Revenues to Alternative Shocks, Using Reference Solutions of CANDIDE 1.2M, 1976-85¹

		Туре о	f shock	
	Increa expor import	ase in t and prices	Incr in w	ease ages
	Partial effects ²	Full effects	Partial effects ²	Full effects
Nonfederal revenues				
Personal income tax Corporate and business tax Indirect taxes Government investment income Federal transfers Total revenue	(+) (-) (-) (+) (-) (+)	(-) (-) (+) (-)	(+) (-) (-) (-) (-)	(+) (-) (-) (+) (-)

1 For every 1 per cent inflationary shock induced in the GNE price deflator, a growth in the revenue or expenditure item of more than 1 per cent is shown by (+); a decline or a growth of less than the GNE deflator, by (-); and roughly no difference, by (*).

2 Partial effects preclude the substitution effects and changes in real economic activity that are contained in the full effects.

SOURCE B. K. Lodh. "Effects of Inflation Generated by a Variety of Alternative Sources. Domestic and Foreign, on the Budgetary Position of Governments: Some Empirical Tests with CANDIDE." Economic Council of Canada Discussion paper (forthcoming).

180 Appendix

Table A-12

Reference Solution, 1975-79

	1976	1977	1978	1979		
	(A	nnual perce	ntage change	c) ¹		
Gross national expenditure	5.4	6.4	5.6	5.1		
Consumer expenditure	5.2	5.7	4.8	3.4		
Total fixed investment	0.8	6.6	8.3	7.5		
Machinery and equipment	2.5	10.0	11.9	9.6		
Nonresidential construction	0.0	6.4	11.1	13.4		
Residential construction	3.3	2.5	1.4	2.4		
Government current expenditure	5.8	5.6	5.7	4.8		
Exports	10.5	6.0	4.9	6.5		
Imports	5.4	6.3	5.7	4.2		
Real disposable income per capita	3.4	4.2	3.1	1.2		
Output per person employed Output per person employed in	3.1	2.8	2.2	2.2		
manufacturing	4.3	4.6	4.2	4.2		
Employment	2.6	3.6	3.3	3.0		
Consumer price index	7.8	5.6	5.3	7.5		
		(Percenta;	ge points)			
Differential between Canadian and foreign						
prices ²	0.8	0.5	0.8	'n.a.		
		(Thousand	ands of units)			
Number of housing starts	257	262	262	243		
	(P	ercentage of	labour forc	e)		
Unemployment rate	7.0	6.0	5.3	4.8		
Rate for males aged 25-54	5.3	4.4	3.7	3.3		

n.a. not available.

1 For gross national expenditure and its components, as well as real disposable income and productivity. the targets are annual percentage changes calculated from data expressed in constant dollars. The employment indicator measures the percentage change in the number of persons employed.

2 Difference between the percentage change in the consumer price index in Canada and the percentage change in the weighted index of consumer prices in the United Kingdom, the United States, West Germany, Japan, France, and Italy. Sot RCF Based on data from Statistics Canada and Data Resources, Inc., and estimates by the Economic

Council of Canada.
Table A-13

Performance Indicators, 1975-79

	1976	1977	1978	1979
	(A	innual perce	ntage change	2)1
Gross national expenditure	5.4	6.4	5.8	5.5
Consumer expenditure	5.2	5.7	4.9	3.6
Total fixed investment	0.8	6.6	9.5	10.1
Machinery and equipment	2.5	10.0	14.9	15.6
Nonresidential construction	0.0	6.4	11.2	13.7
Residential construction	3.3	2.5	1.5	2.2
Government current expenditure	5.8	5.6	5.6	4.9
Exports	10.5	6.0	4.9	6.5
Imports	5.4	6.3	6.3	5.4
Real disposable income per capita	3.4	4.2	3.3	1.5
Output per person employed Output per person employed in	3.1	2.8	2.3	2.4
manufacturing	4.3	4.6	4.3	4.2
Employment	2.6	3.6	3.4	3.2
	(Percentage point		ge points)	
Differential between Canadian and foreign				
prices ²	0.8	0.5	0.9	n.a.
		(Thousand	ls of units)	
Number of housing starts	257	262	262	244
	(F	Percentage o	f labour forc	e)
Unemployment rate	7.0	6.0	5.2	4.5
Rate for males aged 25-54	5.3	4.4	3.6	3.0

n.a. not available.

1 For gross national expenditure and its components, as well as real disposable income and productivity, the targets are annual percentage changes calculated from data expressed in constant dollars. The employment indicator measures the percentage change in the number of persons employed.

2 Difference between the percentage change in the consumer price index in Canada and the percentage change in the weighted index of consumer prices in the United Kingdom, the United States, West Germany, Japan, France, and Italy.

SOURCE Based on data from Statistics Canada and Data Resources. Inc., and estimates by the Economic Council of Canada.

Tables

2-1 2-2	I otal Family Income and Consumer Price Index, 1965-75 Distribution of Total Family Incomes before Taxes, Selected Years,	6
0.0	1965-74	7
2-3	Distribution of Family Units, by Age of Head, 1965 and 1974	8
2-4	Unit Head, 1965 and 1974	9
2-5	Estimated Impact of Inflation on the Relative Positions of House- holds, by Age Group, 1969-75	22
2-6	Estimated Impact of Inflation on the Relative Positions of House- holds, by Income Group, 1969-75	22
3-1	Annual Change in Real Average Weekly Earnings, by Sector, 1973-76	26
3-2	Average Annual Wage Change Provided under New Major Collec- tive Agreements, by Sector, Selected Years, 1970-75	28
3-3	Wage, Cost-of-Living, and Duration Features of Bargaining Agree- ments, 1970-75	29
3-4	Proportion of Major Collective Agreements Containing COLA Clauses, 1971-75	29
3-5	Duration of Major Collective Agreements, by Sector, Selected Years, 1970-75	30
3-6	Relative Importance of Existing and New or Renegotiated Major Collective Agreements in Determining Annual Increases in Base Wage Rates, 1970-75	31
3-7	Annual Change in Wages and Salaries and in Supplementary Labour Income per Person Employed, by Major Sector, 1970-75	33
3-8	Members of Pension Plans, by Type of Benefit, 1965 and 1974	35
3-9	Estimated Loss on Pension Incomes as a Result of Inflation, 1969-74	36
3-10	Gains and Losses Resulting from the Impact of Inflation on the Value of Major Assets of Private Pension Funds, 1970-74	38
4-1	Estimates of Depreciation Expense, by Major Sector, Selected Years, 1965-74	44
4-2	Inflation "Tax" on Cash Balances, by Major Sector, Selected Years, 1965-74	48
4-3	Income Transfers Resulting from the Impact of Unanticipated Inflation on Net Short-Term Liabilities, by Major Sector, Selected Vegrs, 1965-74	50
4-4	Income Transfers Resulting from the Impact of Unanticipated Inflation on Net Long-Term Liabilities, by Major Sector, Selected Vance, 1065 74	50
4-5	Value of Tax Reduction from Expensing of Anticipated Inflation Component of Nominal Interest Rate, by Major Sector, Selected Years, 1965-74	52

4-6	Effects of Inflation on the Income of Major Business Sectors, Selected Years, 1965-74	55
5-1	National and Public Expenditure Indicators, 1955 and 1975	60
5-2	Public Revenues and Expenditures, All Government Levels, 1955, 1965, and 1975	62
5-3	The Effect of Indexing on Personal Income Tax Revenues and Transfer Payments, 1974-79	66
5-4	The Impact on the Budgetary Position of Governments and Other Macro-Variables from Alternative Inflationary Shocks to Forecast Solutions of CANDIDE 1.2M over 1976-85	69
5-5	Estimates of Inflation-Induced Gains and Losses on the Federal Public Debt, 1970-75	71
5-6	Estimates of Provincial Inflation-Induced Gains and Losses on Borrowings from the Canada Pension Plan, 1970-75	72
6-1	Exchange Rate Variations between January 1970 and June 1976, and Relative Importance of Trade in 1975, Seven Leading Indus- trial Nations	80
6-2	Changes in Money Supply, Potential Output, Consumer Price Index. and Nominal Interest Rates, All OECD Member Countries, 1965-74	83
6-3	Relative Importance of Oil Imports, and Effects of Oil Price Increases on the Cost of Living, Seven Leading Industrial Countries, 1973 and 1974	85
6-4	International Comparison of Hourly Compensation and Unit Labour Costs in Manufacturing, 1974 and 1975, and Destination of Canadian Manufactured Exports, 1972-75	86
6-5	Change in Wage Rates and Labour Costs, Canada and United States, 1976	86
6-6	Implicit Price Index, by Industry, Selected Years, 1961-74	87
6-7	Contribution to Change in Consumer Price Index, by Component, 1974-76	91
6-8	Relative Contribution of Factor Costs to Increases in Total Unit Costs, All Sectors, 1961-75	95
6-9	Selected Cost Components of the GNP Price Index, 1965-75	99
7-1	Price Indexes for Manufactured Goods, and Index Ratio for Unit Costs of Compensation in Manufacturing, Canada and the United States, Selected Years, 1960-75	102
7-2 7-3	Balance of Payments on Current Account, Selected Years, 1951-75 Average Annual Growth Rates of OECD Industrial Production, Canadian Merchandice Trade and Real Spending on Goods in	103
	Canada, 1960-75	104
7-4	Canadian Exports as a Percentage of World Exports, Selected Years, 1966-75	104
7-5	Merchandise Imports as a Percentage of Spending on Goods in Canada, Selected Years, 1960-75	105
8-1	Performance Indicators, 1974-78, and Actual Values and Expected	110
8-2	Performance Indicators 1975-79	118
9_1	Summary of Inflation-Induced Gains and Losses to Households	150
9-2	Business, and Government, 1969-75 Distribution and Disposition of Wage Settlements Submitted to the	148
1 4	Anti-Inflation Board by October 1976	157

.....

184 Tables

A-I	Balance Sheet Structure of Households, in Nominal Terms, by Income Class, 1970	168
A-2	Balance Sheet Structure of Households, in Nominal Terms, by Age Group, 1970	169
A-3	Distribution of Assets Held by Private Trusteed Pension Funds, 1965 and 1974	170
A-4	Adjustments to Net Book Profits Resulting from Inventory Valuation Adjustments for Inflation	170
A-5	Estimates of Depreciation Expense, 1965-74	171
A-6	Inflation Tax on Cash Balances, 1965-74	172
A-7	Income Transfers Resulting from Impact of Unanticipated Inflation on Net Short-Term Debt, 1965-74	173
A-8	Income Transfers Resulting from Impact of Unanticipated Inflation on Net Long-Term Debt, 1965-74	174
A-9	Value of Tax Reduction from Expensing of Anticipated Inflation Component of Nominal Interest Rate, 1965-74	175
A-10	Tax and Transfer Effects of Inflation on the Business Sector, 1965-74	176
A-11	Response of Some Government Expenditures and Revenues to Alter- native Shocks, Using Reference Solutions of CANDIDE 1.2M.	
	1976-85	178
A-12	Reference Solution, 1975-79	180
A-13	Performance Indicators, 1975-79	181

Charts

2-1	Gini Coefficients for Family Unit Incomes, by Age of Head, 1965-73	10
2-2	Gini Coefficients for Family Incomes, by Number of Earners in	
	Family Unit, 1967-73	11
2-3	Gini Coefficients for Family Unit Incomes, Unstandardized and	
	Standardized for Structural Changes in the Canadian Population,	
	1965-73	12
2-4	Distribution of Total Income and Its Components among Families. 1973	14
2-5	Distribution of Canada and Quebec Pension Plan Income among Families, 1971 and 1973	15
2-6	Distribution of Unemployment Insurance Commission Benefits among Families, 1967, 1971, and 1973	16
4-1	Extra Declared Earnings Resulting from the Use of Historical Rather than Replacement Costs in Inventory Valuation, 1965-74	16
4-2	Actual and Expected Growth in the Price Levels 1954-74	50
5-1	Quarterly Change in Narrowly Defined Money Supply and Con- sumer Price Index, 1970-76	50
6-1	Price Indexes 1961-75	38
6-2	GNP Price Index and Total Public and Private Investment, 1050,75	19
6-3	International Commodity Price Index 1071-76	01
6-4	Selected Components of the GNE Implicit Price Deflator 1970-76	00
6-5	Food Prices Paid by Consumers and Received by Farmers 1950-75	80
6-6	Unit Costs, 1962-75	94
6-7	Real Domestic Product and Implicit Prices, by Sector, 1962-75	96
6-8	Contribution of Indirect Taxes, Unemployment Insurance Contri- butions, and CPP and QPP Contributions to the Cost per Unit of	
7.1	National Output, 1950-75	98
7-1	Trade Competitive Indexes for All Goods and Manufactured Goods,	106
73	1900-73	107
7-5	Dollars, 1973-85	109
1-4	Canada's International Performance on Current and Capital Ac- counts, 1950-75	112
8-1	Gross National Expenditure, 1971-76	120
8-2	Consumer Expenditure, 1971-76	120
8-3	Total Fixed Investment, 1971-76	121
8-4	Investment in Nonresidential Construction, 1971-76	122
8-5	Investment in Machinery and Equipment, 1971-76	122

186 Charts

8-6	Housing Starts, 1971-76	123
8-7	Investment in Residential Construction, 1971-76	124
8-8	Exports of Goods and Services, 1971-76	124
8-9	Imports of Goods and Services, 1971-76	125
8-10	Government Current Expenditures, 1971-76	126
8-11	Real Disposable Income per Capita, 1971-76	127
8-12	Output per Person Employed, 1971-76	128
8-13	Index of Output per Person Employed in Manufacturing, 1971-76	128
8-14	Total Employment, 1971-76	129
8-15	Aggregate Rate of Unemployment as a Percentage of Labour Force.	
	1971-76	130
8-16	Differential Rate of Price Change between Canada and Major	
	Industrial Countries, 1971-76	131
8-17	Fiscal Position of Governments, 1971-76	133
8-18	Canadian Exchange Rate 1971-76	135

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