

# LEGACIES

TWENTY-SIXTH ANNUAL REVIEW

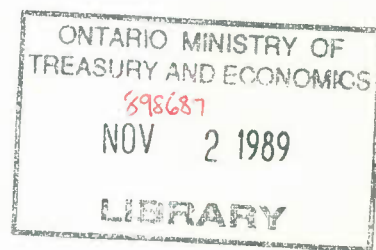
ECONOMIC COUNCIL  
OF CANADA  
1989



HC  
111  
.E26  
n.26

c.1  
tor mai

# Legacies



CAN.  
EC-21-  
1/  
1989

new title

**The National Library of Canada has  
catalogued this publication as follows:**

Economic Council of Canada

Annual review - Economic Council of Canada

1st - 1964-

Each issue has also a distinctive title.

Issued also in French under title: Economic Council of  
Canada. Exposé annuel.

ISSN 0070-8488

1. Canada - Economic conditions - Periodicals.
2. Canada - Economic policy - Periodicals.

HC111.E28    330.971'005    C75-72722-5

# Legacies

Economic Council of Canada  
Twenty-Sixth Annual Review  
1989



© Minister of Supply and Services Canada 1989

Available in Canada through

Associated Bookstores  
and other booksellers

or by mail from

Canadian Government Publishing Centre  
Supply and Services Canada  
Ottawa, Canada K1A 0S9

Catalogue No. EC21-1/1989E  
ISSN 0070-8488

# Contents

<b>Members of the Economic Council of Canada</b>	<b>vii</b>
<b>Foreword</b>	<b>ix</b>
<b>1 Leaner Legacies</b>	<b>1</b>
<b>2 Canada and the Changing World Economy</b>	<b>5</b>
Recent International Developments	5
The Macroeconomic Framework	6
Canadian Industrial Competitiveness	10
The Future Trading Environment	16
Conclusion	17
<b>3 The Medium Term: Resolving the Fiscal Imbalance</b>	<b>19</b>
The Fiscal Legacy	19
The Medium-Term Outlook	23
The Canadian Base Case	24
External Alternatives	27
An Alternative Canadian Policy	28
Taking Advantage of U.S. Policy	29
Conclusion	29
<b>4 How Today's Generations Are Faring</b>	<b>33</b>
Shifting Patterns of Income and Wealth	33
New Patterns of Employment and Wages	37
Unemployment	38
Wages and Salaries	39
Fringe Benefits	43
Private Pensions	44
Inheritance	45
Conclusion	46
<b>5 Providing for Future Generations</b>	<b>49</b>
A Conceptual Framework	49
The Underlying Demographic Trends	51
The Demographic Simulations	52
Implications of a "Greying" Population	54
The Environmental and Resource Legacy: Some Qualitative Considerations	56
Natural-Resource Supply	57
Environmental Quality	58
Intergenerational Implications	60
The Policy Challenge	60

<b>6</b>	<b>Improving the Legacies</b>	<b>63</b>
	The Productivity Slowdown	63
	Intergenerational Concerns	65
	Performance Targets: Changing the Policy Mix	66
	Conclusion	69
	<b>Comments and Dissent</b>	<b>71</b>
	<b>Appendix</b>	<b>73</b>
	<b>Notes</b>	<b>79</b>
	<b>List of Tables, Charts, and Figures</b>	<b>81</b>
	<b>Project Contributors</b>	<b>83</b>

This document reflects the consensus of the Members of the Economic Council of Canada; supplementary comments by William Mackness and a joint dissent by Diane Bellemare and Marcel Pepin appear at the end of the document.

## Members of the Economic Council of Canada

JUDITH MAXWELL, Chairman

CAROLINE PESTIEAU, Deputy Chairman and Director

HARVEY LAZAR, Deputy Chairman and Director

MILLER H. AYRE

President and Chief Executive Officer  
Ayre's Limited  
St. John's

ALIX GRANGER

Vice President  
Pemberton, Houston, Willoughby, Inc.  
Vancouver

DIANE BELLEMARE

Professor  
Département des sciences économiques  
Université du Québec à Montréal  
Montréal

YVES GUÉRARD

President  
Groupe Sobeco Inc.  
Montréal

JALYNN H. BENNETT

Former Vice President, Corporate  
Development  
The Manufacturers Life Insurance Company  
Toronto

CHESTER A. JOHNSON

Chairman and Chief Executive Officer  
Western Pulp Inc.  
Vancouver

ALAN A. BORGER

President  
Ladco Company Limited  
Winnipeg

WILLIAM MACKNESS

Dean  
Faculty of Management  
University of Manitoba  
Winnipeg

JACQUES BOUGIE

President and Chief Operating Officer  
Alcan Aluminium Limited  
Montréal

MARCEL PEPIN

Professor  
École de Relations industrielles  
Université de Montréal  
Montréal

DIAN COHEN

President  
Dian Cohen Productions  
Toronto

BARTLETT B. ROMBOUGH

President and Chief Executive Officer  
PanCanadian Petroleum Limited  
Calgary

THOMAS J. COURCHENE

Director  
School of Policy Studies  
Queen's University  
Kingston

STEVE A. STAVRO

President  
Knob Hill Farms Ltd.  
Scarborough

LÉON COURVILLE

Executive Vice-President  
National Bank of Canada  
Montréal

KEN W. STICKLAND

President  
KenAgra Management Services Ltd.  
Edmonton

NORMAN E. WALE  
Vice-President, Investor and  
Industry Relations  
Canadian Pacific Limited  
Montréal

H. GRAHAM WILSON  
Vice-President and Secretary  
Dofasco Inc.  
Hamilton

## Foreword

As Canadians approach the last decade of the 20th century, it is natural that the Council should reflect on the legacy that they inherited from preceding generations and on the one that they will leave to their children and grandchildren.

Canada entered the 20th century with barely 5 million people, a third of them under the age of 15 and only 5 per cent aged 65 and over. The population was essentially rural, and 40 per cent of the work force lived on farms. Towns and villages were joined by dirt roads, by steam rail, or by water. Life for most people was austere. Even in the larger towns, many tasks revolved around the home; less than one woman in six was in the labour force. Only a minority of children advanced beyond primary school. Farm tasks were never-ending; in manufacturing and service trades, workers often toiled 10 hours a day for as many as six days a week. In times of economic or personal distress, support came mainly from friends or neighbours, other family members, the church, or the local lodge. Life expectancy ran to about 50 years.

Internationally, Canada was part of the British Empire, in a world in which the leading European nations exercised colonial domination over much of Africa and Asia. And in the years that followed, Canadian troops were to fight and die in two world wars, leaving a legacy of courage and a commitment to political freedom and independence.

Today, the situation is very different. Canada is a nation of 26 million people, mostly based in large metropolitan cities. Canadians have enjoyed 40 years of peace, and they have learned by experience that the key to material prosperity is not through conquest or colonial acquisition, but rather through knowledge, enterprise, and the application of science and technology.

During the intervening period, radical technical progress has been the norm: the combustion engine has completely altered and quickened modes of transportation; electricity has brought light to cities and homes; telecommunications have advanced contacts between distant people and places; new drugs and medical technologies have extended life expectancies dramatically and have allowed for personal selectivity in family planning.

On the social plane, Canadians have made political decisions to share the costs of health, education, and income insecurity collectively through publicly administered programs in all regions of the country. In the course of these developments, the role of government has greatly expanded, touching the lives and incomes of every Canadian. Whatever the regulatory costs and shortcomings, Canadian society is probably more just and more concerned about the common welfare as a result.

Thus, as they enter the final decade of this century, the generations of today leave a wealthier society, in which the knowledge and skills of men and women are being used in more balanced and more productive ways. But they also leave a society in which the bonds of family have loosened somewhat. While the problems of war and of health and income

insecurity have been reduced, other problems – resulting from family break-up, drugs, crime, and environmental pollution – have grown.

Still, every generation faces its own challenges. As the population ages, there will be different needs – and different problems to address, as Chapter 5 shows. By 2040, the demographic pyramid will be almost the reverse of that of a century ago; Canada may then have far more citizens in the over-65 than in the under-20 age groups.

But what of the more immediate legacy? Increasingly, members of the baby-boom generation are moving into positions of responsibility in the work force and are making decisions that will determine the quality of life that their children – and they themselves, in their retirement years – will inherit (Chapter 4). They are faced with an enormous stock of public debt, while real interest rates are at all-time highs (Chapter 3). And, if the Council's projected outlook is a guide, they are operating an economy that, while well placed internationally, is growing at only modest rates (Chapters 2 and 3).

The Review acknowledges that this legacy is not entirely reassuring. In the years to come, our political leaders and we as citizens will need foresight and determination if we are to establish a more favourable endowment for our children, grandchildren, and other future Canadians.

\* \* \* \* \*

This 26th Annual Review was prepared under the direction of Robert Jenness, Senior Policy Adviser at the Council, while Ross Preston, Senior Research Director, was responsible for the demographic projections and the medium-term outlook. On behalf of the Council, I wish to acknowledge the depth of their analytical contribution, as well as their careful attention to the views of the Council's members in the lively debates that always shape the messages of the Annual Reviews.

Judith Maxwell  
Chairman



## Legacies

#### READER'S NOTE

The reader should note that various conventional symbols similar to those used by Statistics Canada have been used in the tables:

- . . figures not available
- . . . figures not appropriate or not applicable
- amount too small to be expressed
- nil or zero
- p preliminary figures

Details may not add up to totals because of rounding.

# 1 Leaner Legacies

The toughest decisions for any economic policymaker are not the inescapable ones that have to be made in a crisis. Rather, they are the politically awkward ones that can be fudged until the crisis strikes.

*The Economist*, 1st July 1989

Canadian policy makers today are faced with decisions of both types. There is urgent pressure to address such questions as the deficit of the federal government. There are also a host of issues affecting future generations that will be much easier to resolve if appropriate decisions are made now.

In this Review, we deal with both types of issues. We reflect on the changes that are transforming economic activities worldwide, and we present evidence suggesting that the quality of the legacies – the health of the economy and the natural environment, in particular – that Canadians will leave to future generations may not provide them with the gains in living standards that have been typical of recent decades. But we also discuss the choices that must be made to correct some imbalances *now*, in order to create the proper environment for the longer-term concerns.

As Canadians enter the 1990s, they are caught up in a tide of global economic change. National boundaries are no longer the obstacles to commerce that they once were; more and more, investment and saving decisions are being based on international calculations of comparative advantage, risk avoidance, and profitability. Inevitably, trading nations are being led by the necessities of global commerce to forge new contractual alliances and to abandon old ones. With knowledge, technology, and financial capital internationally mobile, governments are no longer free to pursue domestic economic policies without taking into account international constraints and repercussions. Whether Canadians want it or not, heightened global competition, reinforced by the new scientific and microelectronic processes, is shortening both the lives of products and the processes of production. This has consequences for the jobs and skills that are associated with goods and services. Thus one of the legacies of the 1980s may be that in the future many careers will be based on periodic change, skill renewal, and somewhat heightened job insecurity.

Have these developments increased the growth of worker productivity? Against expectations, they have not. It is a

matter of record that the measured performance of productivity growth throughout the member nations of the Organisation for Economic Co-operation and Development (OECD) has diminished over the past 15 years. Many explanations have been advanced to account for this slowing of growth. Some observers believe a productivity slowdown was perhaps inevitable, as the mature economies operate with equipment and skills at the forefront of technological and scientific knowledge, and as consumer preferences shift from goods to services. At any rate, in the United States – which still leads other nations in overall productivity and per-capita income levels – the annual *growth* in real output per employed worker is running at less than 1 per cent. In Canada, it held at slightly over 2 per cent during the recent cyclical recovery (1983-87), but it is projected to average around 1 per cent or less during the coming years.

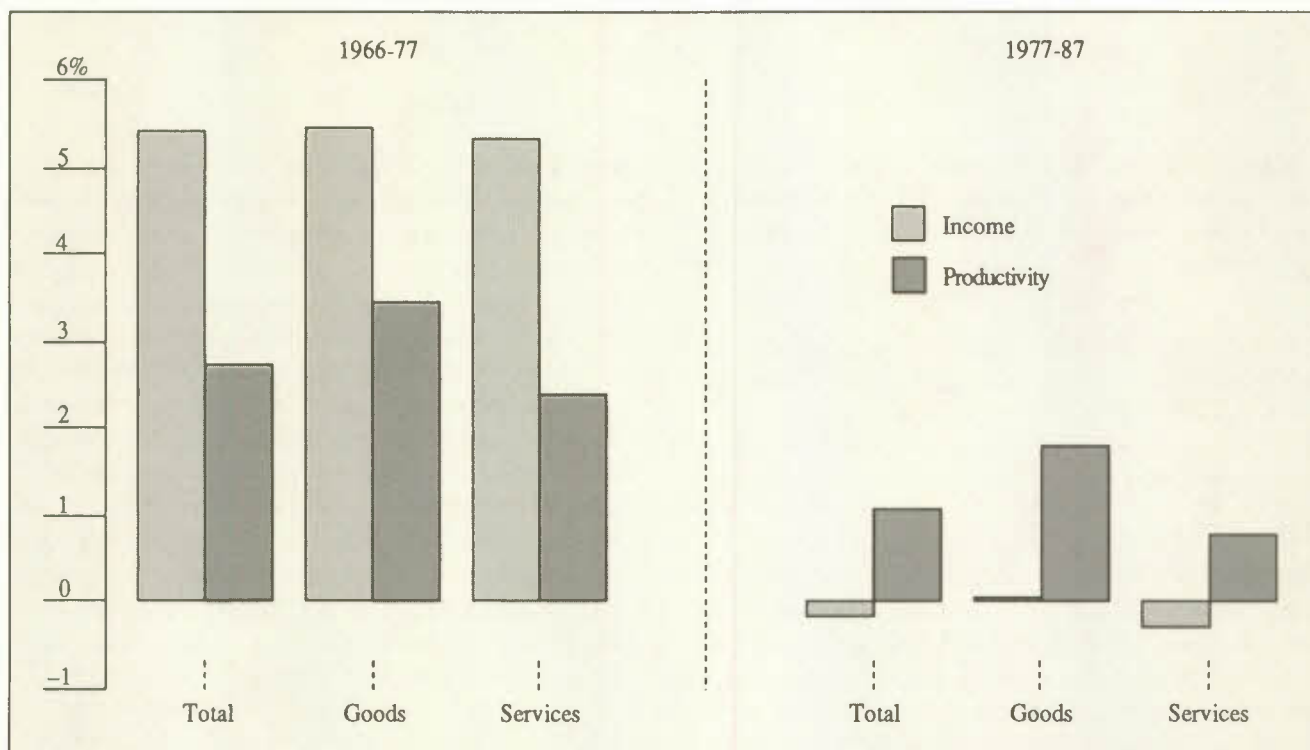
Internationally, the competitiveness of Canada's resource industries (including most of agriculture) remains strong. But of late, the measured productivity growth in manufacturing has slackened. And overall, the weakening of productivity growth is limiting the increases in living standards of working Canadians and restricting the ability of governments to address problems of regional imbalance and social concern (Chart 1-1).

Turning to Canada's internal affairs, we focus this year on issues of equity between generations. Generally speaking, our parents were much better off than their parents when they retired. Today, however, unless Canada's economic performance greatly improves, our children can expect only modest improvement over our own situation when they retire, even though as husband and wife they may have worked full-time for much of their lives. Indeed, at the same age juncture during their lives, many may be worse off than their parents. Their resulting disappointment may provoke new social issues and add new claims against governments, as well as raise new issues in labour-management relations.

Of course, issues of equity between generations – or indeed within generations – are of concern with or without high rates of productivity growth. With solid growth, it is easier for governments and citizens to respond to competing claims for shares of the nation's wealth, but even then there is no certainty that such demands will be met.

Chart 1-1

## Average Annual Growth in Real Labour Income and Productivity, Canada, 1966-87



SOURCE Estimates by the Economic Council of Canada, based on data from Statistics Canada.

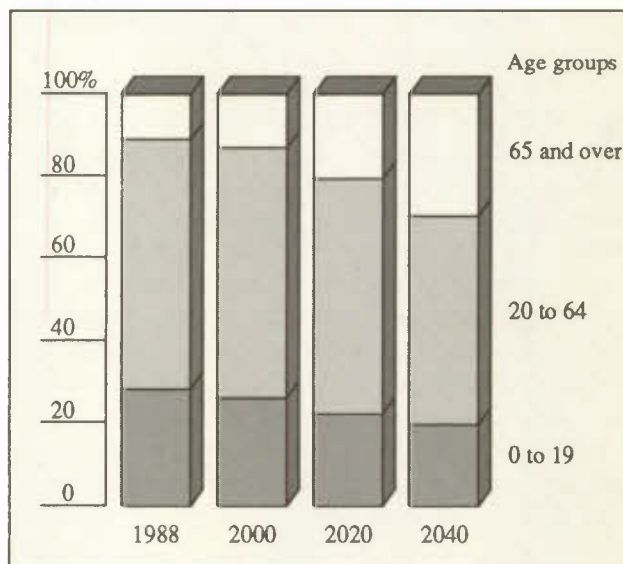
A complicating factor will be the aging of the Canadian population. Whereas persons aged 65 years and over account for 11 per cent of the population today, that proportion will have risen to 21 per cent three decades hence and to 30 per cent by 2040, unless there are very dramatic changes to immigration policy (Chart 1-2).

Equally significant, assuming no large increase in fertility rates, the proportion of the population of working age will fall rapidly once the generation born during the postwar "baby boom" begins to retire. The question then arises whether those working-age Canadians of the future, who will make up a smaller share of the total population, will be able, or willing, to provide for the pension, health care, and other needs of a proportionately large elderly population. The answer will depend, to a considerable extent, on the strength of annual productivity and real income growth over the next few decades.

As well as the financial legacy, there are deepening concerns about the state of the environment that we will leave to our children and grandchildren. While Canadians have long depended on the country's endowment of natural re-

Chart 1-2

## Distribution of Population by Age Group, Canada, 1988-2040



SOURCE Estimates by the Economic Council of Canada.



sources for much of their well-being, they now recognize that there are no substitutes for clean air, clean water, or the tranquility of nature. In this as in so many other issues, governments, business, and individual Canadians all share a responsibility to manage the natural heritage and preserve it in as pristine a condition as possible.

Politically, these areas may not lend themselves to easy decisions, since they have a bearing on such issues as individual versus government responsibilities and the competing claims of different generations. There is a qualification, however. As Chart 1-2 shows, the proportion of working Canadians is expected to shrink very little over the next 30 years, and indeed their absolute numbers are likely to increase. Most of those who will be retiring around the year 2020 are starting their careers today. Thus there is time for them, individually and collectively, to address their future needs by making informed decisions that will maintain environmental quality, increase their savings, and improve the framework for their health, home, and institutional care in later years. By facing up now to impending demographic realities, Canadians have the chance to make reasonable choices without having to resort to crisis management later. These choices will be more or less difficult, depending on how favourable is the economy's performance, and how

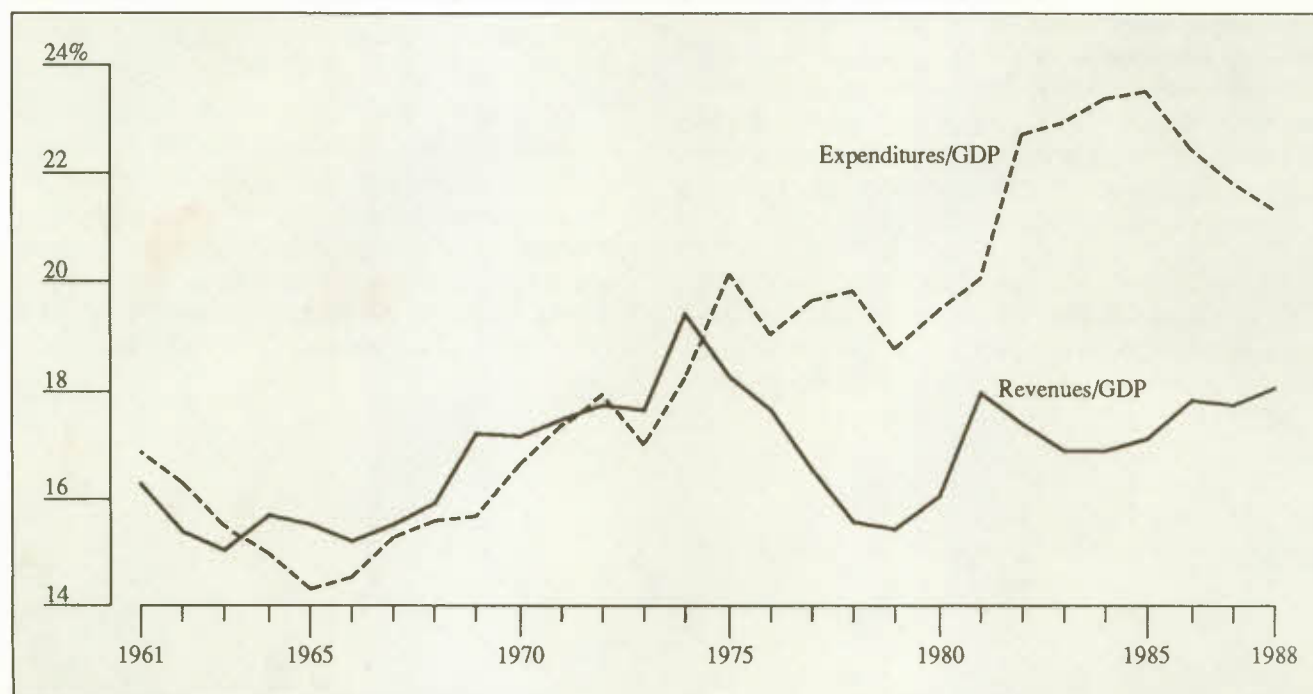
prudently the federal and provincial governments address their spending and taxing responsibilities.

In last year's Review,<sup>1</sup> we pointed out the need for the federal government to change its mix of fiscal and monetary policies. The imbalance of spending over revenues, which began in 1975, has persisted since and has had increasingly harmful effects on the economy (Chart 1-3). The persistence of the deficit, through good years and bad, is a prime example of the reluctance of governments to address seriously an awkward political problem until it assumes crisis proportions – in the event, until the cost of servicing the debt load had risen to such a level that it was pre-empting a huge and rising proportion of federal revenues (Chart 1-4). Never before in the modern era has the interest on Canada's federal debt taken up 30 per cent of federal revenues – not even after the Second World War, when the federal debt was actually greater than the annual GDP. Never has debt servicing so cut into federal expenditures as to virtually eliminate any room to initiate new programs or expand existing ones in response to the needs of Canadians in the various parts of the country.

Thus, as we enter the 1990s, the Council focuses its concerns on the following points:

Chart 1-3

Federal Government Revenues and Expenditures<sup>1</sup> as a Proportion of GDP, Canada, 1961-87

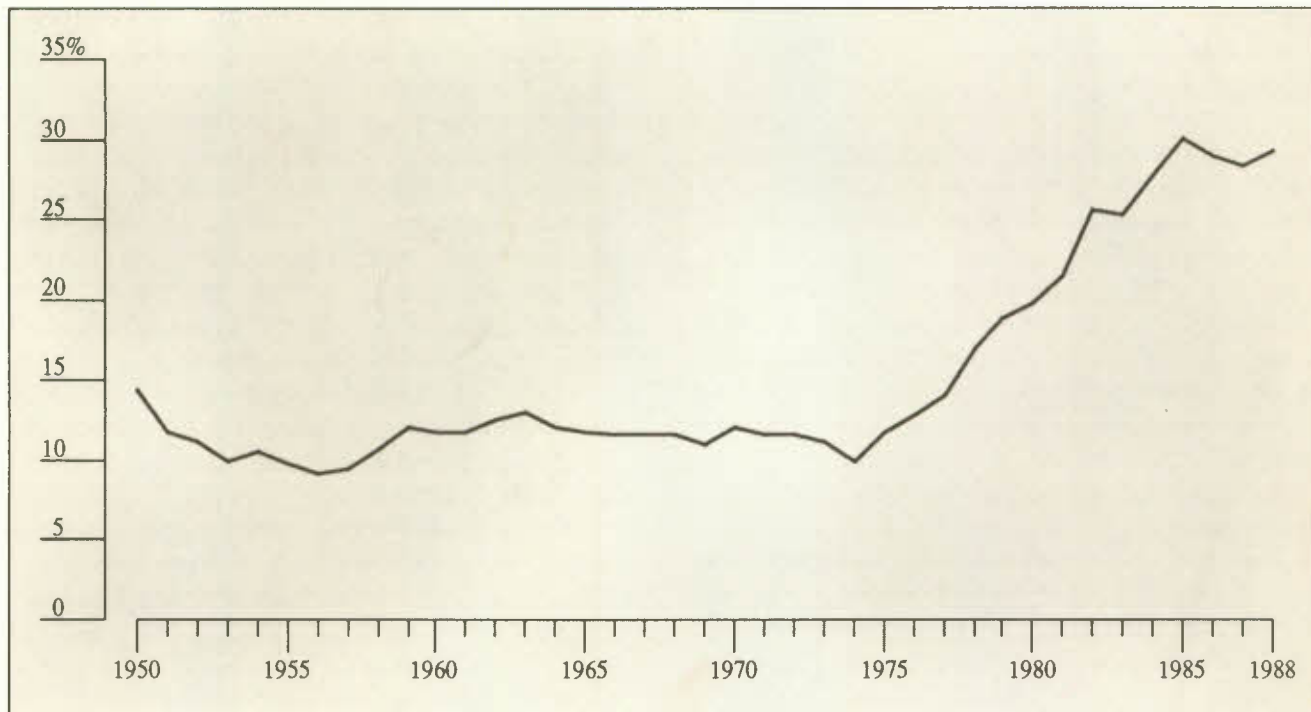


1 Expenditures include current spending and investment.

SOURCE Estimates by the Economic Council of Canada, based on data from National Accounts.

Chart 1-4

## Interest Payments as a Proportion of Federal Revenues, Canada, 1950-88



SOURCE Estimates by the Economic Council of Canada, based on data from Statistics Canada (CANSIM database).

- The restoration of the federal government's fiscal balance. This will foster a macroeconomic environment that, together with measures that the government has introduced to promote competition, should enable market prices to function more efficiently and should encourage a favourable business response to the opportunities inherent in the Canada-U.S. Free-Trade Agreement and in the Uruguay Round of negotiations within the framework of the General Agreement on Tariffs and Trade (GATT).

- The apparent devolution of the labour market into two segments – one consisting of well-paying, relatively secure, knowledge-based jobs; and one made up of low-paying,

insecure, or "dead-end" jobs that offer little prospect for material or career advancement.

- The need to anticipate, and prepare for, the longer-range measures for an aging population and for the preservation of environmental quality.

Above all, our research underlines the need to raise the rate of productivity growth in all sectors of the economy – public and private – in ways that will contribute to rising real incomes, regional balance, and full employment. In the absence of new initiatives that will improve economic performance, we run the risk of leaving our children leaner legacies than those which we received from our own forefathers.

## 2 Canada and the Changing World Economy

In last year's Review, we pointed out three major issues in the world economy that would carry over from the 1980s to the next decade: trade imbalances, as epitomized by the presence of huge current-account deficits in the United States and large surpluses in Japan and West Germany; the shortfall of savings in the United States, combined with the U.S. government's budgetary deficit, which, given that nation's importance in world financial markets, has resulted in very high interest rates; and the plight of Third World countries saddled with massive debt loads, where even the interest payments, not to mention the debt itself, are effectively lowering their living standards.

### Recent International Developments

Since the publication of the 25th Annual Review, the good news is that there has been some progress: U.S. exports have increased; the U.S. federal deficit has declined; and the voluntary-debt-reduction strategy urged by U.S. Treasury Secretary Nicholas Brady has been given new momentum by the agreement reached earlier this year by Mexico and its 15 main creditor banks. The bad news is that progress has been limited – more sideways than forward. The current-account imbalances are still huge; the reductions in the U.S. federal deficit have been more “cosmetic” than real; the Third World's debt load is still compounding; and there has not been a great deal of support so far for the Brady plan – which stresses loan forgiveness and interest-rate cuts – from the commercial banks, which hold about 60 per cent of the debt of the major indebted countries.

What is perhaps the most remarkable legacy of the 1980s is the transformation of the United States from being the world's major lender nation to being its major debtor. The United States remains the most important player in the world economy, and its multinationals are active investors in Asia and Europe; but whereas in the years 1975 to 1980 the United States was the source of 42 per cent of all foreign direct investment, over the period 1981-85 that proportion had dwindled to 19 per cent – less than that of the United Kingdom. The net investment flows embodying U.S. knowledge, technology, and financial capital that fuelled the postwar recoveries of Japan and Europe – even provoking the national reactions articulated in Jean-Jacques

Servan-Schreiber's book *Le défi américain*<sup>1</sup> – have reversed themselves. The United States is now the recipient of net capital transfers, with Europe and Japan as the main sources of funds.

The larger part of capital inflows into the United States has been invested in debt instruments. Through joint ventures, acquisitions, mergers, and other direct initiatives, however, foreign multinationals have also been increasing their equity holdings in the United States. In 1988, for example, new inflows of foreign direct investment into the United States totalled US\$65 billion; of this amount, \$10 billion was from Canada. The most publicized foreign investments have been those by the Japanese in U.S. automobile production, but in fact most of the recent foreign direct investment in the United States has been in chemicals, pharmaceuticals, financial services, publishing, and advertising. U.S. multinational firms, on the other hand, have been retrenching into the home market in order to revitalize their activities and thereby strengthen their capacity to export abroad and to meet import competition at home.

This year, the United States is expected to have a current-account deficit of about US\$120 billion; and federal spending still exceeds federal revenues by more than US\$140 billion. Without substantial tax increases or expenditure cuts, on the one hand, and without a further devaluation of the U.S. dollar against the yen and European currencies, on the other, little improvement can be expected to occur in those two areas. While most observers expect progress on the federal deficit, all of the world modelling systems used to study the question of trade imbalances – including those of the OECD, the International Monetary Fund (IMF), and the World Bank – show the intractability of the current-account deficit of the United States. This means that the United States will likely remain a capital importer throughout the 1990s, drawing primarily on Japanese and European savings to cover its external deficit. Not only are relatively high real interest rates likely to result in the United States, but given that country's weight in international markets, upward pressure on nominal interest rates is likely to occur in other deficit countries (such as Canada) that rely on foreign capital inflows and have little choice but to compete for funds at the world rate. Clearly, these factors will have an impact on the conduct of economic policy in Canada.



The problems of the developing countries have proved to be no less intractable. Their share of world trade has actually dropped from 28 to 20 per cent since 1981 – an indication that they have not participated in the global economic expansion of the 1980s. This is the result in part of weak commodity prices and in part of the heavy debt burden of those countries. The situation of the African countries has deteriorated, while the Latin American countries are still struggling to meet their interest payments and to reduce their debt through a variety of schemes, including debt-for-equity swaps and debt rescheduling. The problems of Third World countries are compounded by extreme inequalities of income, rapidly rising populations, and the fragility of their own political systems.

Particularly in Latin America, inflation, currency devaluations, and a host of domestic complications have diminished the potential profitability of investments in domestic economies relative to more promising alternatives in the industrialized world. As a consequence, the flow of new private investment funds has virtually dried up. The result is a vicious circle: the lack of foreign investment impedes the importation of new machinery and equipment, thereby inhibiting domestic economic growth and the stimulation of exports needed to provide the earnings to service the debt. Indeed, as a result of the large interest payments that they must make on their debt and of a massive flight of capital, the developing countries are now transferring net financial resources to the developed nations.

One slim ray of hope lies in the approach adopted in the recent U.S.-Mexico debt-relief agreement, which may be expanded to other heavily indebted nations. That agreement, while offering relatively modest relief, is important in that it is the first one in which commercial banks have consented to provide outright debt forgiveness on at least a portion of their loans.

There are grounds for greater optimism on other international fronts. The expansion in Europe appears to be picking up speed, driven by very high levels of investment spending that may well be in anticipation of the economic and institutional integration that will occur in the European Community after 1992.

In Asia, the economies of the Pacific basin are currently booming. Over the past decade, several of these countries have generated productivity growth rates in manufacturing twice as high as OECD rates – or even higher than that – thanks in part to Japanese investment, technological know-how, and subcontracting arrangements. Their combined population (excluding China) is about half a billion people; their citizens are young, and with rising incomes they con-

stitute a market of increasing global importance. They are becoming adept at producing electronic components, autos and parts, and other higher-value-added goods that effectively compete with those of the more advanced industrial countries. The Uruguay Round of negotiations under the General Agreement on Tariffs and Trade (GATT) will prove to be yet another step in the emergence of these nations as significant partners on the world trading stage.

Table 2-1 shows the changes in the structure of exports of some of the Asian countries between 1965 and 1986; there have been major increases in manufacturing exports as a proportion of all merchandise exports, and there has been a major shift towards high-value-added machinery and equipment exports and away from lower-value textiles and clothing. The shift towards higher-value-added production and trade has enabled the Asian countries to improve their productivity, economic growth, and real incomes.

These countries have also made great strides in the trade in high-technology products. Since 1971, the share of world exports of high-tech products commanded by Japan has grown from 8 per cent to almost 18 per cent (Table 2-2). At the same time, the newly industrialized countries (NICs) of Asia have increased their share from 1.5 per cent to over 8 per cent. The United States and Europe were the major losers; Canada, never a major player in this market, has had difficulty holding its ground.

What is extraordinary about the progress of the Pacific Rim countries is how much of it is internally driven. Most of them have very high rates of domestic savings; they save and invest proportionately more than Canada or the United States (Table 2-3). In addition, their share of global foreign direct-investment inflows rose from 6 per cent in the late 1970s to 10 per cent in the period 1981-85 (Table 2-4).

## The Macroeconomic Framework

In a recent statement entitled *A New Frontier*, we reported on the remarkable increase in financial intermediation worldwide.<sup>2</sup> In 1988 alone, Canadians sold over 70 billion dollars' worth of Canadian bonds abroad and purchased \$33 billion in foreign bonds. This is part of a general trend towards the globalization of financial transactions, as more and more lenders and borrowers turn to international markets to buy and sell financial services. This worldwide mobility of capital tends to narrow the spreads in nominal interest rates between countries and, as a result, has an impact on the ability of central banks to exercise truly independent national monetary policies. The value of these

Table 2-1

## Structure of Merchandise Exports, Selected Countries, 1965 and 1986

	1965			1986		
	Manufacturing exports (as a proportion of total merchandise exports)	Textiles and clothing (as a proportion of total manufacturing exports)	Machinery and transportation equipment (as a proportion of total manufacturing exports)	Manufacturing exports (as a proportion of total merchandise exports)	Textiles and clothing (as a proportion of total manufacturing exports)	Machinery and transportation equipment (as a proportion of total manufacturing exports)
	(Per cent)					
Canada	36.7	2.7	40.9	59.3	1.7	70.8
United States	64.8	4.6	57.1	74.9	2.7	64.1
Japan	91.2	18.7	34.0	96.7	3.1	66.2
Hong Kong	87.1	49.4	6.9	92.1	38.0	22.8
Singapore	34.5	17.4	31.9	65.2	7.7	58.3
South Korea	59.4	45.4	5.0	92.0	27.2	35.9
Thailand	4.8	—	—	44.8	33.4	20.1
Malaysia	6.1	—	33.0	35.9	10.4*	72.5
Indonesia	3.8	—	78.7	20.0	20.0	15.0
Philippines	5.4	18.5	—	58.9	11.9	10.2
China	..	..	..	64.2	37.4	24.9
India	49.1	73.3	2.0	61.6	29.2	16.2

\*1985.

SOURCE Based on data from *World Development Report, 1987 and 1988*, and on United Nations, *1982 Yearbook of International Trade Statistics*, New York, 1984.

Table 2-2

Shares of High-Technology Products in World Exports,<sup>1</sup> by Trading Country or Area, 1971-86

	1971	1975	1981	1986
	(Per cent)			
Canada	3.5	2.3	2.7	2.6
United States	26.5	24.6	23.6	19.7
Japan	8.0	8.1	14.0	17.6
European Community	46.6	48.0	38.9	37.7
European Free Trade Area <sup>2</sup>	8.7	8.9	6.4	6.5
Asian NICs <sup>3</sup>	1.5	3.0	6.1	8.3

1 High-technology products include those manufactured goods which are generally characterized by highly R&D-intensive production processes. The classification of high technology used here excludes passenger motor cars (SITC 781) and vehicles for transport of goods (SITC 7821).

2 Austria, Finland, Iceland, Norway, Sweden, and Switzerland.

3 Includes South Korea, Taiwan, Hong Kong, and Singapore.

SOURCE Estimates by the Economic Council of Canada, based on data derived from the Statistics Canada World Trade Data Base.

gross capital movements now significantly exceeds that of transactions associated with trade in goods and services; these capital flows inevitably put upward or downward pressures on exchange rates, thereby altering the relative price competitiveness of exports of different trading nations.

In a closed economy, governments and central banks can effectively use fiscal and monetary policies so as to alter domestic prices and rates of return as a means of increasing output and employment. But as economies become more open and interdependent, the options available to governments in these matters become more limited. While large countries have more discretion over monetary and fiscal policies than do smaller nations, even the United States and West Germany now find that their margin for manoeuvre in those areas is somewhat constrained. The West German government, for example, recently decided to withdraw a 10-per-cent withholding tax on interest and dividends introduced in January 1989 because so much capital left the country to avoid the tax. (Most of the capital probably went

to the foreign branches of West German financial institutions.) Canada, being smaller and closely tied to U.S. markets, finds that its monetary stance cannot depart far from that of its neighbour without the consequences showing up in exchange-rate differentials that, in turn, affect relative prices, output, and employment.

In Canada also, the persistence and size of the federal deficit have complicated the conduct of economic policy. That the deficit persists after seven years of relatively strong economic growth is worrisome, since that suggests that much of it is structural. In addition, the very size of the deficit in an economy that is operating at close to full manufacturing capacity puts the burden of containing domestic inflation squarely on monetary policy. We shall examine the question of the deficit and its impact on policy in greater detail in Chapter 3.

A related, and perhaps more serious, long-term concern is the legacy of foreign debt that we are building up as a consequence of continuing large government deficits. While less than 4 per cent of federal debt is made up of foreign liabilities – a figure far below that for provincial and municipal governments and utilities (Chart 2-1) – the large federal draw on domestic savings, together with very high domestic interest rates, is causing private borrowers to look outside Canada, thereby contributing to Canada's foreign-debt load. Future Canadians will need to allocate a growing proportion of their export earnings to service and ultimately to repay that debt.<sup>3</sup> Commitments that are being incurred for ongoing payments to foreigners will reduce the income and the consumption opportunities of future generations.

Part of the problem is that in periods of high capacity utilization, public borrowing competes with private invest-

Table 2-3

## Saving and Investment in Selected Countries, 1970-86

	Gross domestic savings <sup>1</sup>			Gross domestic investment <sup>1</sup>			Average annual growth rate of gross domestic investment	
	1970	1980	1986	1970	1980	1986	1970-80	1980-86
	(Per cent)							
Canada	20.8	23.4	20.4	21.6	23.4	20.6	4.2	1.6
United States	18.2	18.4	15.0	17.8	18.9	18.3	1.6	5.6
China	29.2	28.7	36.0	29.2	30.0	38.8	6.8	19.3
Japan	40.3	31.3	32.3	39.0	32.2	28.2	3.2	3.2
Newly industrialized countries								
South Korea	15.0	23.3	35.0	24.7	31.1	29.2	13.4	9.6
Taiwan	25.6	33.1	37.1	25.7	34.3	16.2	..	..
Hong Kong	25.0	31.4	27.9	21.4	36.0	23.3	12.7	-0.6
Singapore	18.4	37.5	38.7	38.7	46.3	38.2	6.7	3.3
ASEAN <sup>2</sup> members								
Indonesia	13.9	37.1	24.9	15.8	24.3	24.6	14.4	3.7
Malaysia	26.6	32.9	31.5	22.4	30.4	25.1	10.3	0.8
Philippines	20.9	25.0	19.1	21.2	30.7	12.9	10.5	-17.6
Thailand	21.2	20.1	24.5	25.6	26.4	22.4	7.7	0.8

1 As a proportion of GDP.

2 Association of South-East Asian Nations.

SOURCE World Bank, *World Development Report, 1982 and 1988* (New York: Oxford University Press, 1982 and 1988); World Bank, "Selected economic indicators, 1967-1988," Washington, D.C., 1988; and Statistics Canada, *National Accounts*, various years.



Table 2-4

**Distribution of Foreign Direct-Investment Inflows by Major Region, 1975-85**

	Annual averages	
	1975-80	1981-85
	(Per cent)	
Developed market economies	76.6	75.2
United States	24.6	39.2
Western Europe	43.3	30.4
Japan	0.3	0.6
Other	8.4	4.5
Developing countries	23.4	24.8
Africa	2.5	3.3
Latin America and the Caribbean	12.5	10.5
Western Asia	1.9	0.8
Other Asia and Oceania	6.2	9.9
Southern Europe	0.3	0.4
World <sup>1</sup>	100.0	100.0
	(Billions of dollars)	
	32.1	48.7

1 Excluding the centrally planned economies of Europe.

SOURCE United Nations Centre on Transnational Corporations, *Transnational Corporations in World Development: Trends and Prospects* (New York, 1988).

ment for domestic savings. Net household savings in Canada have dropped as a proportion of disposable household income from a peak of over 17 per cent in 1982 to 9 per cent in 1988. The consumption expenditures of households and governments have risen, while corporate savings have remained relatively stable. To make up for the short-fall of domestic savings, Canadians have increased their borrowing abroad. Canada's foreign borrowing amounted to 2.5 per cent of GDP in 1988, bringing the net foreign debt to \$228 billion. The net foreign debt grew from 29.4 per cent of GDP in the mid-1970s to 38.1 per cent of GDP in 1988, and net interest payments to foreigners increased from 6 to 11 per cent of export earnings.

In last year's Review, we noted:

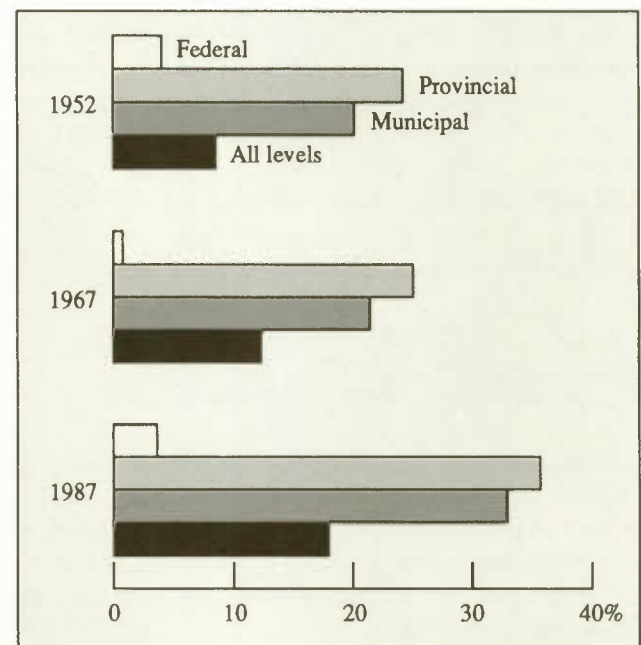
... it is very risky to finance growing public consumption through net foreign borrowings, for two reasons: the build-up in debt-servicing costs makes Canada very vulnerable to an upswing in interest rates; and the diversion of future incomes to pay interest to non-residents reduces the incomes available to Canadians. The way to avoid these costs is to reduce the

federal deficit, but it must be done in a way that will keep the economy growing, since any slump in activity will lead to a greater deficit and more debt.<sup>4</sup>

Another consideration is that, as stated above, the continuing deficits of the federal government after seven years of growth have placed the full burden of resisting inflation on monetary policy. And given the need to forestall rising inflation, this has resulted in Canadian interest-rate premiums over U.S. rates reaching record highs. High rates of interest have had a deterrent effect on private investment. Despite the revival in the past two years, private investment has yet to reach the share of GDP attained prior to the 1981-82 recession. In addition, public-sector investment as a proportion of GDP has been falling since the mid-1960s.

The ultimate effect of these high interest rates has been to encourage capital inflows, which in turn have increased the value of the Canadian dollar against the U.S. dollar. If the higher exchange rate genuinely reflected relative improvements in Canada's productivity, it would be welcome since it would lower inflation and effectively increase incomes through lower import prices. But when higher exchange

Chart 2-1

**Foreign Debt as a Proportion of Total Debt, by Level of Government, Canada, 1952, 1967, and 1987<sup>1</sup>**

1 The 1987 data for municipal debt are preliminary estimates.

SOURCE Based on data from the Bank of Canada.

rates reflect monetary tightness that is made necessary by fiscal imbalances, then the outcome is more questionable. The higher exchange rates are likely to put Canadian export sales to the United States at risk, especially if the U.S. economy should enter a period of significant economic slowdown.

Even though Canada has benefited from the globalization of capital markets and the recovery of world trade, federal fiscal imprudence has introduced distortions into the Canadian economy that are harmful to the country's long-run commercial competitiveness. The manner in which these distortions are taking place is different from the situation in the early and mid-1970s. In the earlier period, the world was awash in OPEC petrodollars, and the failure to control inflation was accompanied by low or negative real interest rates and rising real wages, while productivity growth stagnated and unemployment rates grew. In the 1980s, there has been a reversal in the flow of savings from developed to developing countries, and the failure of governments in the United States and Canada to exercise fiscal prudence has been accompanied by record high real interest rates, stagnancy in real wages, and increased foreign debt. Unemployment has fallen in recent years, but in virtually all but Canada's central provinces the rates remain higher than prior to the 1981-82 recession; and productivity growth is much lower than it was in the 1960s and early 1970s.

In essence, as in the United States, Canada's present mix of monetary and fiscal policies has effectively raised the price of capital relative to labour and encouraged more labour-intensive service activities, which in central Canada have been the driving force behind the country's record employment growth. It has also deterred at least some of the new investment needed to modernize various sectors of Canadian industry and contributed to the build-up of foreign indebtedness. The downward trend in the ratio of net wealth to GDP suggests that Canadians have been building more liabilities than assets in the 1980s.

## Canadian Industrial Competitiveness

For a medium-sized open economy such as Canada's, trade is vital to continued prosperity. Canada exports around 34 per cent of what it produces, and it imports a corresponding proportion of what it consumes. Looking to the years ahead, the potential challenges and opportunities are daunting. The implementation of the Canada-U.S. Free-Trade Agreement, the integration of the European Economic Community after 1992, and the emerging markets of the Pacific Rim offer important trade and investment prospects

for Canadian businesses, but these developments will also test their mettle.

Canada has traditionally been a major exporter of primary resources – wheat, energy, lumber, pulp and paper, metals, and chemicals – and it still is. In 1988, these items accounted for over half of Canada's merchandise exports; motor vehicles and parts accounted for 20 per cent; and the rest consisted of other manufactured goods. But the volume of exports of manufactures other than automotive products doubled between 1980 and 1988. The surge in exports of communications and electrical machinery means that "other manufactures" now account for 21 per cent of total exports, in real terms (Table 2-5).

Spurred by new domestic and foreign investments and by the prospects for freer North American and global trade, parts of Canadian industry are transforming themselves into true players in international markets. This transformation embraces such widely disparate sectors as power-generating

Table 2-5

### Change in the Volume Composition of Canadian Exports, 1980-88

	Distribution	
	1980	1988
	(Per cent)	
Food	12.5	9.8
Energy materials <sup>1</sup>	15.2	18.4
Lumber and sawmill	5.0	4.2
Pulp and paper	11.5	7.8
Other metals and minerals	17.3	12.8
Chemicals and fertilizers	5.6	5.5
Motor vehicles and parts	14.8	20.0
Other manufactured goods <sup>2</sup>	18.0	21.6
	100.0	100.0
	(Billions of 1981 dollars)	
Total volume of exports <sup>3</sup>	81.5	137.0

1 Includes crude petroleum, natural gas, and other energy products.

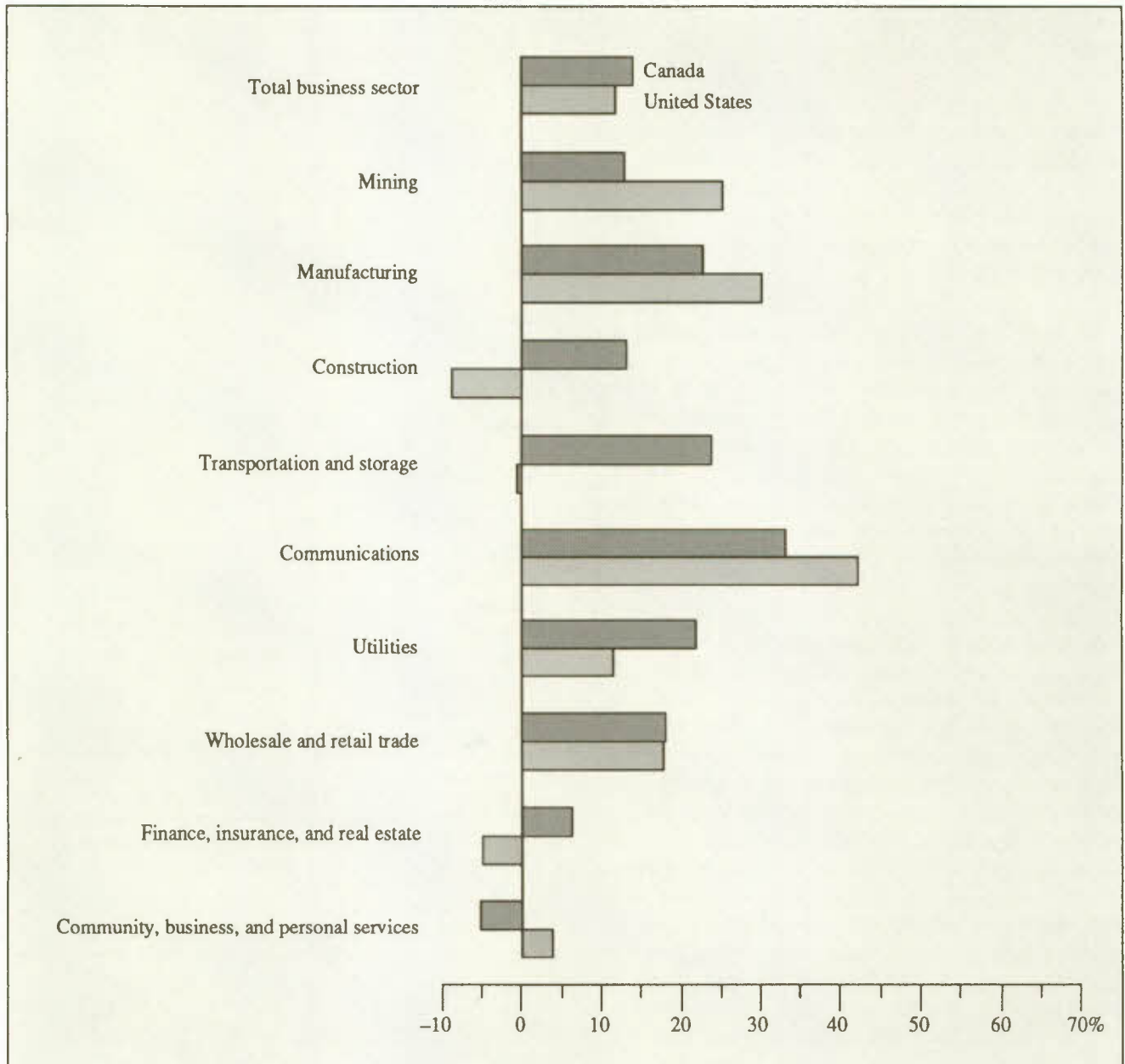
2 Includes aircraft and parts, other transportation equipment, agricultural and industrial machinery, communication and electrical equipment, and other consumer and industrial goods. The largest increase in volume of exports was observed in communication and electrical equipment.

3 Excludes unallocated balance-of-payments adjustments plus special transactions, trade.

SOURCE Estimates by the Economic Council of Canada, based on data from the *Bank of Canada Review* (July 1989) and from Statistics Canada, CANSIM data bank.

Chart 2-2

## Changes in Output per Person-Hour, by Industry, Canada and United States, 1980-87



SOURCE Estimates by the Economic Council of Canada, based on data from Statistics Canada and from the U.S. Bureau of Labor Statistics.

equipment, telecommunications, engineering consultants, and the real estate industry. And it is not confined to multinational corporations: some small and medium-sized firms are also active in the international market. In addition, European and Asian investors have already spent considerable amounts of capital in Canada, with an eye to producing for the whole North American market.

Canada's commitment to the free-trade agreement with the United States is expected to give greater momentum to the adaptation of Canadian industry to the changing world economy. This country's reliance on the U.S. market for its exports has increased since the mid-1970s, as the share of that market has grown from about two thirds to about three quarters. And Canadian exports account for 20 per cent of



U.S. imports. This mutual reliance is likely to be strengthened with the progressive implementation of the trade agreement, enabling Canadian firms to invest and modernize their production facilities in order to serve the wider market.

Of all the major countries, Canada's overall levels of productivity and per-capita income are closest to those in the United States – which, it is generally conceded, still leads the world – although in manufacturing we have a legacy of suboptimal plants and our productivity levels, measured at the industry level, are considerably below those in the United States.

But in other sectors and activities, Canadian productivity growth rates have exceeded those in the United States. According to figures compiled by Statistics Canada and the U.S. Bureau of Labor Statistics, this is especially evident in transportation and storage, utilities, construction, and finance, insurance, and real estate over the period 1980-87 (Chart 2-2). Since all of these industries produce important inputs to manufacturing and resource production, their strong productivity growth gives a boost to Canada's competitiveness.

Although Canada traditionally has had a comparative advantage in resource-based products in international trade, an important long-range question is whether we are also developing an advantage for other higher-value-added products, including skill-intensive services and high-technology manufactures. Most of the commodities in which Canada has the greatest export strength still belong to the resource sector – farm products, minerals, forest products, energy, and so on. This was true in 1971 and remains true today, as shown in Table 2-6. It is obvious that Canada's superior comparative advantage lies in such resource-based products as wood, pulp and paper, paperboard, cereals, minerals, metal ores, nonferrous metals, coal, natural gas, electricity, and so on. There are, of course, a few manufacturing exports in which Canada is also strong – motor vehicles, electrical machinery, telecommunications equipment, and a growing number of specialized parts and products, in particular.

Chart 2-3 compares the manufacturing productivity levels of six industrial countries with that of the United States over the period 1951-87. Not only does Canada's manufacturing productivity still lag substantially behind that of its neighbour, but it has been surpassed by those of West Germany, France, and Italy in the 1980s; and those countries continue to gain ground. Japanese manufacturing has dramatically improved its relative standing since 1951. Because its annual growth has consistently outperformed that of all the

Table 2-6

### Ranking of Commodity Groups by Their Comparative Advantage,<sup>1</sup> Canada, 1971 and 1986

	Rank		Canadian exports in 1986 (Billions of U.S. dollars)
	1986	1971	
Pulp and paper	1	1	3.3
Wood and cork	2	5	4.3
Electric current	3	7	0.9
Paper and paperboard	4	3	5.9
Crude fertilizers and minerals	5	11	1.5
Motor vehicles	6	8	26.3
Metal ores	7	4	2.8
Cereals	8	10	3.1
Fertilizers (manufactured)	9	6	0.9
Nonferrous metals	10	9	3.6
Coal, coke, and briquettes	11	32	1.6
Fish	12	12	1.9
Natural gas	13	2	2.5
Manufactured wood products	14	15	0.7
Oilseeds	15	14	0.6
Inorganic chemicals	16	17	1.3
Power-generating machinery/equipment	17	13	2.7

1 The Balassa method has been used to estimate revealed comparative advantage. This method measures comparative advantage as the ratio of Canada's export share in a commodity at the world level to Canada's aggregate share of exports in total world exports. If the ratio is greater than 1, Canada has a comparative advantage; if the ratio is lower than 1, Canada does not have a comparative advantage.

SOURCE Estimates by the Economic Council of Canada, based on data derived from the Statistics Canada World Trade Data Base.

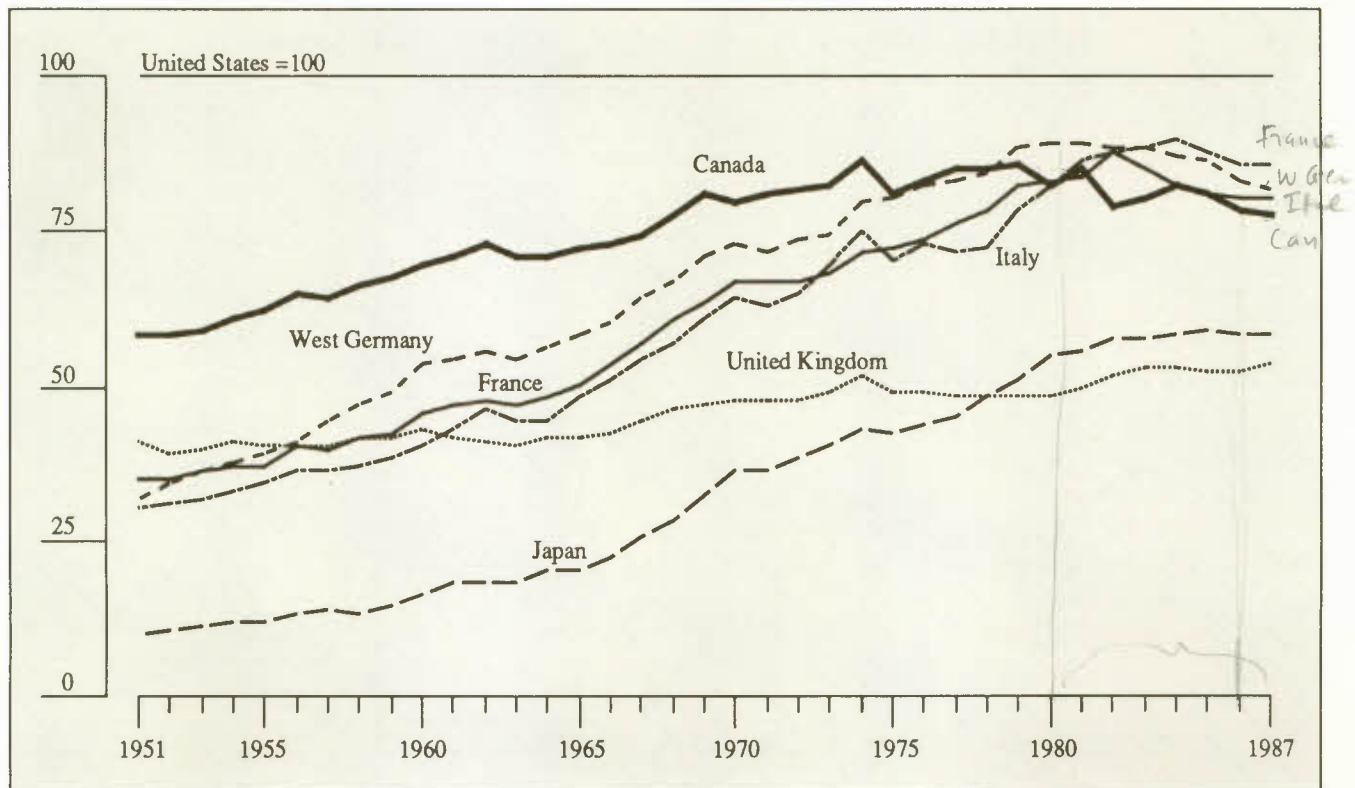
other G-7 countries, its relative productivity level has been rapidly catching up to the levels recorded by Canada and the others.<sup>5</sup> This suggests that Canada is adapting more slowly than its trading partners to the new international environment.

Productivity levels determine a nation's well-being and the incomes of its citizens, but they are not the only determinant of international cost competitiveness. The net impact of changes in productivity, hourly compensation, and the exchange rate on the export prices of individually traded goods and services also plays an important role, as do such qualitative factors as marketing skills and customer



Chart 2-3

Level of Labour Productivity in Manufacturing (Output per Hour) in Selected Countries Relative to That of the United States, 1951-87



SOURCE Estimates by the Economic Council of Canada, based on data from Statistics Canada and from the U.S. Bureau of Labor Statistics.

services. International cost competitiveness is often measured in terms of unit labour costs, expressed in a common currency. By this measure, how do Canadian manufacturers, taken as a whole, compare with their main competitors?

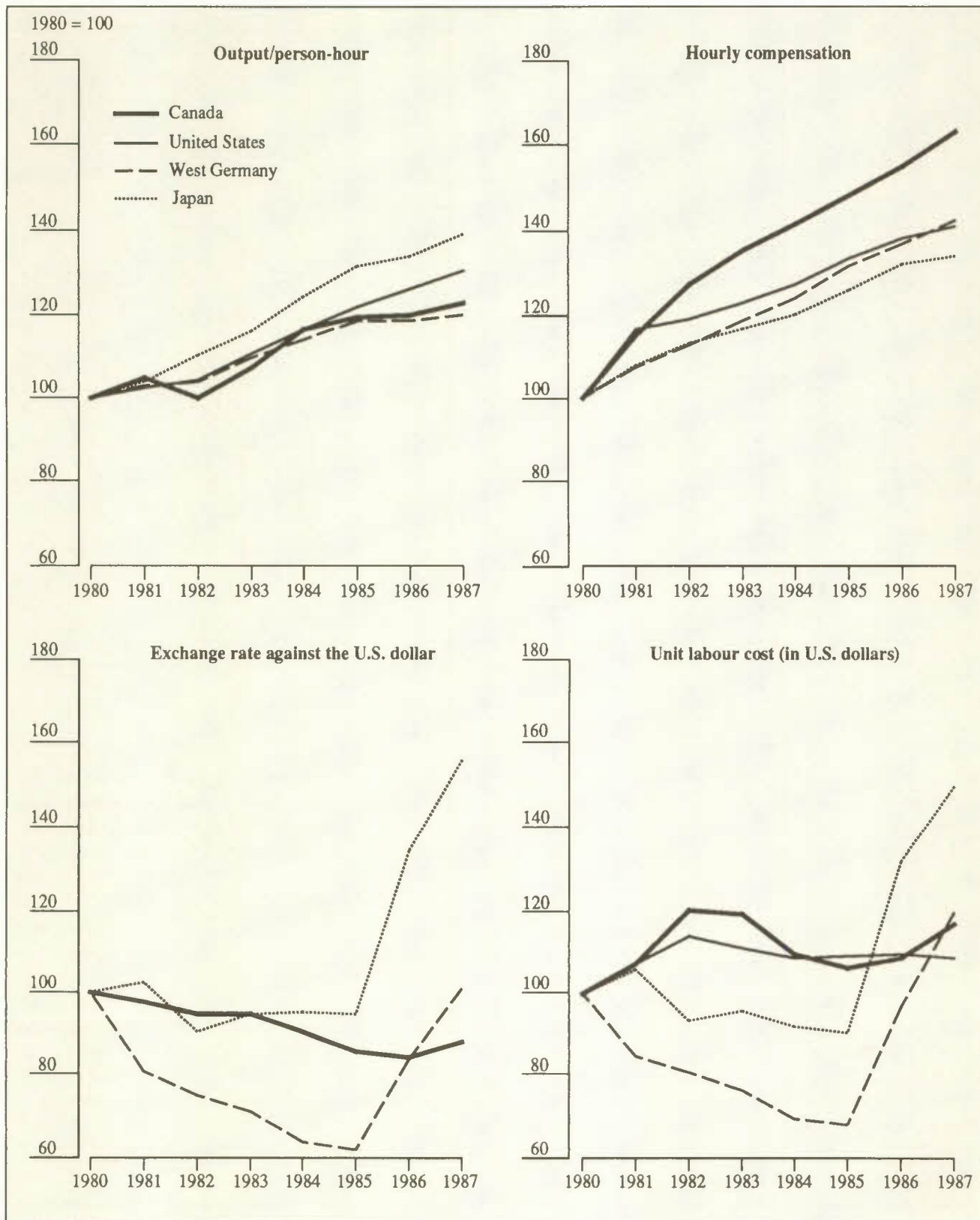
From 1980 to 1985, a steady depreciation of the Canadian dollar significantly improved the cost competitiveness of Canadian manufacturers vis-à-vis their American counterparts, despite a slower rate of growth in productivity. But since then, the relative cost position of Canadian manufacturing has deteriorated, partly as a result of slower productivity growth and of faster increases in hourly compensation, but mostly because of the appreciation of the Canadian dollar to US\$0.84. At the same time, Canada's cost position vis-à-vis Europe and Japan has improved (Chart 2-4). The appreciation of the yen, the Deutschmark, the pound, and other overseas currencies against the Canadian dollar since 1985 has opened up opportunities for Canadian manufacturers exporting abroad.

A breakdown by industry suggests that, as long as the Canadian dollar remains more or less at its current level against the U.S. dollar, 16 of the 18 Canadian manufacturing industries (Table 2-7) – all except transportation equipment and nonmetallic minerals – will display higher unit costs than their counterparts in the United States. Historical evidence suggests that Canadian firms operate with a keen eye on the exchange rate: an appreciated exchange rate puts competitive pressures on manufacturers to revitalize and improve productivity in their businesses, while a depreciated dollar tends to protect them from foreign competition and to retard the pace of productivity improvement. This factor was particularly evident in the early 1980s. Clearly, the appreciation of the dollar and the prospects of a duty-free border create both a need and an incentive for Canadian manufacturers to modernize and specialize.

Yet much of Canada's future productivity performance – the performance on which future income expectations must be based – is likely to be governed and limited by the ability

Chart 2-4

## Measures of Competitiveness in Manufacturing, Four Industrialized Countries, 1980-87



SOURCE Estimates by the Economic Council of Canada, based on data from Statistics Canada and from the U.S. Bureau of Labor Statistics.

Table 2-7

Unit Labour Costs in the United States Relative to Canada, 1980-88<sup>1</sup>

	1980	1985	1988
	(Canada = 100)		
Food, beverages, and tobacco	91.2	90.8	74.0
Paper and allied products	99.3	85.7	69.4
Chemicals and chemical products	103.9	111.9	91.3
Petroleum and coal products	69.1	77.9	62.6
Nonmetallic minerals	128.5	124.4	100.2
Primary metals	96.2	116.3	93.5
Fabricated metals	99.7	102.9	80.5
Nonelectrical machinery	169.0	106.8	84.6
Electrical machinery	84.0	116.3	94.5
Transportation equipment	110.5	127.2	103.6
Textiles	108.6	112.9	94.4
Clothing	95.7	108.5	93.5
Wood products	67.2	93.3	74.2
Furniture and fixtures	99.8	109.8	93.6
Printing and publishing	91.8	96.4	80.3
Rubber and plastic products	90.5	92.0	76.6
Leather and leather products	75.4	88.2	71.7
Miscellaneous manufacturing	85.8	92.6	75.9
Average manufacturing	100.3	103.3	79.0

1 The comparison is based on market exchange rates. For 1988, the year-end rate (0.837) is used.

SOURCE Estimates by the Economic Council of Canada, based on unpublished data from the U.S. Department of Labor and from the OECD.

of Canadian firms to assimilate and use "frontier" science and technology. And on this score, Canada's report card is alarmingly weak, by whatever measure – R&D performed, the use of patents, the availability of scientists and engineers, or the trade performance of high-tech industries (Figure 2-1).

A large number of Canadian firms lack the capacity to develop the new products and processes that will open up new industries and new export markets. Even worse, our industrial sector lacks much of the essential technical knowledge required to identify, purchase, and install the best-practice technologies available around the world. We note, for example, that a 1989 survey of 538 members of the Canadian Manufacturers' Association (CMA) indicated that only one fifth of these firms are now using some of the most effective manufacturing technologies, such as the computerized factory floor and local-area networks.

Despite this handicap, there are some signs that Canadian manufacturers are responding to the challenges posed by freer trade with the United States and by growing international competition. Over the past few years, private investment in machinery and equipment has been strong, and the industrial heartland in Ontario and Quebec has been operating at full capacity.

In anticipation of the complete removal of tariff barriers between Canada and the United States, many firms appear to be already restructuring their operations. In the process, new investments from abroad, new workplace technologies, and computer-intensive skills are becoming increasingly important. It is instructive, for example, to note that roughly four fifths of the member companies responding to the CMA questionnaire reported no problems or only minor problems in adjusting to the Canada-U.S. Free-Trade

Figure 2-1

## Canada's Science and Technology Performance

Measure of competitiveness in science and technology	Canada's rank <sup>1</sup>
Gross R&D expenditures/GDP	Lowest
Industry-funded R&D/GDP	Lowest
Government-funded R&D/GDP	Second lowest
Government-performed R&D/GDP	Middle
Higher-education R&D/GDP	Second lowest
Domestic patents granted per 100,000 inhabitants	Second lowest
International patents granted (by population)	Lowest
Advanced degrees awarded (by population)	Middle
Scientists and engineers in labour force (by population)	Lowest
Number of technology-intensive industries with positive trade balance	Lowest

1 Among a group of eight countries, including the United States, West Germany, France, Sweden, the United Kingdom, The Netherlands, and Japan.

SOURCE *Competing in the New Global Economy*, Report of the [Ontario] Premier's Council, vol. 1 (Toronto: Queen's Printer for Ontario, 1988).



Agreement. A similar proportion reported no impact or only a minor impact on their operations from the rise of the exchange rate to US\$0.84. It is too early to say whether these results reflect complacency or preparedness – or a mixture of both. For Canada seems to have a dual economy: some firms are ready, willing, and able to compete in intensely competitive world markets, while others are slow to awaken to the threats and the opportunities. The next few years will show whether the laggards can make the transformation to a radically changed world economy.

## The Future Trading Environment

Over the years, despite increasing flows of trade and investment, there has been a disturbing increase in the use of quantitative restrictions as a means of protecting selected industries. In some cases, the restrictions have been in areas outside the purview of GATT rules – under the Multi-Fibre Arrangement (MFA), for example, which limits the entry of Third World textiles and clothing into industrial countries and which has been renewed a number of times since it was first established<sup>6</sup> – or have involved “voluntary” export restraints; in other cases, they have been outright violations of the rules of GATT.

The application of such measures has been widespread. For example, of the 135 export restraint arrangements in operation in 1987, 64 were directed against developing countries, 51 against developed market-economy countries, and 20 against the centrally planned economies. Indeed, according to the United Nations Secretariat, the average GATT member country imposes close to 300 distinct quan-

titative restrictions, covering about one third of all traded goods and half of agricultural commodities (Table 2-8). Most of these import restrictions adopted by both developed and developing nations alike fall under the provision for a general exception to GATT rules allowed under Article 20. But some of the major trade restrictions imposed by industrialized countries (covering textiles, steel, transportation equipment, and electronics) have, in fact, been in violation of GATT rules.

A second development, arising perhaps in response to the GATT's failure to discourage restrictive trade actions, has been the growing interest in regional alliances, especially where there are natural complementarities in trade and investment. The application of trade restrictions by the major industrialized countries has forced many nations to look to their neighbours for support, as shown by the plans for European integration by the end of 1992, the Canada-U.S. Free-Trade Agreement, and the growing interchange of trade and investment in the Asia-Pacific area.

Regional alliances often assure trading partners of wider markets that give rise to economies of scale. As well, the partners often establish mechanisms by which specific commercial issues can be resolved directly, thus bypassing the GATT machinery. This has the virtue of speed and efficiency, but at the cost of discriminating against trading nations that do not belong to the alliance. Nonetheless, regional trading alliances are recognized by the GATT, and they are likely to increase in number in the future. In most cases, they allow for trade liberalization and harmonization on a more limited scale than would be possible on a fully multilateral basis.

Table 2-8

### Extent of Quantitative Restrictions in International Trade in the 1980s

	Number of restrictions per country			Proportion of commodities affected by restrictions		
	Developed market economies	Developing countries	All countries	Developed market economies	Developing countries	All countries
					(Per cent)	
All commodities <sup>1</sup>	170	355	290	0.19	0.38	0.32
Agricultural commodities	47	100	77	0.29	0.61	0.47
Manufactures	115	243	213	0.15	0.32	0.28

<sup>1</sup> Including minerals and precious stones.

SOURCE United Nations, *World Economic Survey*, 1988 (New York, 1988).

While the countries of Eastern Europe form a trading block that does not currently fall under the purview of GATT or, for the most part, of the IMF, they are slowly opening their doors to commercial activity with Western countries, often through joint ventures with, and through technology purchased or licensed from, Western multinational firms. The Soviet Union is rich in natural resources, and, taken together, the Eastern bloc represents a market of about 400 million people. However, given the inherent rigidities and shortcomings of centrally planned economies and given their own long-standing barriers to trade – including exchange controls – it is not clear whether, or how quickly, closer commercial relationships between East and West will develop.

Indeed, in China as well as in Eastern Europe, recent events have made us acutely conscious of the depth and complexity of domestic discontent. In both regions, there is a growing recognition that individual enterprise and competition offer the key to modern material prosperity. But the natural companion of freer markets is political freedom. While the governments of the Soviet Union, Poland, and Hungary seem to be moving cautiously towards a more open society, the authorities in China – once viewed optimistically for their economic initiatives – have responded brutally and oppressively to the political aspirations of their students.

We remain hopeful that global developments will help to de-escalate international and military tensions, and thus will create scope for a reduction in military spending within the Eastern bloc, NATO, and elsewhere. While the Soviet Union and China remain military powers to be reckoned with, the need to address their own internal tensions is likely to limit the speed at which they will expand their participation in world trade.

In the meantime, the 96 members of the GATT are now entering the substantive and detailed phase of actual trade negotiations in the Uruguay Round. The mid-term review of progress has led to agreements on negotiating frameworks for all 15 working groups. In addition, the GATT members have set an ambitious agenda for the next 12 to 14 months, with a view to extending the purview of the General Agreement into such areas as services, agriculture, and investment, and to strengthening the framework of the trading system.

At the Uruguay Round of GATT negotiations, the United States has given continuing support for the selective lowering of trade barriers. Nonetheless, given the size of the U.S. trade deficit, there are strong pressures on the Administration to pursue an aggressive trade policy, making use of

provisions in the recently passed Omnibus Trade Bill to initiate actions purportedly aimed at achieving a more level "playing field." Considerable support has emerged for a "managed trade policy" that would emphasize bilateral over multilateral trade arrangements. It remains to be seen how these measures will be used in respect of future Canadian-U.S. trade issues.

From Canada's perspective, the main achievement of the April 1989 GATT meeting in Geneva was the agreed negotiating framework for liberalizing trade in agriculture and for establishing a fair, market-oriented trading system in that sector. Canada has a large stake here, not only because it depends heavily on agricultural exports but also because it has a comparative advantage in many major areas of agriculture, particularly grains and red meats.<sup>7</sup> However, that advantage was upset during the 1980s by massive government support for agriculture in the European Community and the United States.

A key element of the new agriculture reform framework involves a substantial and progressive reduction of barriers to market access and of trade-distorting subsidies. The package also contains a set of short-term commitments by GATT members to freeze at current levels, during the period of negotiations, domestic and export support and protection in the agricultural sector. In addition, the GATT members are committed to reducing support and protection levels by 1990, as well as to implementing the first phase of agricultural trade reform in 1991.

The GATT also intends to initiate a new trade-policy surveillance program, which will give it a greater role in monitoring the trade policies and practices of member countries. As part of this program, the trade policies of the United States, the European Community, Japan, and Canada will be reviewed later this year or early in 1990. This examination may cause some political discomfort domestically, but it is an essential step towards strengthening the powers of enforcement in a trading system where protectionist pressures are a constant threat.

## Conclusion

The global expansion of investment and trade presents opportunities and poses competitive challenges for Canadian producers. We have noted in this chapter that the uncertainties and distortions in relative prices caused by inflation in the 1970s were replaced in the 1980s by those caused by an unhappy mix of loose fiscal and tight



monetary policies in both the United States and Canada, as well as by large international trade imbalances.

We believe that the restructuring and modernization undertaken by many Canadian manufacturing firms since the 1981-82 recession will position them well with respect to the opportunities inherent in the Canada-U.S. Free-Trade Agreement. But the strong economic expansion made it possible for some firms to increase sales without restructuring or with only modest efforts at niche-finding or specialization. As a result, they may be entering the period of adaptation to the Canada-U.S. Free-Trade Agreement – which is expected to coincide with a period of economic slowdown – less prepared for the transition to knowledge-intensive production and export than are many of their counterparts.

Since 1985, the cost position of most Canadian manufacturers has deteriorated vis-à-vis their U.S. counterparts, but it has improved relative to those in Japan and Europe. The competitive pressures from Europe and the Pacific Rim countries are expected to intensify in the future, however, in large part because they are proving to be such successful producers of technology-intensive goods. Even though the manufacturing productivity levels of the Asian NICs are still well below the Canadian level, they remain highly cost-competitive because of their lower labour costs. This means that Canadian employers must be continuously reviewing their systems in order to minimize total production costs. In simple terms, the amount of physical capital and human expertise employed in Canadian manufacturing must be increased or must become more productive, so that Canadian workers can continue to enjoy levels of productivity –

and, therefore, of income – that are higher than those of their competitors.

More importantly, Canada badly lags behind the other major industrialized countries in science and technology fields – a major source of future growth in productivity and standards of living. The gradual removal of tariff and nontariff barriers under the Canada-U.S. Free-Trade Agreement, together with the developments that will follow the implementation of the Uruguay Round of GATT negotiations, is already providing major inducements for Canadian manufacturers to rationalize their production processes and move up the value-added scale to more technology- and skill-intensive production.

Turning from production to market access, we noted the spreading influences of quantitative restrictions and other nontariff barriers to trade. We also emphasized the importance to Canada of a successful round of multilateral trade negotiations. Simulations undertaken for the Council suggest that the potential gains for both developed and developing countries from the mutual removal of trade barriers are sizeable but not overwhelming. They are equivalent at best to about one year's healthy trade growth.<sup>8</sup> Of greater significance is the actual strengthening of the GATT process of trade surveillance and dispute settlement mechanisms, coupled with the broadening of its mandate to new areas of supervision, such as agriculture, intellectual property, and services. Successful talks on these issues would go a long way towards ensuring the continued expansion of international trade and would provide the foundation for continuing gains in Canadian exports.

### 3 The Medium Term: Resolving the Fiscal Imbalance

Our main concern in this year's discussion of the medium-term outlook is that Canada has reached the later stages of the business expansion with a particularly fragile federal fiscal position. The rates of growth projected for 1990 and 1991 will not provide support for deficit reduction; and, if a recession were to occur, the federal deficit would increase significantly. In this chapter, therefore, we focus on the policy action that will be required to make federal finances more robust.

The April 1989 federal budget recognized that Canadians could not rely on economic growth alone to resolve current fiscal problems. New taxes and expenditure cuts were therefore imposed to reduce the deficit and thus slow the upward momentum of the debt/GDP ratio. But some of the measures in the April budget will also temporarily contribute to inflation, thus making it more difficult for the Bank of Canada to maintain reasonable price stability. The excise-

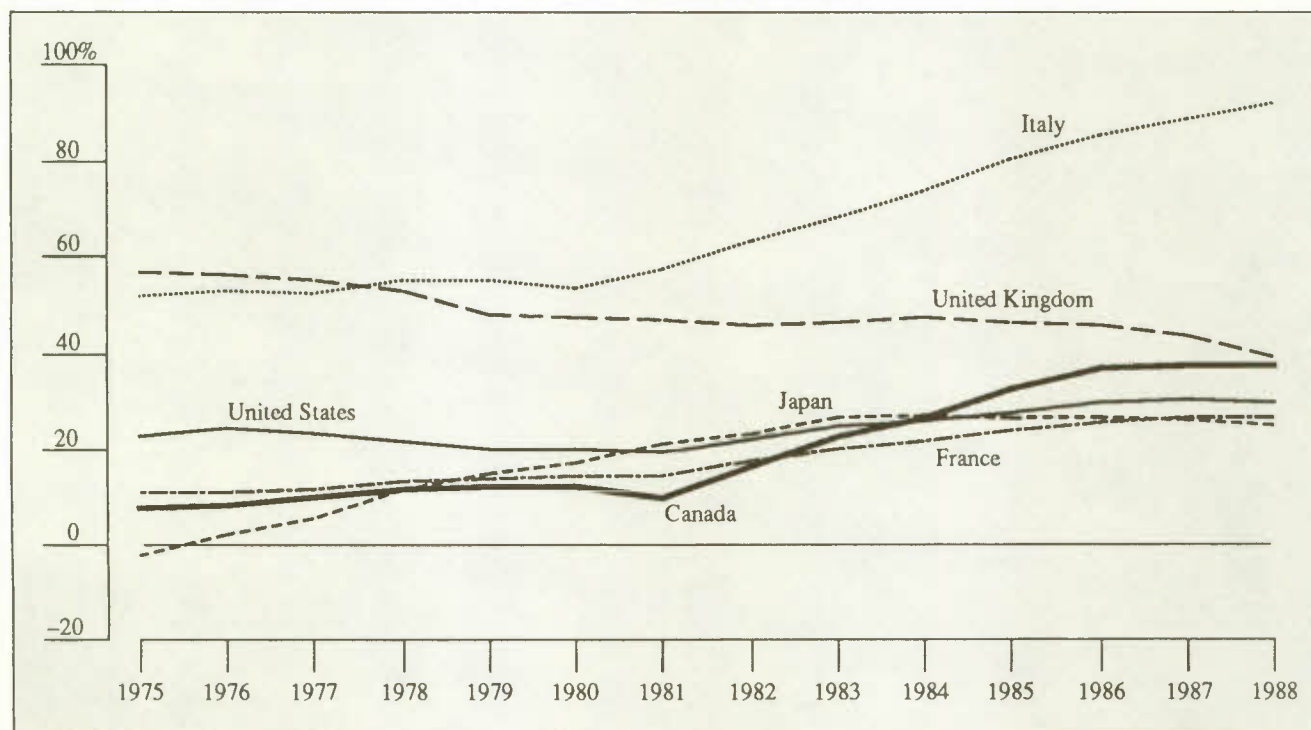
tax increases and the introduction of the goods and services tax (GST) will cause an inflationary bubble during 1990 and 1991. Although it is unlikely that this bubble will develop into a wage/price spiral during a period of slow growth and labour-market slack, there will be pressure on the Bank of Canada to sort these one-time tax effects from underlying inflationary trends in order to determine an appropriate monetary stance.

#### The Fiscal Legacy

A large public debt may well be a principal legacy of the 1980s to future generations. In 1988, the net financial debt of federal, provincial, and local governments (and their enterprises) was about \$400 billion, or over \$15,000 for every man, woman, and child.<sup>1</sup> Among the other major OECD nations, only the United Kingdom and Italy have a higher debt/GNP ratio (Chart 3-1).

Chart 3-1

Public Debt<sup>1</sup> as a Proportion of GDP or GNP, Selected Countries, 1975-88



1 Includes the debt of all levels of government and public pension plans but excludes government enterprises. The data for 1988 are estimates.  
SOURCE Department of Finance, *The Fiscal Plan*, April 1989; and data from Statistics Canada.



Of more concern than the size of the debt, however, is its growth. After diminishing steadily from the extremely high level reached during the Second World War, the debt/GDP ratio reversed direction in 1975 and has since grown rapidly. Canada's total debt/GDP ratio leveled off in 1987, but this reflects changes in contributions to the Canada Pension Plan and a moderation in provincial and municipal debt. Hidden in the total is the persistent rise in the ratio of net federal debt to GDP, which reached 39 per cent in 1988 (Chart 3-2).

The pattern of federal revenues and expenditures depicted in Chart 3-2 reflects many influences, but a few factors merit particular attention. Between the mid-1960s and the mid-1970s, federal revenues rose dramatically, thanks to strong economic growth. They provided the funding for a major expansion in expenditures on social programs (medicare, public pensions, unemployment insurance, and regional expansion) and for transfers intended to accommodate a large increase in postsecondary enrolment. By the mid-1970s, federal expenditure commitments had grown considerably, while revenues had begun to slow down dramatically, for several reasons. The introduction of numerous tax changes (e.g., indexing, personal and business tax

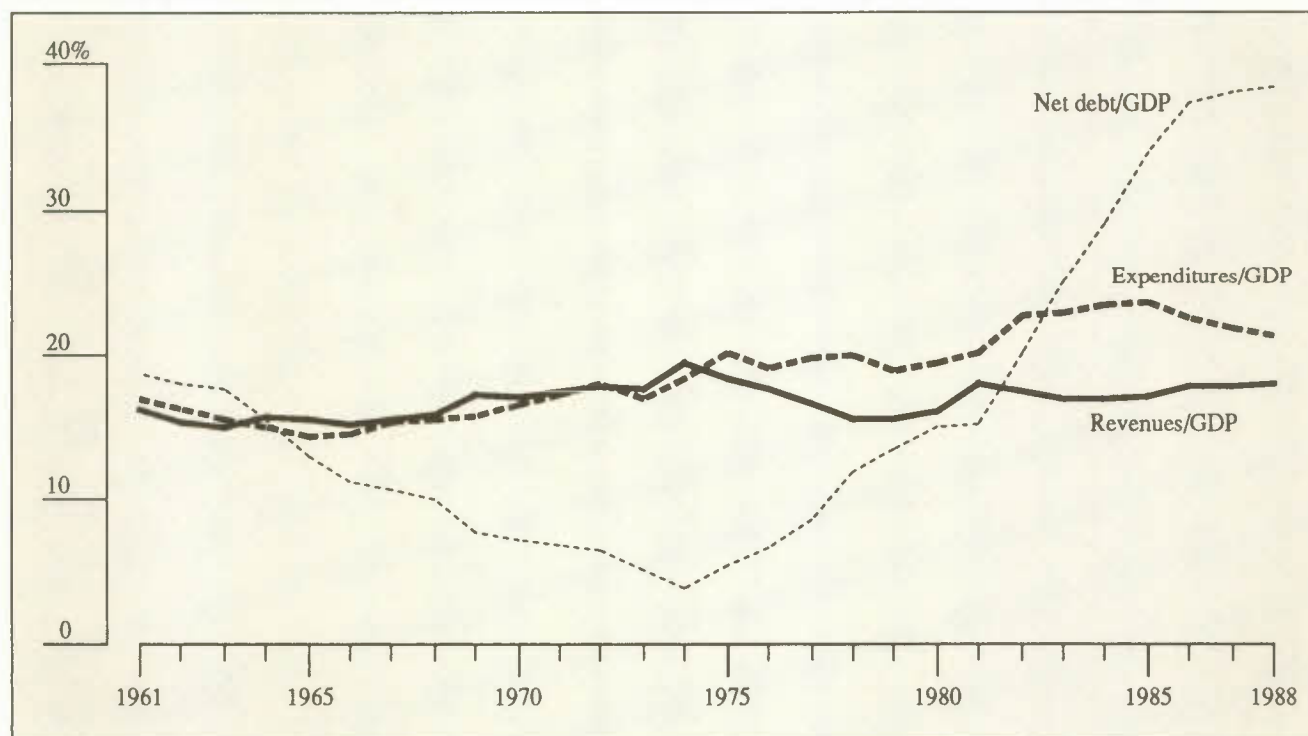
credits, and the deduction for personal investment income) had had the effect of markedly reducing federal tax revenues as a proportion of GDP. Adding to the effect of these discretionary changes were the negative impacts of the recessions in 1974-75 and 1981-82, and of the generally slower growth of the Canadian economy after the mid-1970s.

More recently, the federal government has made some progress in reducing its deficit. In 1984, when the deficit was at its peak, federal expenditures were equal to 24 per cent of GDP, whereas federal revenues were only 17 per cent. By 1988, federal expenditures had dropped to 21 per cent, and revenues had risen to just over 18 per cent, of GDP. The revenue increase was the result of major modifications to the tax system, including the elimination of many tax exemptions and a lowering and widening of the base for personal taxes. But despite the genuine progress that has been made in closing the gap between expenditures and tax revenues – and in reducing the deficit/GDP ratio from over 7 per cent in 1984 to 3.4 per cent in 1988 – the ratio of federal debt to GDP continues to climb.

It is interesting to compare current circumstances with the situation that prevailed after the Second World War. By the

Chart 3-2

Revenues, Expenditures, and Net Debt of the Federal Government as a Proportion of GDP, Canada, 1961-88<sup>1</sup>



<sup>1</sup> The underlying data on government revenues and expenditures record annual flows. The data pertaining to net debt record the cumulative stock of debt as a consequence of deficits incurred over time.

SOURCE Estimates by the Economic Council of Canada, based on data from Statistics Canada.

1946-47 fiscal year, the ratio of net federal debt to GDP had reached 107 per cent (on a public-accounts basis) – almost twice the current figure. Some five years later, the ratio had fallen to less than 50 per cent. What made such a drop possible was a combination of strong growth and low interest rates. The interest rate paid on the outstanding public debt in 1946-47 averaged less than 3 per cent, while in 1947 and 1948 the nominal rate of economic growth shot up to over 14 per cent.

When the reverse occurs, however – i.e., when interest rates are higher than the rate of economic growth – there is a real danger of explosive growth in the public debt and, therefore, in the relative importance of the claims of one segment of the Canadian population on the rest – a development that many would regard as unfair. Under those circumstances, the primary budgetary balance – which excludes net interest payments – must generate a surplus sufficient to offset the growth in interest costs, in order to avoid an increase in the debt/GDP ratio. In other words, increases in revenue and/or reductions in government expenditure are needed simply to overcome the escalating momentum of the public debt.

The federal government has already slipped into this danger zone. By contrast with the situation four decades ago, interest rates are now higher than the nominal rate of

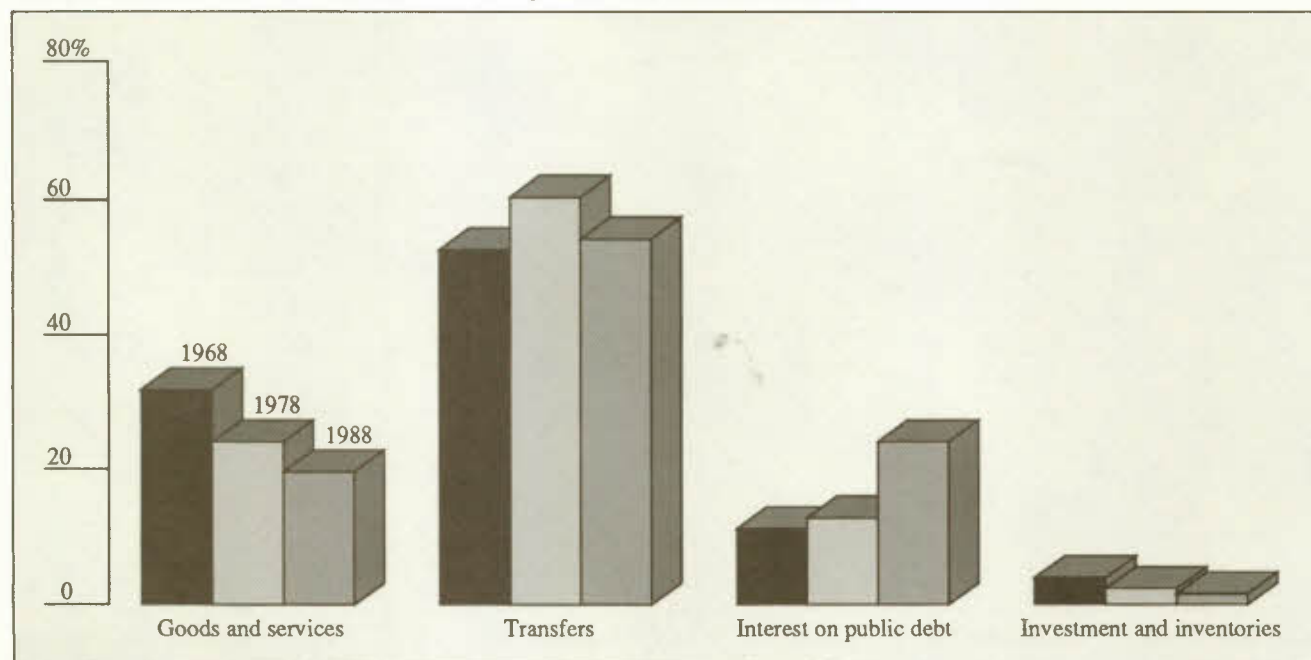
economic growth. The differential between interest charges on the outstanding federal debt and the rate of economic growth was modest in 1987-88 and 1988-89, but it will increase in coming years, as the federal debt becomes more heavily weighted by obligations that were incurred recently at very high interest rates. Notwithstanding the discretionary changes that have been introduced in recent years to improve the government's fiscal position, the debt/GDP ratio has continued to mount, and at a significant pace. In a sense, we are now facing the consequences of the overspending of past years, which has contributed to the accumulation of federal debt. Along with this, we are sharing the costs of those excesses of the U.S. economy which explain that country's heavy demand for foreign savings and the high level of North American interest rates.

The increasing importance of interest expenses in relation to total federal spending can be seen from Chart 3-3. The federal government's interest payments of \$32 billion on its debt constitute the largest and – at today's rates – most rapidly rising expenditure item in its budget, exceeding all of its current and capital expenditures on goods and services.

Beyond the immediate danger presented by the debt/interest-rate "trap" in which Canadians are now caught, the fiscal situation poses a longer-term threat in terms of the

Chart 3-3

Composition of the Federal Government's Expenditures, Canada, 1968-88



SOURCE Estimates by the Economic Council of Canada, based on data from Statistics Canada, *National Income and Expenditure Accounts*, Cat. 13-001, various issues.

legacy that it is creating for future generations. By contributing to an increase in the nation's foreign liabilities and/or discouraging private-sector investment, the combination of high interest rates and government deficits reduces the net wealth that is available to be passed on to future generations.

Traditionally, many Canadian corporations, public utilities, and provincial governments have borrowed abroad. This access to foreign savings limits the extent to which federal deficits and consequent borrowings crowd out private investment or by themselves force up interest rates. However, the persistence and magnitude of the federal deficits have undoubtedly raised concerns about the future level of taxation, and that, in turn, may have discouraged some private-sector capital formation. As well, the general uneasiness of the business sector towards the federal government's monetary and fiscal stance has implications for investment decisions. Many Canadian business persons would echo our observation in Chapter 2 that the current differential between domestic and international interest rates that has encouraged them to draw upon foreign savings has pushed exchange rates beyond what the dictates of domestic competitiveness, industrial cost structures, and

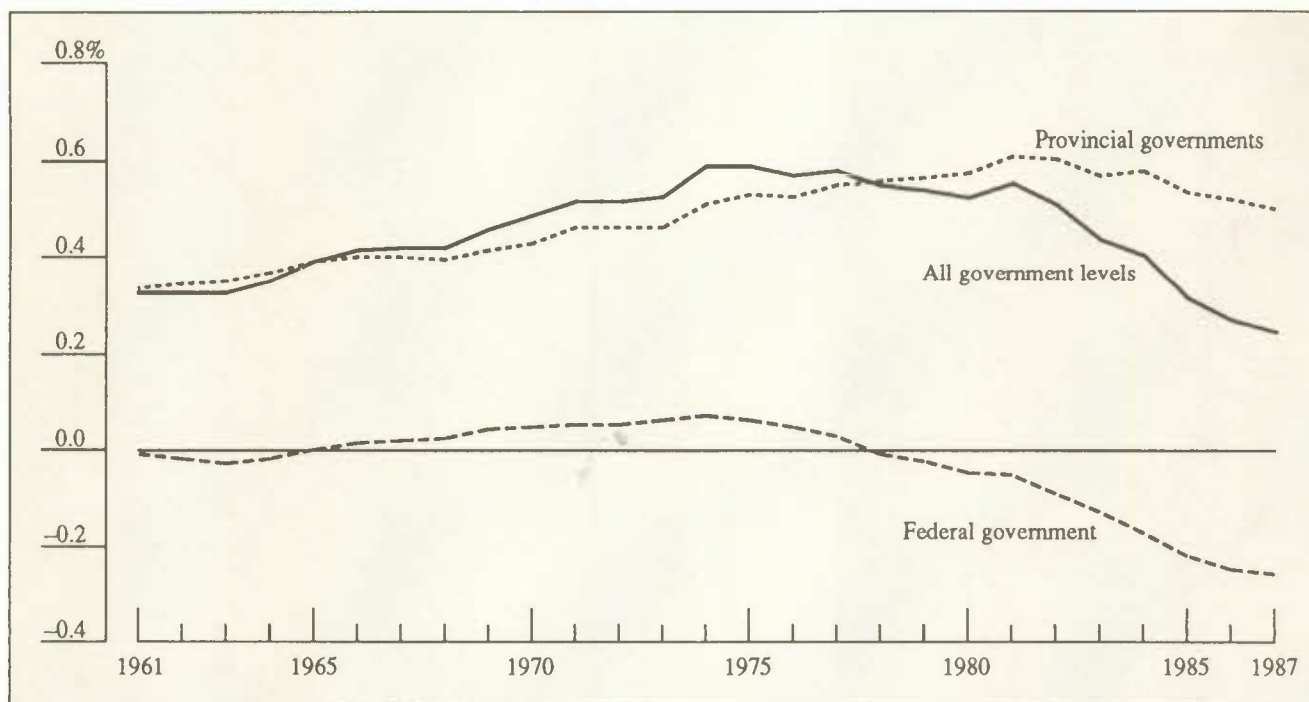
purchasing-power parity would deem as appropriate, putting at risk at least some of the potential trade opportunities for Canadian producers.

Deficit spending would not lead to reductions in the nation's net worth if the extra expenditure were invested in public-sector assets. But that has not been the case; large public-sector deficits have, in fact, coincided with declining public-sector investment. Indeed, even after adjusting for interest payments on government debt, capital formation as a proportion of total government expenditures in the 1980s was less than half of what it was in the early 1960s.

Another way of looking at these issues is to examine the situation with respect to government net worth, which is a combined measure of real and financial assets and liabilities. If the growth in government debt can be accounted for by government capital accumulation, net worth would be unchanged or increasing. But, in fact, as Chart 3-4 shows, the ratio of net worth to GDP for the government sector has fallen significantly since the early 1970s.<sup>2</sup> For the federal government, the ratio is becoming increasingly negative, suggesting that liabilities not only exceed assets but that the disparity between the two is growing. During the 1980s, the

Chart 3-4

Ratio of Government Assets<sup>1</sup> to GDP, Canada, 1961-87



1 Government assets have been calculated by applying certain adjustments to the data published by Statistics Canada in *Financial Flow and National Balance Sheet* (Cat. 13-214). These adjustments include the addition of government real assets in national defence and the revaluation of government holdings of public corporations to bring their value more closely to their approximate market value.

SOURCE Arthur Kaell, "Public assets, liabilities and intergenerational equity," a paper prepared for the Economic Council of Canada, 1989.



rate of net wealth accumulation by provincial governments has also fallen. The decline in the overall government index, therefore, suggests that at both the federal and provincial levels, the public-wealth endowment to future generations is not being maintained.

Certainly, there are occasions when deficit spending, whether it finances consumption or investment, will be of benefit to future generations. When there are substantial unemployed resources in the economy – as in 1974-75 and 1982-83, for example – deficit spending may spur the economy and contribute to increased private savings and investment. But these periods of slack cannot justify the persistence of large deficits and the rise in the debt/GDP through prolonged periods of relatively strong economic growth. Taking account of the need for countercyclical fiscal policy, the concern remains that the growth in the public debt is seriously undermining our legacy to future generations. It also casts a heavy shadow over the medium-term economic performance.

### The Medium-Term Outlook

With a view to throwing some light on the deficit issue, we have carried out medium-term projections of the Cana-

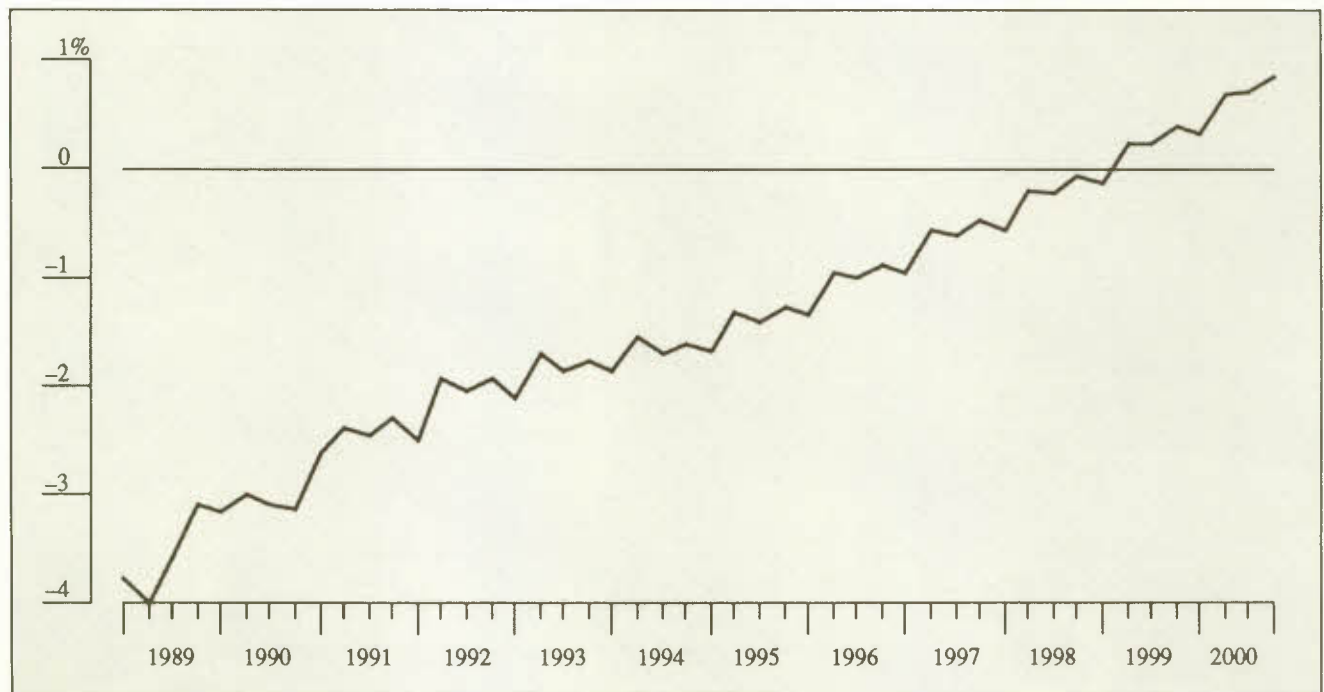
dian economy and explored potential avenues for reducing the federal deficit, using an integrated framework that highlights the risks of higher inflation and higher unemployment.

The Council's base-case projection is based on the fiscal regime set out in the April 1989 budget and assumes that the goods and services tax (GST) is implemented as scheduled in 1991.<sup>3</sup> Thereafter, we assume no further alteration in the structure of the federal government's tax or expenditure regime. The base-case results indicate that with a "soft landing" – i.e., a deceleration of growth to below the economy's potential, but no recession – in 1990 and then normal growth thereafter, fiscal imbalance will persist long into the next decade (Chart 3-5).

Our current view of the medium-run outlook for Canada also rests on an assessment of world economic activity and, more specifically, on our judgment about the outlook for the United States. Our assessment calls for a moderate slowdown in growth in 1990, not a protracted recession. In short, we anticipate a "soft landing" there as well, with the Federal Reserve Board shifting its focus from fighting inflation to avoiding recession during the second half of 1989. Nevertheless, our U.S. assessment calls for only slow improvement in both the Bush Administration's fiscal

Chart 3-5

Projected Deficit of the Federal Government as a Proportion of GDP (Base Case), Canada, 1989-2000



SOURCE Estimates by the Economic Council of Canada.



deficit and the merchandise trade account. Indeed, the U.S. current-account deficit, along with high nominal and real rates of interest, is likely to persist throughout the 1990s. (A more detailed discussion of the U.S. outlook is found in the Appendix.)

In addition to the base case, two other types of scenarios have been considered: those which involve different assumptions about U.S. economic prospects – that is, a change for the better in U.S. fiscal and monetary policy, or a possible U.S. recession – and those which involve different assumptions about Canadian fiscal and monetary policy. In particular, we tested various combinations of expenditure restraint programs in order to obtain a sense of the trade-offs involved in early and vigorous action versus a more gradual approach to fiscal correction. The purpose of this exercise was to establish the outer limits of what can be done, given the external circumstances and the implied trade-offs. We leave it to the fiscal and monetary authorities to determine the most prudent course in the light of these trade-offs and of the economic environment as it unfolds – recession, boom, changes in the U.S. political climate, and so on.

Perhaps the single most sensitive indicator is the date at which the deficit crosses over the zero line and turns into a

surplus (Chart 3-6). The analysis indicates that it is technically feasible to eliminate the fiscal deficit within three years if we are prepared to accept the costs in terms of higher unemployment and higher inflation. On the other hand, the results that we present later show that if the United States also chose to make a shift towards fiscal restraint, with a compensating moderation in monetary policy, it would become far less painful for Canada to eliminate the deficit by 1994. In addition, the analysis shows that the fiscal situation could deteriorate if a recession were to occur at any time during the next several years.

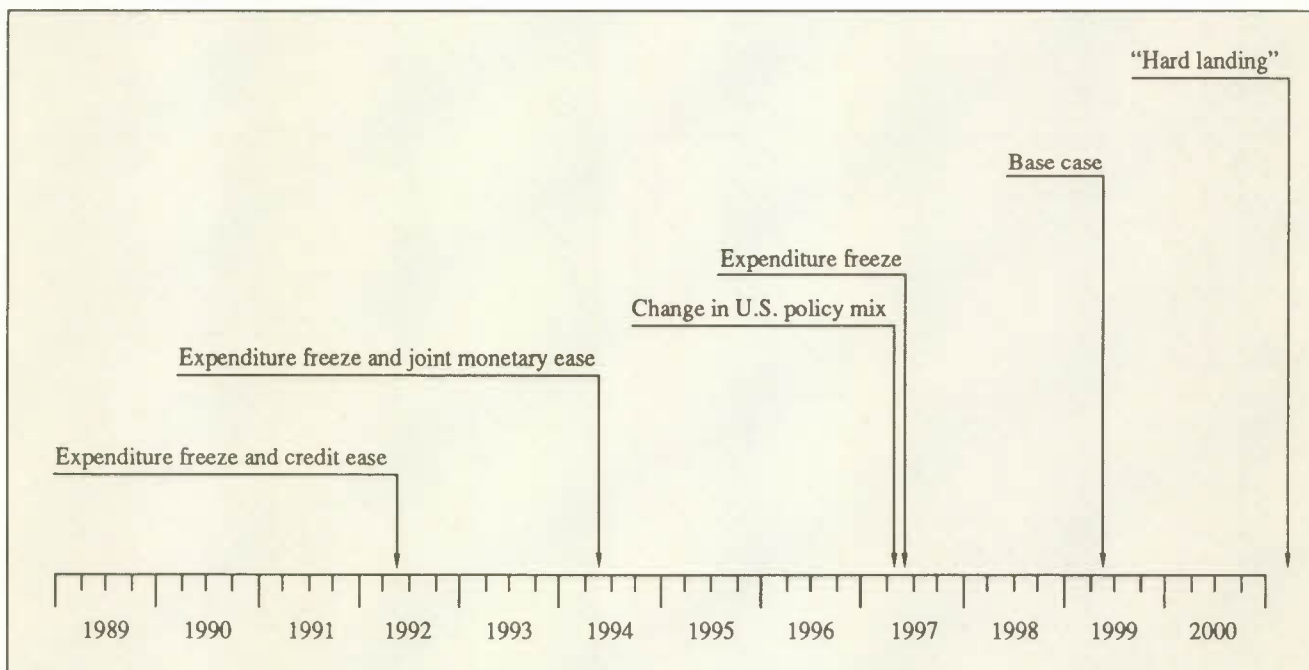
### The Canadian Base Case

In stretching our analysis to cover the entire period to the year 2000 and in determining Canada's longer-run potential growth path, we must take into account both supply and demand. The factors most pertinent to the growth of supply are growth in labour productivity and in the work force.

Productivity growth in Canada has recently been weaker than was the case during the early stages of the current recovery and expansion. Once the economy had moved close to its potential, the rate of labour productivity growth settled into a range below 1 per cent. We expect some cyclical

Chart 3-6

**Crossover Point (at Which the Federal Government's Deficit Becomes Surplus) under Different Assumptions, Canada, 1989-2000**



SOURCE Estimates by the Economic Council of Canada.

improvement once the current period of slow-growth passes, but over the long haul productivity growth in a range below 1 per cent appears to be the norm (Chart 3-7).<sup>4</sup>

Labour-force growth will depend upon a number of factors, most of which are already history. First, the rate of growth in the working-age population (those aged 15 and over) will reflect the decline in birth rates that occurred in the 1960s, 1970s, and early 1980s. The source population is expected to grow at a rate below 1 per cent over the next decade, as these younger age groups mature. Their rate of participation in the work force and those of adult women are also expected to stabilize. In effect, the remarkable process of change in women's role in the workplace that began after the Second World War will have nearly run its course by the turn of the century. These factors imply a falling rate of growth in the labour force in the long run. In the early 1990s, the rate will average about 2 per cent, declining to about 1.8 per cent later in the decade.

Also important is the range of unemployment rates below which inflation begins to accelerate. Recent evidence indicates that inflation begins to accelerate when unemployment rates fall to around 7 per cent. There is also evidence to suggest that this key indicator – the “nonaccelerating inflation rate of unemployment,” or NAIRU – has been trending downward. We expect it to be around 6 per cent by the year 2000.

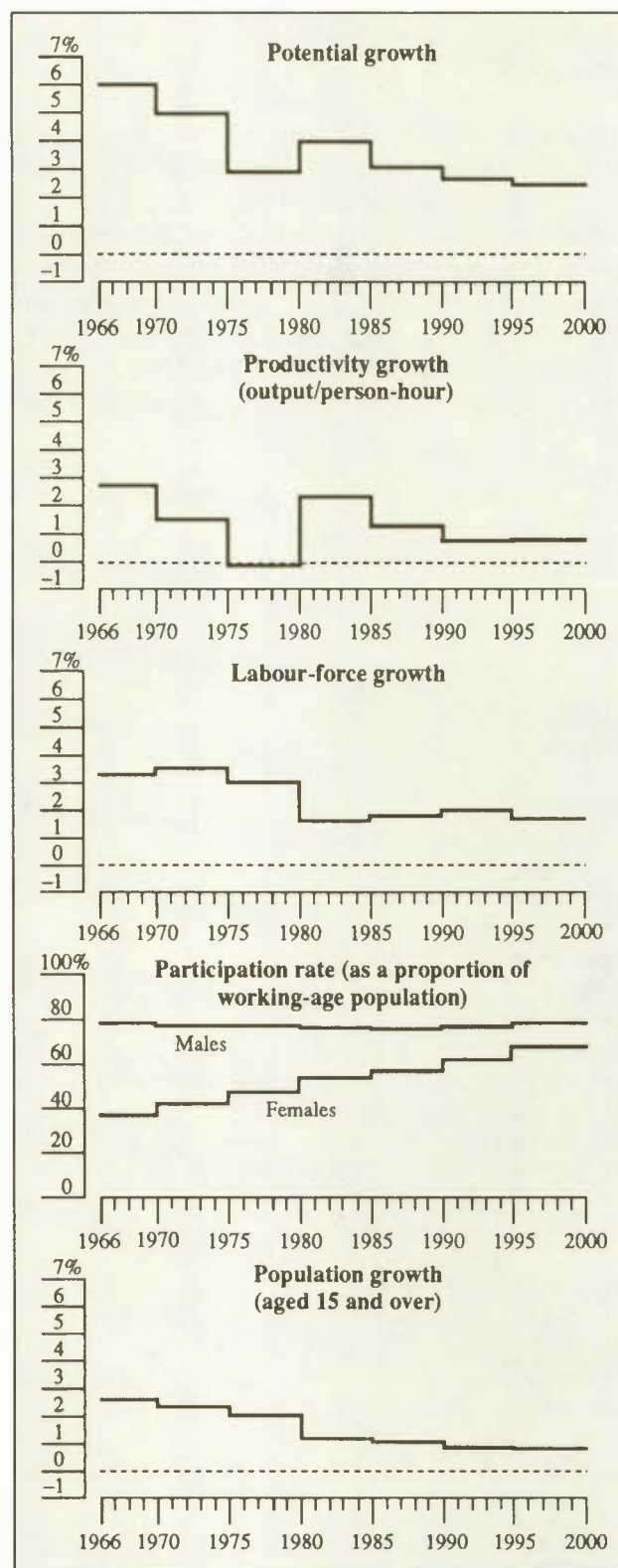
Taken together, the decline in labour-force growth rates, a productivity growth rate below 1 per cent per year, and a slowly declining unemployment rate produce a potential real growth rate for aggregate GDP that averages about 2.7 per cent for the 1990s, with a slightly higher average expected for the first half of the decade. This projected performance compares with averages of about 5.2 per cent in the 1960s, 4.3 per cent in the 1970s, and 3.2 per cent in the 1980s.

These figures relate to the capacity of the economy to grow. The actual performance could be somewhat better or worse, depending on the strength of demand; and, in the near term, demand is not expected to fully match the growth capacity of the economy, especially in 1990.

Economic performance in Canada is headed for a period of adjustment. The North American expansion is now in its seventh year. Typically, economic imbalances begin to show during the latter stages of an expansion in the form of tightness in the markets for goods, labour, and credit. Recently, we have witnessed a slow upward drift in inflation rates, some upward drift in the rate of growth of nominal wages, a cyclical decline in the rate of growth of

Chart 3-7

Factors Influencing the Potential Growth in GDP, Canada, 1966-2000



SOURCE Estimates by the Economic Council of Canada.

productivity, a leveling-off of the unemployment rate, and a tightening of credit. Weaker demand is particularly noticeable in credit-sensitive markets. Both automobile purchases and new housing starts are much less buoyant than they were 12 to 18 months ago, partly because of the rise in interest rates.

Economic conditions in Europe and Asia, however, are much more buoyant. Investment levels in Europe and Japan have picked up substantially; and other Pacific Rim countries are also experiencing very strong investment-led growth. This desynchronization of economic cycles will cushion the effects of slow growth in North America, contributing to the "soft landing" that we expect in 1990-91. Nevertheless, during this transition period, the key economic indicators in Canada will display a mixed performance.

Real growth in Canada is expected to average about 2 per cent in 1990-91 (Table 3-1) and then to move back to around 3 per cent in 1992 and 1993. The inflation rate will remain around 5 per cent in 1990, primarily because of the increases in excise and indirect taxes that one expected to result from the April 1989 budget. In 1991, the introduction of the GST is expected to bump the inflation rate to nearly 7 per cent; inflation should subsequently decline to the 4-per-cent zone in 1992 and 1993. We do not expect a wage/price spiral to result from those policy-induced price surges, because there will be a considerable amount of economic slack at the time, which will prompt businesses to resist wage demands and limit their ability to pass further price increases along to their customers.<sup>5</sup>

Employment growth in 1990-91 will average somewhat less than 1.5 per cent per year; it will then rise to 2 per cent

Table 3-1

## Selected Indicators of Projected Performance, Canada, 1989-2000

	1989	1990	1991	1992	1993	1994	1995	Average, 1991-95	Average, 1996-2000
	(Per cent)								
Change in:									
Real GDP	2.9	1.8	2.3	2.9	3.1	2.7	2.8	2.8	2.6
Consumer price index	5.1	5.6	6.9	4.4	4.1	4.1	4.3	4.8	5.2
Labour force	1.8	1.4	1.6	2.0	2.3	2.2	2.1	2.0	1.8
Employment	1.8	1.2	1.7	2.1	2.6	2.3	2.2	2.2	2.0
Productivity (output per person-hour)	1.4	1.6	0.9	0.9	0.5	0.4	0.9	0.7	0.7
Real wage rate	0.1	-0.4	-1.3	0.6	0.5	-0.3	-0.2	-0.1	0.5
Nominal wage rate	5.2	5.2	5.5	5.1	4.6	3.9	4.1	4.6	5.7
Level of:									
Unemployment rate	7.7	7.9	7.8	7.7	7.4	7.3	7.3	7.5	6.5
Participation rate <sup>1</sup>	67.2	67.5	68.0	68.8	69.7	70.5	71.3	69.6	73.3
Level as a proportion of GDP:									
Real investment	22.3	22.5	22.3	22.1	21.7	21.6	21.6	21.9	21.6
Government balance									
Federal	-3.6	-3.1	-2.4	-2.1	-1.9	-1.7	-1.4	-1.9	-0.2
Provincial and local	-0.1	-0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.3	--
Balance of payments									
Current account	-1.9	-1.6	-1.2	-0.9	-0.6	-0.7	-0.8	-0.8	-0.8
Merchandise	1.5	1.6	1.9	1.9	2.0	1.8	1.7	1.9	1.5
Nonmerchandise <sup>2</sup>	-0.9	-0.9	-0.8	-0.8	-0.7	-0.6	-0.6	-0.7	-0.5

1 Labour force as a proportion of the population aged 15 and over.

2 Excludes net income services.

SOURCE Estimates by the Economic Council of Canada.



in 1992 and 2.6 per cent in 1993. Unemployment rates will therefore drift upward in 1990 and then resume a slow downward trend. The current account of the balance of payments is expected to improve, as weaker domestic demand slows down the growth of imports in 1990 and 1991. Because the correction in 1990 is relatively mild, we expect investment to remain relatively strong, as businesses continue to gear up their plants to meet foreign competition. Under those conditions, the federal deficit is expected to reach 1.9 per cent by 1993 and to disappear by 1998, as the economy experiences another period of sustained growth.

The risk is that events (such as droughts, commodity price shocks, recession, an international political crisis, and so on) will intervene to reverse this process of gradual deficit reduction. A major question, therefore, is the sensitivity of the deficit to outside events.

### External Alternatives

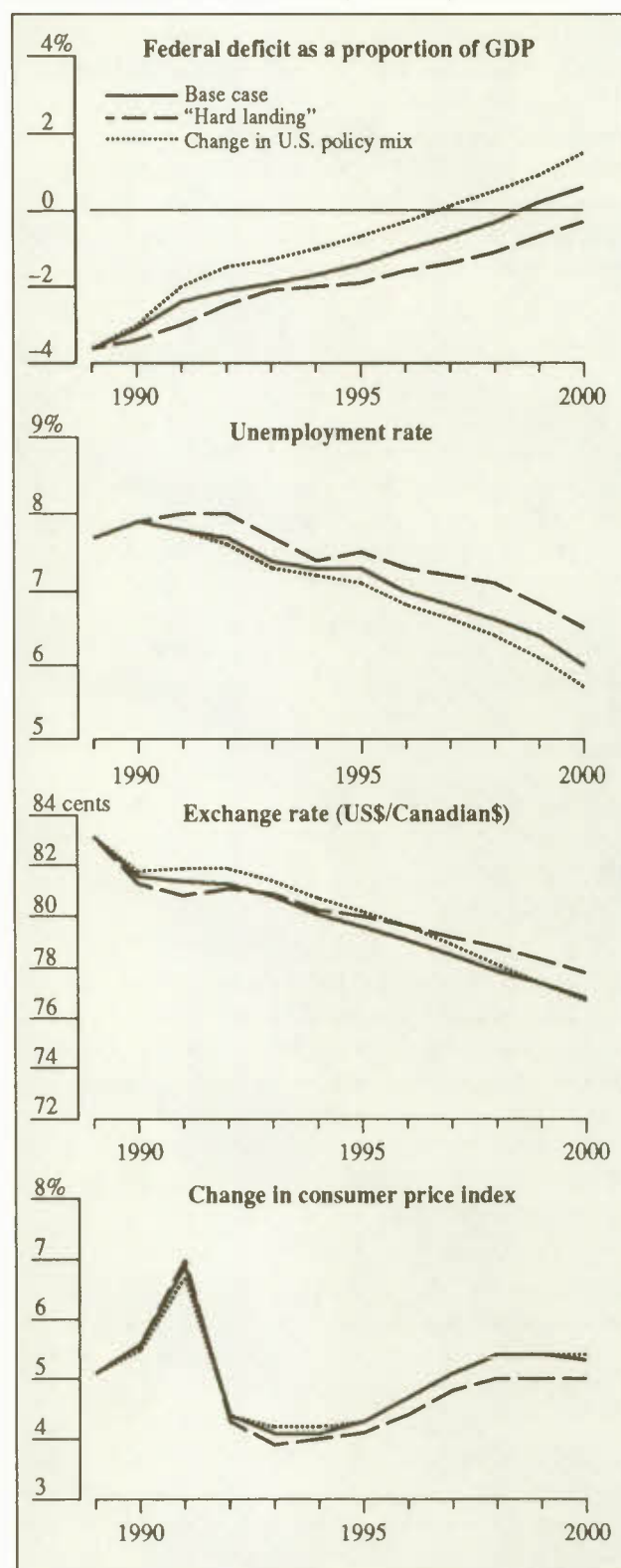
We have explored two alternatives to a "soft landing" in the United States – the "hard landing" (or recession) alternative, and a more favourable alternative in which the U.S. government takes the steps needed to reduce its budgetary deficit and loosen up its monetary policy in 1991 (see the Appendix).

The U.S. "hard landing" scenario involves first a sharp peak in interest rates in 1990, followed by an abrupt decline in 1991. It would provoke a mild recession in Canada, precipitated by higher interest rates that would raise government borrowing costs and by lower exports to the United States. This recession would have side effects that would reduce federal revenues and thereby increase the deficit (Chart 3-8). A mild recession in 1990-91 could also reduce employment; depending upon how many people would react by leaving the labour force, this could raise the unemployment rate by as much as half a percentage point during the period of slow growth. One downturn such as this during the next decade would defer the return to fiscal surplus until after the year 2000. Indeed, our estimates suggest that two mild recessions or one severe recession (such as occurred in 1981-82) could short-circuit the deficit-reduction impetus imparted by the April 1989 budget, leaving the debt/GDP ratio close to today's high level throughout the 1990s. Hence the importance of restoring a balanced fiscal regime. When the debt/GDP ratio is high, wide swings in interest rates that already carry a high risk premium mean nothing but trouble.

The flip side of these observations holds in the more favourable U.S. case, where we assume that the Administration embarks on a more vigorous deficit-reduction

Chart 3-8

Projected Impact of Three External Scenarios on Selected Economic Indicators, Canada, 1989-2000



SOURCE Estimates by the Economic Council of Canada.



program and implements a fiscal-restraint package of \$30 billion in January 1991, thus enabling the Federal Reserve Board to lower interest rates by about 1.6 percentage points. This change in policy mix would stimulate U.S. real growth rates, raise export demand, and lower borrowing costs in the medium term. Canadian rates would react accordingly; and with the more favourable external conditions in financial and export markets, the return to fiscal balance would advance to early 1997, assuming no change in Canadian policy. Thus there could be benefits to Canada if the U.S. Congress were to seize the nettle of fiscal prudence and the Federal Reserve Board were to lower interest rates.

With the gradualist approach that is embodied in the base case, a recession or other events that would erode the tax base could easily set in train another set of missed fiscal targets. Thus the fiscal regime established by the April 1989 budget still appears to be too gradual to bring about a solution to fiscal imbalance. The risk of being knocked off course by a recession, a drought, a "spike" in interest rates, or a change in political priorities over a period of nine years remains uncomfortably high. In that context, what would it take to bring about budget balance by early 1992? And what would be the cost of such a strategy, as measured by the size of the required cuts and their effect on key economic indicators?

## An Alternative Canadian Policy

The forces that drive federal spending have various origins. They include (in no particular order) defence, subsidies to business, pension benefits, welfare benefits, other types of transfers, business capital assistance, assistance to foreign countries, debt-servicing payments, transfers to the provinces, and so on. Some of these expenditures can be controlled, but others cannot, in the sense that they are statutory commitments.

Within the realm of what is controllable, we consider the following possibility. Suppose a two-year freeze (in nominal terms) were implemented in five areas of government spending, effective from 1 January 1990 to 31 December 1991. Normal expenditure growth would resume on 1 January 1992 in the affected spending categories. There would be no "catch-up" – i.e., the reduction in spending attributed to the freeze would not be recouped. Thus the level of government spending in the categories affected would shift downward. For the purpose of our analysis, we chose the following areas as those being affected by the freeze: capi-

tal assistance to business; subsidies to business; transfer payments to the provinces; the indexing factor for family allowances; and the hiring of federal public servants. (We assumed that the provinces would respond to the cut in revenues by raising provincial personal income taxes.)

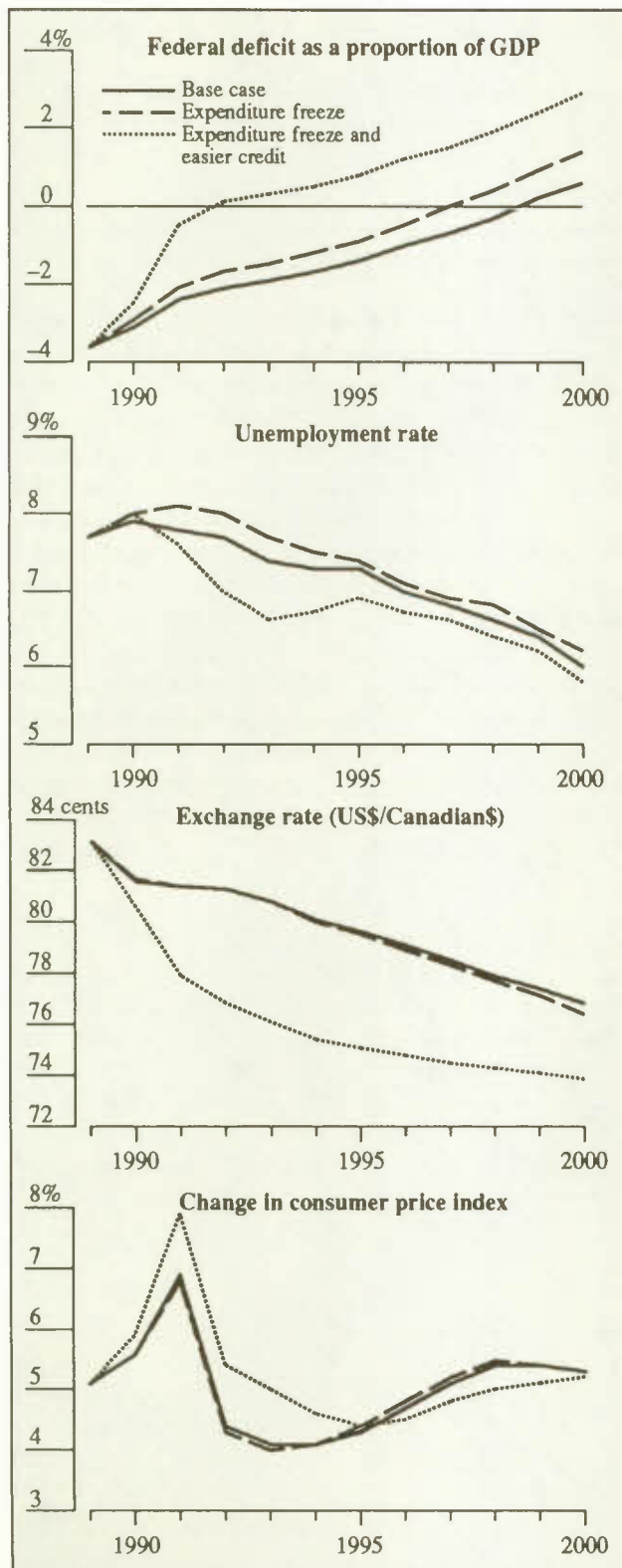
If such a freeze were implemented, the reduction in government spending from the base-case level would be \$4.6 billion in 1992. A revenue loss of \$1.6 billion would also occur, however, as the immediate effect of the freeze would be to lower the level of economic activity. By the end of 1992, therefore, the improvement in the government deficit would be about \$3 billion. By itself, the freeze would advance the "crossover" date by two years – from 1998 in the base case to late 1996 (Chart 3-9).<sup>6</sup>

Suppose that, in addition to the freeze, an easier credit policy were to be instituted, so that by the end of 1991 nominal rates of interest would be lower by about 2.5 percentage points (250 basis points). Under those circumstances, borrowing costs to the federal government would be reduced by about \$7 billion in 1992. In addition, easier credit would stimulate the economy, thus replacing some of the demand lost as a result of the spending cuts. This would turn a revenue loss into a revenue gain. By 1992, the budget would be in balance, and by 1995 a strong surplus would be recorded. If such a policy were pursued for the duration of the decade, a substantial portion of the existing debt stock could be paid down.

There are, however, side effects, good and bad, related to this type of policy shift. A spending freeze without any compensating monetary measure, as described above, would mean job losses (direct and indirect) of about 100,000 in 1992 and thus an increase in the unemployment rate. If compensating monetary measures were introduced, the job loss would be more than offset by the jobs created in response to the easier credit conditions. However, the lower interest rates initiated by the Bank of Canada would narrow the spread between U.S. and Canadian rates and would precipitate a drop of between 4.5 and 5 cents in the exchange rate of the Canadian dollar. That would put upward pressure on prices and wages, adding roughly 1 percentage point per year to inflation for four years. This rise in inflation would coincide with the surge in prices expected in 1991-92, when the GST is scheduled to be implemented. The combination of the two price shocks – the GST and the depreciation of the Canadian dollar – appears to us to create a severe risk of a wage/price spiral, since the inflation rate would rise as high as 8 per cent in late 1991. This points to the need to choose the right timing if a policy package of this type were to be considered.

Chart 3-9

Projected Impact of Three Canadian-Policy Scenarios on Selected Economic Indicators, Canada, 1989-2000



SOURCE Estimates by the Economic Council of Canada.

## Taking Advantage of U.S. Policy

The preceding scenario illustrates the likely consequences if the Canadian government undertakes radical surgery on the spending side, along with a sharp easing of monetary policy. The problem for the Bank of Canada, however, is that, given the openness of the Canadian economy, a reduction or an increase in interest rates immediately affects the exchange rate, and that has implications for both inflation and competitiveness.

Let us consider a final scenario that is more moderate but requires a bit of either international cooperation or good luck. Here, we combine the change in U.S. policy – a tightening of fiscal policy and a lowering of interest rates by the Federal Reserve Board – and the Canadian freeze in spending, both described above. To this we need only add a modest initial reduction in the spread between Canadian and U.S. interest rates of 30 to 40 basis points (not 250 points, as in our earlier example) to obtain an eventual 200-point reduction in Canada's short-term interest rates.

Under such conditions, the federal government could bring its budget into balance by late 1994, and the exchange rate would move downward by only about half a cent in the short run – much less than in the go-it-alone domestic-restraint case discussed above (Chart 3-10). This would also result in much less inflationary pressure. There would be some job loss in the very short run, but 58,000 additional jobs would have been created by 1992; and by the year 2000 there would be 175,000 extra jobs, thus contributing to a decrease in the unemployment rate. If anything, this scenario demonstrates the benefits of policy coordination between economies that are highly connected through trade and financial links. In contrast, the Canadian go-it-alone restraint scenarios illustrate some of the unfortunate consequences that can befall a small open economy when pursuing policies that can have substantial feedbacks from international markets.

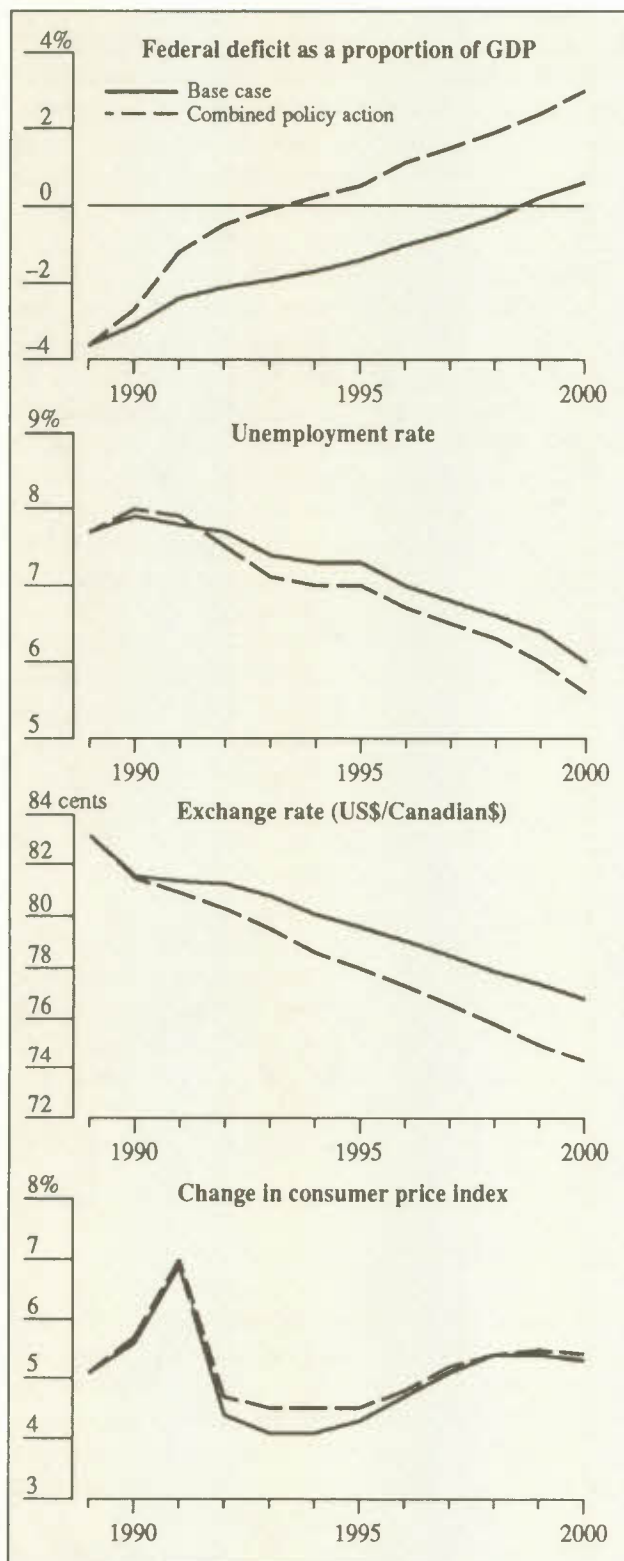
## Conclusion

Our assessment of the medium-term outlook this year indicates that the Canadian economy is entering a period of slower growth – of consolidation – but we do not expect this to develop into a recession. Activity will be supported by the continued resurgence of investment by industries preparing themselves for a more integrated North American market and for new export opportunities overseas. However, avoiding a recession will depend to a significant degree on the capacity of the United States to engineer a relatively moderate correction in 1990.



Chart 3-10

**Projected Impact of Combined Canada-U.S. Policy Change on Selected Economic Indicators, Canada, 1989-2000**



SOURCE Estimates by the Economic Council of Canada.

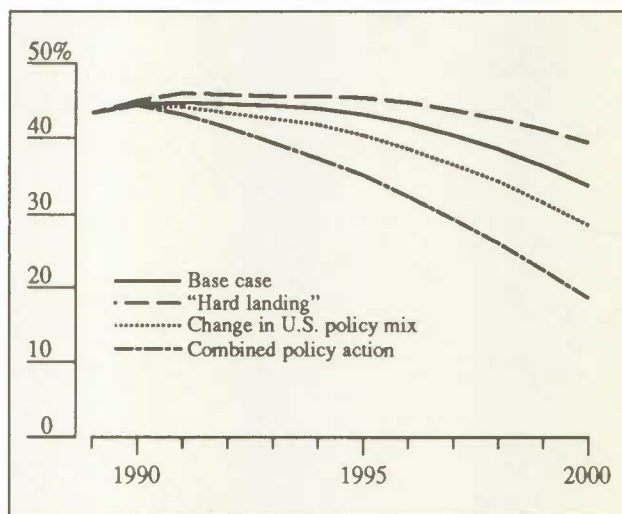
The economic performance over the next several years will be strongly coloured by this cyclical correction. The unemployment rate will decline only modestly; the growth in productivity will be rather disappointing; and the rate of inflation will subside only to 4.1 per cent by 1993.

In our view, the area of greatest vulnerability in the coming period is the federal government's fiscal position. We have witnessed five years when progress in deficit reduction has fallen short of explicit targets, and the long, drawn-out process of deficit correction proposed for the 1990s will obviously be subject to many risks.

We have seen that a large, permanent federal deficit imparts a twist to macroeconomic management that puts a disproportionate burden on monetary policy to maintain economic stability. The current fiscal framework is moving in the direction of deficit reduction, but at a gradual pace. It is also highly vulnerable to a period of slower growth or higher interest rates. Chart 3-11 shows our projections of the trend in the federal debt/GDP ratio, under different external conditions and policy choices.<sup>7</sup> It is important to note that in the "hard landing" scenario, even one mild recession in 1990-91 prevents the ratio from dropping below 40 per cent before the end of the decade. This is a legacy that we do not recommend to Canadians, as it implies that the federal government will have its hands tied by fiscal problems and will be unable to respond to the changing needs of the population. That is why we have tried to assess the policy options that would get the debt/GDP ratio onto a declining path.

Chart 3-11

**Projected Impact of Alternative Scenarios on the Ratio of Net Federal Debt to GDP, Canada, 1989-2000**



SOURCE Estimates by the Economic Council of Canada.

Our analysis also brings to the fore the complex interactions between federal revenue and expenditures, between monetary and fiscal policy in Canada, and between Canadian and U.S. policy. The federal government will have to choose the appropriate timing and assess the right dose of restraint when considering new policy options intended to speed up the return to a more robust fiscal position. The key considerations will be the strength of demand, the scope for a concomitant relaxation in monetary policy, and policy developments in the United States. In each case, the risks and the opportunities must be balanced, and the key to success will be to seize all of the potential opportunities.

We have stated a preference for spending cuts, but we realize that the timing and the extent of those cuts, along with the associated easing of monetary policy, must be tuned so as to avoid either excessive increases in unemployment or a price shock that would be greater than consumers and wage earners are prepared to absorb. It would be foolhardy, for example, to reduce the deficit at the price of launching another cost-push inflation such as that experienced in the 1970s.<sup>8</sup>

Our analysis shows that a shift to monetary ease is essential to any made-in-Canada solution to the fiscal dilemma. Thus the next round of expenditure cuts should be implemented at a time when the Bank of Canada is able to reduce interest rates. This could be a time when there is little evidence of upward pressure on prices or when interest rates in

the United States are trending downward, so that there would be little risk of provoking a significant depreciation in the Canadian dollar.

The most favourable conditions for fiscal correction exist when the United States is in the process of dealing with its own fiscal problem. Our results indicate that if the United States implements the type of changes in monetary and fiscal policy that OECD governments have been pressing for, the results could be beneficial to Canada, advancing the prospects for the federal government to restore a regime of revenue and expenditure balance. In such a case, Canadian monetary policy could be eased without seriously affecting the rate of exchange of the Canadian dollar in the short run; and if such a move were combined with an expenditure freeze, the federal budget could move to a surplus position in 1994 without serious costs in terms of unemployment or inflation.

Timing, of course, is everything, and the prudent occasion for federal fiscal restraint is when other sectors of the economy are active and strong. Our estimates suggest that Canada's "soft landing" economic pause will likely be over by mid-1990, with a return thereafter to steady economic growth led by the private sector. If the United States achieves its own "soft landing," we believe that the prospects then for U.S. monetary and fiscal initiatives are likely to be more supportive of a favourable environment for Canadian restraint.



## 4 How Today's Generations Are Faring

Among the many reasons for concern about future generations of Canadians is the evidence that the slower economic growth of the past decade and the major changes in industrial structure have been particularly tough on the younger age group. To measure that impact, we use two broad sets of indicators – those describing patterns of income and wealth for different family types and age groups, and those which reflect new patterns of employment and wages. In particular, we present evidence on wage polarization – that is, on the trend towards the division of the employment market into jobs that are more high-paying and jobs that are more low-paying, with fewer Canadian workers being found in the middle.

### Shifting Patterns of Income and Wealth

Following a decade of substantial growth, the climb in average real family income began to flatten out in the mid-1970s. Since then, the real earnings of the average worker have virtually stood still. If families with heads aged less than 65 had had to depend solely on the husband's earnings, there would have been almost no growth in real family income between 1973 and 1986. Over this period, real family earnings were buttressed by the increased contribution of other family members – a consequence of the increasing participation of married women in the labour force.

Table 4-1

Average Income, and Income Composition, of Young and Middle-Aged Families and Unattached Individuals,<sup>1</sup> Canada, 1973 and 1986

	Families			Unattached individuals		
	1973	1986	Change, 1986/1973	1973	1986	Change, 1986/1973
	(1981 dollars)		(Per cent)	(1981 dollars)		(Per cent)
Average income	27,683	31,374	13.3	12,213	14,597	19.5
Earnings	25,247	27,076	7.2	11,028	12,407	12.5
Husband	19,323	18,416	-4.7	...	...	...
Wife and others	5,924	8,659	46.2	...	...	...
Income composition:						
	(Per cent)			(Per cent)		
Earnings	91.2	86.3		90.3	85.0	
Husband	69.8	58.7		...	...	
Wife and others	21.4	27.6		...	...	
Investment income	2.8	3.9		3.5	4.5	
Transfer payments	4.8	7.3		4.2	7.2	
Other money income <sup>2</sup>	1.1	2.5		2.0	3.3	
Total	100.0	100.0		100.0	100.0	

1 Aged under 65.

2 Includes pension income received from abroad, alimony payments, nonrefundable scholarships and bursaries, royalties, union strike and sick pay, and income-maintenance payments from insurance plans.

SOURCE Estimates by the Economic Council of Canada, based on data from the Survey of Consumer Finances.

In addition, both families and individuals benefited from increased investment income and more-generous government transfers (Table 4-1). The increased importance of government transfers was a result of the major expansion that had occurred in Canada's social programs over the previous decade, as well as of significantly higher levels of unemployment. The increased contribution of investment income was associated with the sharp rise in interest rates over the late 1970s and with the relatively high real rates that prevailed throughout the 1980s.

These sources of income growth have had a different impact on Canadians at different stages of their life cycle.

Between the years 1973 and 1986, the average real income of families in their working years increased by 13 per cent. This reflected a 5-per-cent decline in the contribution of the husband to the family's real earnings and a whopping 46-per-cent increase in that of other members of the family. Among single individuals under age 65, there was a 20-per-cent increase in real income, but much of this was a reflection

of the growth in the number of skilled and professional single and divorced persons in the 35-to-54 age bracket.

The issue of fairness across generations has traditionally focused on the elderly. The emphasis was on policies that would enable retired Canadians to benefit from the economic prosperity that they helped make possible through their efforts in earlier years. This perspective was appropriate when economic growth was such that current workers were far better off than their parents and their grandparents and when transfer programs to assist the elderly were inadequate.

But while there are still some low-income elderly who require attention, conditions have changed significantly over the past decade or two. The elderly have been the main beneficiaries of the maturation of the Canada and Quebec Pension Plans and of increased investment returns, as well as of changes to the tax system (particularly with respect to Registered Retirement Savings Plans - RRSPs) that were introduced and expanded throughout the 1960s and the

Table 4-2

**Average Income, and Income Composition, of Elderly Families and Unattached Individuals,<sup>1</sup>  
Canada, 1973 and 1986**

	Families			Unattached individuals		
	1973	1986	Change, 1986/1973	1973	1986	Change, 1986/1973
	(1981 dollars)		(Per cent)	(1981 dollars)		(Per cent)
Average income	17,154	21,079	22.9	7,062	9,736	37.9
Earnings	7,188	5,333	-25.7	890	376	-57.8
Husband	2,985	1,581	-47.1	...	...	...
Wife and others	4,203	3,752	-10.7	...	...	...
Income composition:						
	(Per cent)			(Per cent)		
Earnings	41.9	25.3		12.6	3.9	
Husband	17.4	7.5		...	...	
Wife and others	24.5	17.8		...	...	
Investment income	14.6	18.3		23.2	22.7	
Private pension	9.8	13.9		12.3	14.2	
Canada/Quebec Pension Plans	2.6	11.6		3.2	13.7	
Old Age Security (including Guaranteed Income Supplement)	25.9	25.3		44.5	39.8	
Other money income	5.1	5.6		4.2	5.8	
Total	100.0	100.0		100.0	100.0	

<sup>1</sup> Aged 65 and over.

SOURCE Estimates by the Economic Council of Canada, based on data from the Survey of Consumer Finances.

1970s. Fewer people aged 65 and over were working in 1986 than in 1973, and the real earnings of that age group were less, but as a consequence of the growth in other sources of income, the relative real-income position of individuals and families in the 65-and-over bracket was up by 38 and 23 per cent, respectively (Table 4-2). It is particularly significant that the proportion of elderly who are below the poverty line, as measured by Statistics Canada's low-income cut-offs, fell dramatically between 1971 and 1986 – from 68 to 16 per cent for individuals, and from 35 to 6 per cent for families. Government transfers played an especially important role in that regard. A recent study indicates that transfers narrowed the poverty gap for the elderly (as measured by the shortfall in total income from the level required to meet Statistics Canada's definition of low income) by over 90 per cent.<sup>1</sup>

Given these developments, it is now appropriate to give attention to the prospects of young workers and future generations. In comparison with the elderly, young and middle-aged families are, of course, much more dependent on labour earnings, which have been the most sluggish component of income growth. Young workers have borne

much of the burden of high rates of unemployment and significant declines in real wages during the late 1970s and the early 1980s. Studies suggest that this is in part the result of crowding from the influx of the baby-boom generation into the labour market and from the subsequent swelling in the ranks of workers aged 40 and under.<sup>2</sup> In addition, in the face of rising unemployment, both the provinces and the federal government consciously allowed the real value of legislated minimum wages to decline. The result has been that after adjusting for inflation, the members of an average young family under age 25 in 1987 could expect a real income that was 14 per cent lower than that of a similar family a decade earlier. By contrast, a young family who started out in 1967 could have expected a real-income gain of 33 per cent over the next 10 years (Chart 4-1).

The changing economic position of various age groups is also reflected in the data on average wealth holdings. The net assets of a family depend in part on the stage it has reached in its life cycle; typically, wealth will be accumulated over a family's working life, and this will be drawn upon to finance consumption during the retirement years. But wealth accumulation also depends on the growth of the

Chart 4-1

Growth in Real Family Income,<sup>1</sup> by Age of Head, Canada, 1967-87

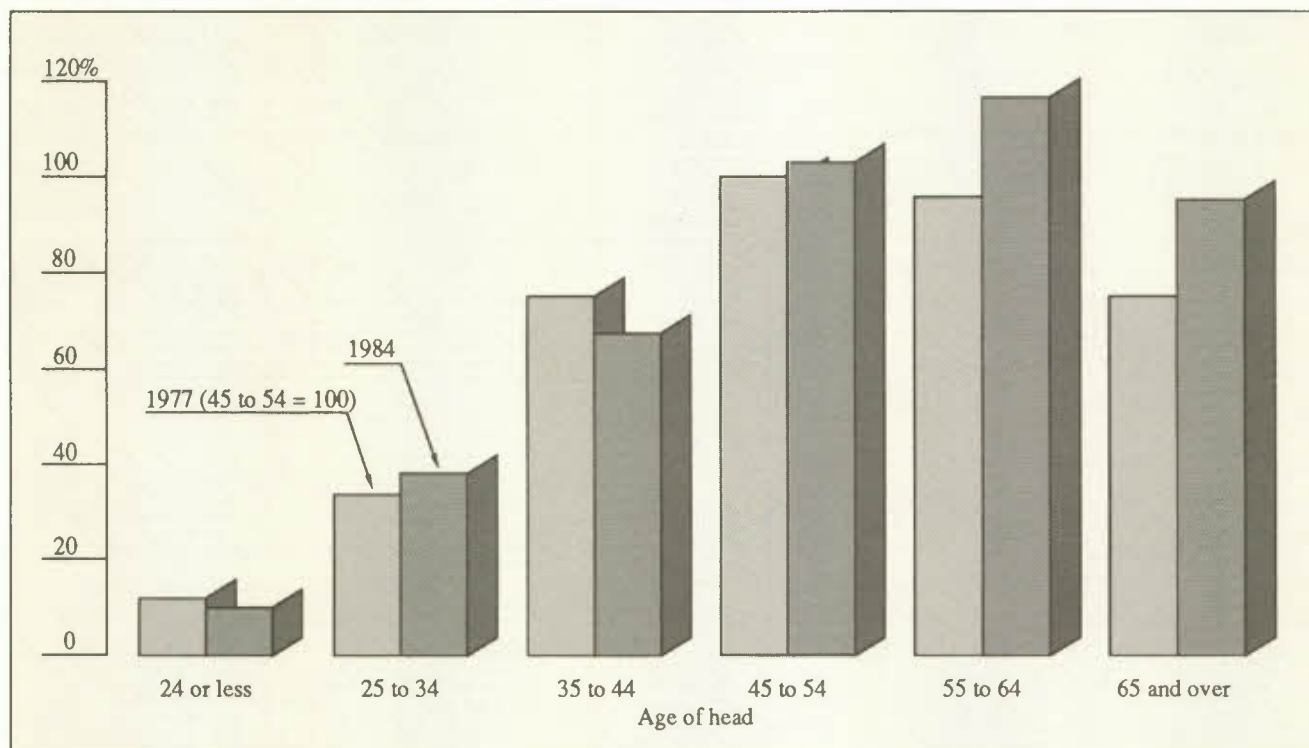


<sup>1</sup> Based on 1981 dollars.

SOURCE Statistics Canada, *Income Distribution by Size in Canada*, Cat. 13-534 (1967) and 13-207 (1977-87), and *Bank of Canada Review*, various issues.



Chart 4-2

Relative Wealth<sup>1</sup> of Families, by Age of Head, Canada, 1977 and 1984

1 Based on 1981 dollars. Wealth here excludes accrued claims against work-related pension plans and/or entitlements to future social security provided by the federal and provincial governments (in the form of pensions, old-age security benefits, guaranteed income supplements, and so on); also excludes the family's human capital, measured by the value of the discounted flow of future earnings for all family members. The figure for the 45-to-54 age group in 1977 is used as the point of comparison here.

SOURCE Based on Statistics Canada, *The Distribution of Income and Wealth in Canada*, Cat. 13-570; *The Distribution of Wealth in Canada*, Cat. 13-580; and *Canadian Economic Observer*, Cat. 11-210.

economy when families are in their peak earning and savings years – that is, when family earners are aged between about 35 and 54. In 1977, families in the 45-to-54 age cohort had the greatest average wealth (Chart 4-2), which is consistent with evidence relating to the strong growth of the economy over the previous two decades. As a result of this growth, the 45-to-54 cohort was able to earn and save substantially more than the 55-to-64 cohort did during their prime working years.

What is particularly interesting, however, is the change in relative wealth holdings between 1977 and 1984. Over that period, there was significant improvement in the position of those aged 55 and over, relative to those aged 35 to 54. Wealth accumulation was more difficult for the younger group because a major portion of its members were passing through their prime earning years at a time of relatively slow economic growth and high mortgage interest rates. Older workers and retirees – who were completing, or had already completed, their wealth accumulation – were less affected by these developments.

A further indication of the more difficult environment for prime-age workers is provided by the declining incidence of

Table 4-3

## Proportion of Households Who Own Their Residence, Canada, 1961-86

	1961	1971	1976	1981	1986
(Per cent)					
Age of head:					
Under 25	23.9	14.3	19.0	18.3	16.6
25 to 34	49.8	42.9	51.6	52.1	48.5
35 to 44	67.5	67.1	70.9	72.0	69.7
45 to 54	73.2	72.5	74.3	75.8	75.2
55 to 64	75.1	71.5	71.9	73.6	74.5
65 and over	77.0	67.7	64.3	63.0	64.0
All households	66.0	60.3	61.8	62.1	62.1

SOURCE Based on census data.



home ownership among Canadians under age 45 between 1981 and 1986 (Table 4-3). Since then, of course, there have been housing booms in Toronto and Vancouver, and quite strong growth elsewhere. Whether those more recent developments would modify the observation for the period 1981-86 is unclear.

### New Patterns of Employment and Wages

In recent years, Canada has had one of the most favourable job-creation records among advanced industrial nations. But the employment growth here, as elsewhere, has been heavily concentrated in service industries and among white-collar occupations, and it has been accompanied by marked shifts in industrial and occupational job distributions.

While much of the employment creation has been in seemingly high-quality areas, such as management and administration, an examination of compensation trends suggests a different story. In real terms, not only has labour income per worker not increased – in 1987, it was nearly 2 per cent lower than it had been 10 years earlier – but there has been a shift towards greater polarization in the distribution of earnings. Workers in the middle-income range accounted for 21.5 per cent of the work force in 1986, down from 27.4 per cent in 1967. Over the same period, the share of workers in both the upper and lower earnings categories increased (Chart 4-3). There is concern, therefore, that employment opportunities may be becoming more fragmented in terms of rewards, skills, and satisfaction.

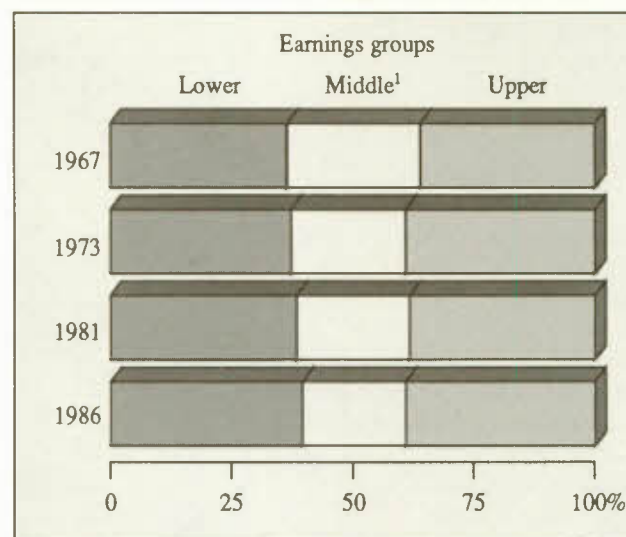
It is true, of course, that employment growth has rebounded at an average rate of 2.8 per cent annually since the sharp drop experienced during the 1981-82 recession. Canada's performance in this respect has outstripped that in 22 other OECD countries – all except the United States and Australia.

Labour-force growth, too, has been extremely rapid during this period, driven largely by rising participation rates among women. Between 1980 and 1988, the measured Canadian labour force increased from 11.6 to 13.3 million, growing at an average rate of 1.7 per cent annually – also one of the fastest rates of expansion among OECD nations.

Nearly three quarters (72 per cent) of the new jobs created over the decade have been filled by women. About 57 per cent of all women of working age were in the labour force in 1988, up from 50 per cent in 1980. Female participation rates in Canada are among the highest in the OECD,

Chart 4-3

#### Distribution of Annual Earnings, Canada, 1967-86



1 Defined as the median income plus or minus 25 per cent.

SOURCE Estimates by the Economic Council of Canada and Statistics Canada, based on data from Statistics Canada.

being exceeded only by those in the United States and in Scandinavia. Higher female participation rates have driven up the overall rate of labour-force participation to 66.7 per cent, despite declining participation among older men. This overall rate is also one of the highest among industrialized countries.

Employment growth in Canada during the 1980s has been concentrated in a few occupational groups. Between 1981 and 1986, the total economy created over half a million new jobs. The data presented in Table 4-4 indicate that four white-collar occupations – managerial, administrative, and related occupations; occupations in medicine and health; sales occupations; and service occupations – accounted for 97 per cent of this overall increase. In other words, these four groups alone were almost completely responsible for the total net employment growth of the economy. By contrast, many blue-collar occupational groups experienced absolute declines in the 1980s – a trend that had begun during the 1970s.

Even in the goods-producing sector, technological and organizational changes are increasing the importance of the white-collar occupations that are normally associated with services. This trend is reinforcing occupational developments that are occurring in the wake of the structural shift to a service-dominated labour market.

In summary, new patterns of employment and wages are affecting the well-being of Canadians in profound ways.

Table 4-4

**Contributions of Occupational Categories to Total Employment Change, Canada, 1981-86**

	Contribution (Per cent)
Occupational categories:	
Managerial, administrative, and related	33.1
Service	30.4
Sales	18.6
Medicine and health	14.8
Social sciences and related	8.8
Occupations not elsewhere classified	8.1
Natural sciences, engineering, and mathematics	6.8
Teaching and related	6.2
Clerical and related	5.3
Artistic, literary, recreational, and related	4.7
Farming, horticultural and animal husbandry	3.6
Fishing, hunting, trapping, and related	0.1
Occupations in religion	—
Forestry and logging	-0.2
Other crafts and equipment-operating	-0.2
Transportation equipment-operating	-1.7
Product fabricating, assembling, and repairing	-2.1
Mining and quarrying, including oil and gas	-2.8
Material handling and related	-3.5
Occupations not stated	-4.2
Processing	-7.2
Machining and related	-7.4
Construction trade	-11.3
Total	100.0

SOURCE Estimates by the Economic Council of Canada, based on data from Statistics Canada.

We have observed that, collectively, working-age Canadians are only modestly better off in real terms than they were, say, a decade ago. While some groups are undoubtedly doing well, other groups and regions are falling behind, whether the measure used is unemployment or income. And there is some evidence that the divisions are becoming more entrenched.

## Unemployment

Unemployment is the most frequently used measure of labour-market distress. Overall, while Canada's unemployment rates have dropped progressively during the past six years, they have still not attained their pre-recession levels;

and, of course, they do not even begin to approach the rates observed during the 1960s and the early 1970s (Table 4-5). And, despite Canada's very favourable employment-growth record, unemployment rates in this country have remained consistently higher, throughout the 1980s, than both the OECD average and the average for the seven major industrialized countries.

Table 4-5

**Unemployment Rates, Canada, by Province, 1968, 1980, and 1988**

	1968	1980	1988
(Per cent)			
Newfoundland	7.1	13.3	16.4
Prince Edward Island	..	10.6	13.0
Nova Scotia	5.1	9.7	10.2
New Brunswick	5.7	11.0	12.0
Quebec	5.6	9.8	9.4
Ontario	3.6	6.8	5.0
Manitoba	3.9	5.5	7.8
Saskatchewan	2.4	4.4	7.5
Alberta	3.3	3.7	8.0
British Columbia	5.9	6.8	10.3
Canada	4.5	7.5	7.8

SOURCE Statistics Canada, *Canadian Economic Observer - Historical Statistical Supplement 1988/89*, Cat. 11-210.

Furthermore, as Table 4-5 shows, the rate of joblessness has been very uneven across the country. By 1988, unemployment had fallen below its pre-recession levels in only two provinces - Quebec and Ontario. While the industrial heartland experienced extremely tight labour markets - in Metropolitan Toronto, for example, the unemployment rate in 1989 dropped below 4 per cent - in other provinces the decline has been frustratingly slow; and in many parts of the country, unemployment rates remain wedged at unacceptably high levels. Indeed, if Ontario is excluded from the calculations, Canada's unemployment rate was 9.5 per cent in 1988. The four Atlantic provinces are still experiencing double-digit rates, and unemployment rates in the four Western provinces are from 2 to over 4 percentage points higher than in 1980. In addition, long-term joblessness has become an increasingly frequent phenomenon over the decade: while 37 per cent of the unemployed in 1980 were out of work for 14 weeks or more, by 1988 that proportion had risen to 42 per cent.

As a result, economic insecurity is endemic in many parts of Canada - people alternate between seasonal jobs and

unemployment or settle for low-paying, relatively dead-end work, often counting on spousal income to help the household get by. During the peak of the commodity and energy booms of the 1970s, for example, many young men outside the industrial heartland found work in the resource sectors and in construction jobs that paid well but required only rudimentary educational skills. But now there are fewer jobs available in resources and construction; and those jobs which are available are often filled by men with more skills and seniority.

Moreover, the extent of "disguised" unemployment – in the form of people who work part-time because they cannot find full-time jobs – is also higher than at the beginning of the decade. There are now more than twice as many people in this situation as in 1979. Nearly one eighth of the employment growth that occurred between 1979 and 1988 involved involuntary part-timers – that is, people who would have preferred full-time employment. These part-time jobs generally pay less and provide fewer fringe benefits than full-time jobs.

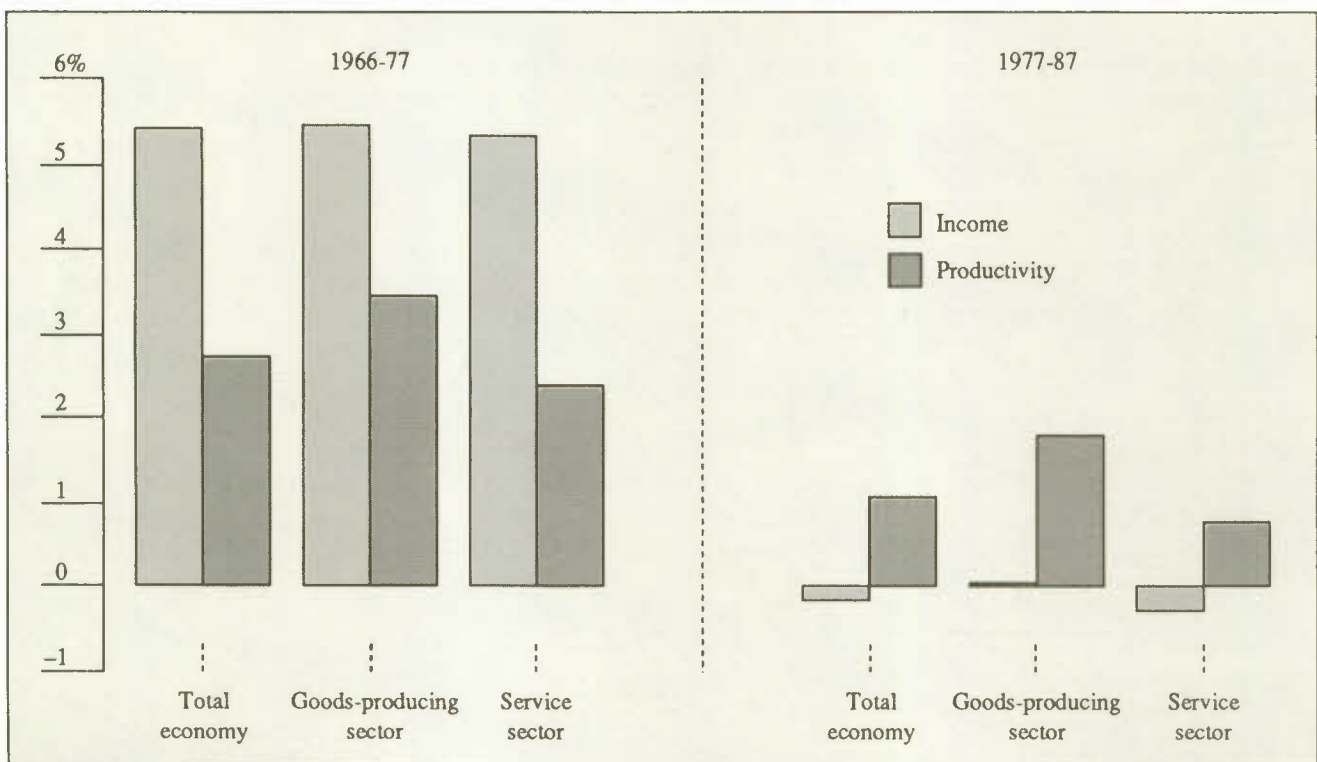
## Wages and Salaries

The stagnation in real labour income, cited earlier, has been another source of economic insecurity in the 1980s. In last year's Review, we pointed out the fundamental imbalance that developed in the mid-1970s, when real wage gains far outstripped stagnating productivity performance. The 1981-82 recession saw a massive shedding of labour in the goods sector, as well as widespread unemployment. With the post-recession recovery, productivity increases have caught up with the earlier wage gains, effectively ending the imbalance. As Chart 4-4 shows, increases in real labour income outstripped productivity growth from 1967 to 1977, particularly in the service sector. After 1977, real incomes were stagnant or falling while productivity grew, albeit slowly, in both goods-producing and service sectors.

Over the longer term, workers' incomes cannot permanently outpace increases in productivity. But other factors too contributed to the complete absence of real wage gains during this period – the prolonged period of high

Chart 4-4

### Change<sup>1</sup> in Real Labour Income and Productivity, Canada, 1966-87



<sup>1</sup> Average annual growth rates.

SOURCE Estimates by the Economic Council of Canada, based on data from Statistics Canada.



unemployment rates in the 1980s among them. Undoubtedly, the presence of many people without jobs diminished the bargaining power of Canadian workers, focusing their attention on matters of job security and eroding their ability to capture productivity gains.

A second factor is related to the double-digit interest rates that have marked the 1980s. High real interest rates on borrowed capital have squeezed profit margins and strengthened the resolve of businesses to reduce or hold back costs in other areas, including labour costs. In the process, the contribution of labour income to personal income has fallen from 71 per cent in 1977 to less than 64 per cent today (Chart 4-5). On the other hand, these higher interest rates have benefited those with investment income – mainly people in the older age groups who have had a chance to accumulate savings.

A final reason lies in a shift in the industry mix, favouring service industries. Currently, real output per worker is about 30 per cent lower in services than in the goods industries. In many services, income per worker is also lower. In community, business, and personal services, and in whole-sale and retail trade – which together accounted for 74 per cent of total employment gains between 1977 and 1987 –

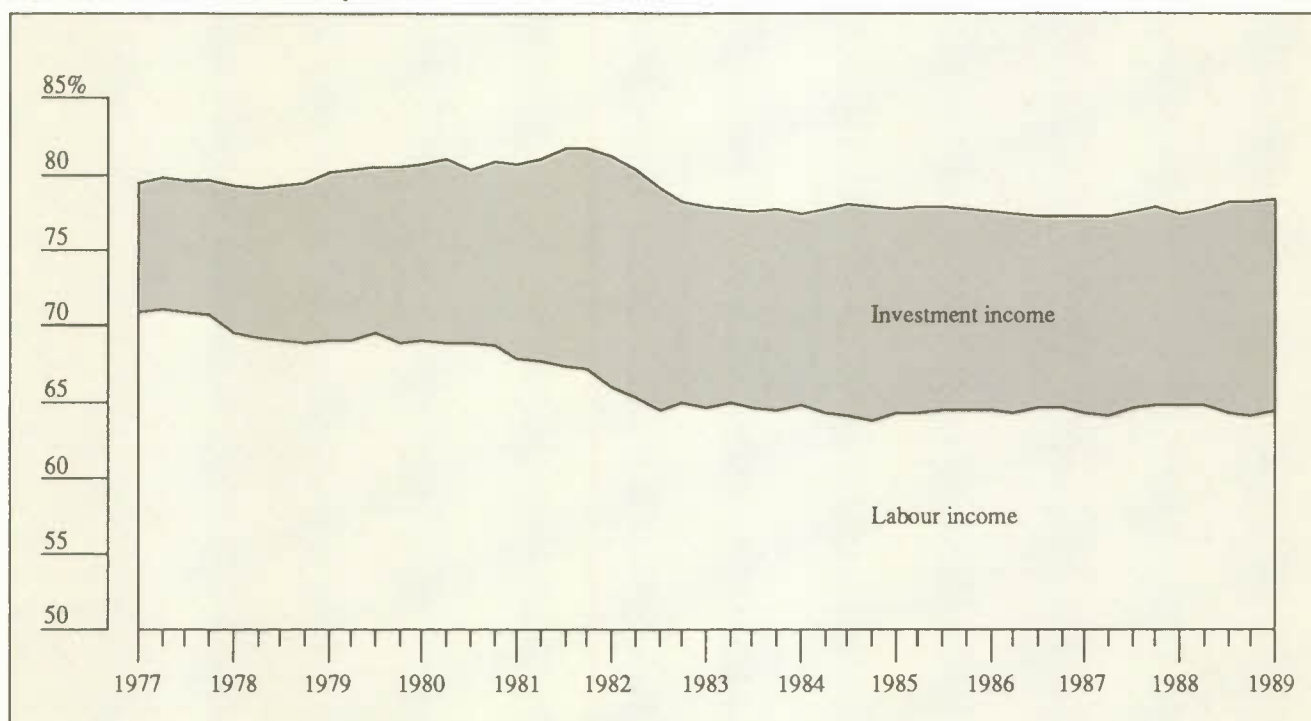
real labour incomes represented only 85 and 67 per cent, respectively, of corresponding levels in the goods industries during that period. Thus it seems likely that the greater absolute employment growth in the lower-income service industries contributed to the decline in overall labour income.

However, one must exercise caution in using explanations based on the industry mix. The fact that wages are predominantly high (or low) in a given industrial sector does not necessarily mean that jobs created (or lost) in the sector will pay the same wage rates. For example, a predominantly high-wage sector can shed low-wage jobs by laying off young workers with little experience. Or a predominantly low-wage sector may adopt technologies that displace its higher-paid craftsmen. In short, the wage distribution *within* an industry can change over time.

In a recent study, Statistics Canada researchers analysed data on jobs held, wages paid, and hours worked in the years 1981 and 1986.<sup>3</sup> This analysis focused on *jobs* and their hourly wage, rather than on *individuals* (who can hold two or three jobs in a year). The two surveys from which the analysis derives – the Survey of Work History for 1981 and the Labour Market Activity Survey for 1986 – were the

Chart 4-5

#### Labour and Investment Components of Personal Income, Canada, 1977-89



SOURCE Based on Statistics Canada, *National Income and Expenditure Accounts*, Cat. 13-001.



first to provide job data of this kind in Canada. The Statistics Canada study looked at jobs from two angles – their industrial distribution and their wage structure.

In measuring the industrial distribution of jobs, the study used the full-time-equivalent (FTE) job as the basic unit. An FTE job is defined as being 40 hours per week, 52 weeks per year; hence it may take two or three part-time jobs to make one FTE job. During the period 1981-86, the shift in jobs towards services and away from the goods-producing sector was particularly strong. The service sector's share of FTE jobs increased by almost 4 percentage points over this relatively short period – from 66 to 70 per cent (Table 4-6). This is almost as much expansion as occurred during either the 1960s or the 1970s. The consumer services (low-paying) and health/education/welfare (above-average-paying) sectors had the largest increase in the share of employment. This type of expansion fits with the view that jobs are being polarized into high- and low-paying extremes.

In looking at the wage structure within industries, the authors of the Statistics Canada study divided the 1981 FTE jobs into 10 wage categories (from the lowest to the highest

wages), each containing approximately 10 per cent of all jobs. Similar wage categories for the 1986 jobs were also established, using an appropriate wage deflator. Then the number of FTE jobs in each category was counted for each year, in order to determine how the wage structure had changed in each wage segment.

Two pockets of above-average job growth were observed in the wage distribution. First, in the very lowest wage category (with pay below \$5.24 per hour in 1986), the number of jobs rose by 275,000. Second, in the above-average paying categories (groups 7, 8, and 9), employment rose by almost 250,000 (Table 4-7). Meanwhile, jobs were disappearing in the middle wage groups (groups 3, 5, and 6).

**Table 4-7**

**Net Change in FTE Jobs, by Wage Level, Canada, 1981 and 1986**

	FTE jobs		Net change
	1981	1986	
	(Thousands)		
Wage level: <sup>1</sup>			
1	821	1,096	275
2	827	836	9
3	918	767	-151
4	884	914	30
5	896	875	-21
6	898	845	-53
7	784	947	163
8	966	982	16
9	963	1,030	67
10	807	767	-40
All levels	8,764	9,059	296

1 The boundaries between the 10 levels are as follows (in dollars/hour):  
1981: 3.87, 4.99, 5.89, 6.81, 7.71, 8.77, 9.99, 11.51, and 14.34.  
1986: 5.24, 6.76, 7.97, 9.22, 10.43, 11.87, 13.52, 15.58, and 19.41.  
SOURCE Statistics Canada, *The Labour Force*, Cat. 71-001, October 1988.

**Table 4-6**

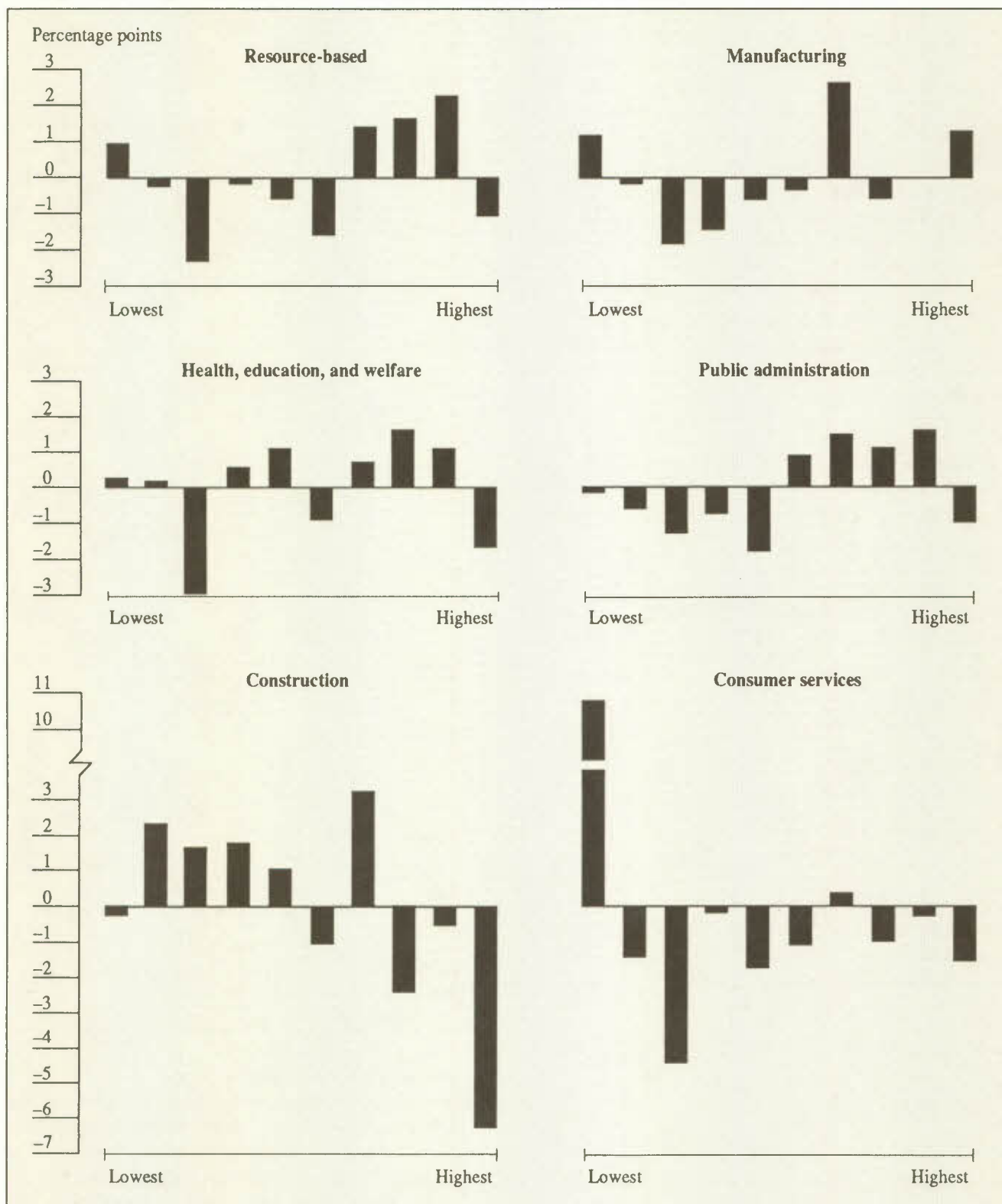
**Distribution of FTE Jobs by Major Sector, Canada, 1981 and 1986**

	1981	1986	Change in share
	(Per cent)		
Resource-based	9.6	7.8	-1.8
Manufacturing (excluding resource-based)	18.8	17.1	-1.6
Construction	5.5	5.0	-0.5
All goods-producing jobs	33.9	30.0	-3.9
Distributive services	12.4	12.7	0.3
Consumer services	19.7	21.3	1.7
Business services	9.7	10.2	0.5
All commercial-service jobs	41.8	44.2	2.4
Health, education, and welfare	15.2	16.9	1.8
Public administration	9.2	8.8	-0.4
All noncommercial-service jobs	24.4	25.7	1.3
All service jobs	66.1	70.0	3.9

SOURCE J. Myles, G. Picot, and T. Wannell, "Wages and jobs in the 1980s: Changing youth wages and the declining middle," Statistics Canada, Research paper 17, Ottawa, July 1988.

The patterns of job change vary considerably when the wage-level data are broken down by industry groups (Chart 4-6). In the natural-resources sector (including the resource-processing segment), there was a marked shedding of lesser-skilled, lower-wage labour – a process that exacerbated unemployment in many of the outlying regions. The result for this sector was an upward shift in the wage distribution, with more jobs being concentrated in the top wage group in 1986 relative to 1981. A similar process occurred

Chart 4-6

Change in the Wage Distribution of FTE Jobs, by Industrial Sector, Canada, 1981-86<sup>1</sup>

1 The chart shows the change, between 1981 and 1986, in the distribution of FTE jobs among 10 wage categories (ranging from "lowest" to "highest" wages), in each of the six major sectors.

SOURCE Based on Myles, et al., "Wages and jobs in the 1980s."

in communications and transportation (not shown in the chart), and in public administration.

Conversely, there was a downward shift in the wage distribution in construction and, even more dramatically, in the already low-paying consumer-services sector. Here, the share of FTE jobs in the lowest wage level rose by 11 percentage points from 1981 to 1986, while jobs disappeared in eight of the nine other wage levels. Hence the contribution of the consumer-services sector to the net growth in low-paying jobs came from two sources: first, its share of total employment grew over the period; and second, a much larger proportion of the jobs within consumer services were at the lowest rates of pay in 1986 compared with 1981.

The question then arises: Who was occupying these low-paying jobs? We have already remarked upon the relative income decline among the young. But income embodies considerations such as time worked and transfers such as unemployment insurance (UI) benefits. What about pay levels? Between 1981 and 1986, workers under 35 experienced a decline in both their real hourly wages and their wages relative to the average wage paid in the economy. This phenomenon was most pronounced among workers aged 16 to 24.

Thus it appears that while the wage-polarization process described earlier was a fairly pervasive phenomenon among the different industrial groups, a considerable part of it may be explained by a downward shift in the real wages paid to younger workers and an upward shift among older workers. The increased concentration of jobs in the bottom wage level was largely a phenomenon of the young, particularly those under 25, and many of these jobs were part-time or part-year, enabling at least some of those employed to attend school or university.

It may be, therefore, that the concern about wage polarization is somewhat overdrawn. In essence, there may have been a trade-off between wages and jobs over the early and mid-1980s. The declining wages paid to young people may have enabled employment expansion to take place, helping to bring down the youth unemployment rate, which is now below the pre-recession (1981) level. With the number of young people entering the labour force now on the decline, the shortening supply of youth labour may cause their relative wages to rise in the future.

Whether they will do so quickly or whether the relative disadvantage in which today's young cohorts find themselves will follow them through their working lives remains to be seen. Other changes in the economy – such as delayed increases in minimum wages, a weakening of the labour

movement, and perhaps more job creation in small firms (where wages tend to be lower) – may work against a quick wage recovery.

## Fringe Benefits

Up to this point, we have focused on jobs and on hourly wages and salaries. What about employer contributions to employee benefit plans? These have risen. For all workers, supplementary income (commonly known as fringe benefits) as a proportion of total labour income has risen from less than 6 per cent in 1967 to almost 10 per cent in 1987. This includes the total value of employer contributions to private pension plans and other employee benefit programs, as well as to the UI and workers' compensation systems, and to the Canada and Quebec Pension Plans (C/QPP).

On the surface, then, it would appear that gains in real benefit entitlements may have mitigated the effect of

**Table 4-8**

### Components of Supplementary Labour Income,<sup>1</sup> Canada, 1980 and 1988

	1980	1988 <sup>P</sup>	Distribution of change, 1988/1980
	(Billions of 1988 dollars)		(Per cent)
Private benefit plans			
Pensions	9.3	8.0	-15.1
Other <sup>2</sup>	6.0	9.2	37.2
All private plans	15.3	17.2	22.1
Public benefit plans			
Unemployment insurance	2.8	6.5	43.0
Workers' compensation	2.5	4.5	23.3
Canada/Quebec Pension Plans	2.8	3.8	11.6
All public plans	8.1	14.8	77.9
Total	23.4	32.0	100.0

1 Comprises payments other than wages and salaries made by employers for the future benefit of their employees.

2 Other private benefit plans include life insurance, disability insurance, dental plans, employer contributions to provincial Medicare premiums, supplementary health insurance, and so on.

SOURCE Based on Statistics Canada, *Estimates of Labour Income*, Cat. 72-005; and unpublished tabulations.



declining real wages and salaries. On closer inspection, however, some of these apparent gains prove to be illusory.

Over the past decade, most of the growth in supplementary labour income (78 per cent) was due to higher employer contributions to three public benefit programs – UI, C/QPP, and workers' compensation. Only 22 per cent of the increase since 1980 can be attributed to the expansion of private benefit plans (Table 4-8).

For example, both the UI system and the C/QPP – which together account for one-third of employers' contributions to the supplementary labour income of Canadians – have raised their contribution rates during the 1980s, but neither set of rate increases was associated with any significant improvement in real benefit entitlements. The rise in UI rates went primarily towards offsetting the greater insurance costs imposed by higher unemployment rates and longer average spells of unemployment, while the higher C/QPP contribution rates were intended to sustain the long-term financial viability of the two pension plans as the population ages.

## Private Pensions

Pensions form by far the single largest employer-provided benefit; they account for one quarter of the value of all supplementary labour income in Canada. With one exception – finance, insurance, and real estate – those sectors of the economy with the highest hourly wages and

salaries also tend to have the highest levels of employer-provided benefits, both in absolute terms and as a percentage of total income. The highest hourly benefit levels, by far, are found in public administration, followed by the heavily regulated services – transportation, communication, and utilities – and then manufacturing. The lowest benefit levels are in the financial and sales sectors.

After increasing fairly steadily for many years, however, the proportion of the labour force covered by a private pension plan declined between 1980 and 1986 from 39.6 to 36.7 per cent. Thus, while those who are members of plans are generally enjoying improved benefit provisions and while others are investing in personal RRSPs, a majority of working Canadians have no work-related pension at all, other than their C/QPP coverage, and they are concentrated in the low-earning categories (Table 4-9).

The recent decline in the extent of coverage stems largely from the patterns of employment growth that have been prevalent in the 1980s. In general, employment growth has been most rapid among those groups with the lowest rates of pension (and other benefit) coverage. Statistics Canada's Labour Market Activity Survey shows, for example, that pension coverage is weakest for:

*Employees of small firms* — Firms employing fewer than 20 persons accounted for nearly three quarters of all employment growth between 1978 and 1986. However, only 14 per cent of employees in those firms are covered by work-related pensions.

Table 4-9

### Incidence of Pensions and RRSP Holdings among Labour-Force Participants Aged 15 to 64, by Earnings Category, Canada, 1984

	Pension plan only	RRSP and work-related pension plan	RRSP only	Neither RRSP nor work-related pension plan
	(Per cent)			
Earnings:				
\$5,999 and less	5.2	0.6	5.9	88.3
\$6,000 – \$11,999	12.1	2.0	9.6	76.3
\$12,000 – \$17,999	27.0	8.7	11.6	52.7
\$18,000 – \$26,999	39.5	17.7	12.3	30.6
\$27,000 – \$35,999	44.4	28.1	11.6	15.9
\$36,000 – \$44,999	40.2	38.3	11.7	9.7
\$45,000 and over	26.9	37.7	22.6	12.7
All individuals	24.6	12.6	10.5	52.2

SOURCE Based on Statistics Canada, Household Surveys Division, unpublished data from the 1984 Survey of Consumer Finances.

*Part-time workers* — Nearly one third of the net new jobs generated in the 1980s have been part-time, but only 15 per cent of part-time workers are covered by pensions.

*Nonunionized workers* — While 78 per cent of unionized workers have pension coverage, only 30 per cent of non-unionized workers are covered. However, the proportion of workers who are unionized has declined during the decade.

*Workers in traditional service industries* — Over half (51 per cent) of employment growth during the period 1980-86 occurred in the "traditional service" industries — retail trade, accommodation, food, and personal services — in which pension coverage is only 18 per cent.

These figures, of course, reflect a one-time snapshot survey of a young labour force that is aging. The critical question is: How many of those who are currently not covered by a private pension plan will eventually acquire such coverage, as they move to new employers and proceed with their careers?

It is not clear how strong is the desire for contributory private pensions among workers in low-income jobs, given the combined protection afforded by the Canada/Quebec Pension Plans and the Old Age Security/Guaranteed Income Supplement system. There are two reasons for this. First, persons in low-income jobs may simply not be in a financial position to see their take-home pay further reduced, especially as the income tax relief that they get on their contributions is minimal. Second, if sustaining living standards after age 65 is a concern, the public system's combined benefits replace a higher proportion of pre-retirement earnings of low-wage earners than it does of high-wage earners.

Over the past few years, however, major changes have been made to the legislation on private pension plans. These changes will improve the ultimate benefits received by plan members, as well as increase the percentage of workers who will receive pension benefits. If the Quebec legislation scheduled to come into force in 1990 is included, pension legislation covering over 80 per cent of plan members in the private sector has been substantially improved since 1986.

Among the revisions, there has been a substantial improvement in the rules governing vesting; the rules now ensure that, in the future, 80 per cent of private-sector plan members will have access to the employer's contributions as well as their own contributions after two years' participation in the plan. As recently as 1986, two thirds of members had to pay into the plan for 10 years before they had a right to take the employer's contribution with them when they

moved to another firm. This change should ensure an increase in private pension coverage in the future.

Another improvement in the new legislation is that it now specifies a minimum interest rate that must be used. This rate usually moves with interest rates in the economy and protects some contributions from inflation, in addition to guaranteeing a fair return. (Ontario is moving to provide explicit indexing for inflation.) In addition, the new legislation in almost all jurisdictions requires private plans to provide better benefits for a surviving spouse when the member dies.

The quality of work-related pensions in Canada is important, because the public pension system (Old Age Security, Guaranteed Income Supplement, and the Canada and Quebec Pension Plans) has been designed to supplement, rather than substitute for, private pensions. Indeed, neither system, standing on its own, could be considered adequate. The public system in this country provides a lower rate of income replacement upon retirement than that of most other major industrial countries, while the existing private system excludes many workers and is paying out, on average, benefits that are well below designated poverty levels for urban areas. Both systems are enhanced, of course, by favourable treatment of personal income taxes.

Looking ahead to the next generation of retirees, however, the situation is mixed. Those protected by private coverage will be better off than today's beneficiaries, thanks to the recent pension reforms: coverage will be wider as a result of the improved vesting provisions, and protection against inflation will probably be better. But Canadians who are ineligible for private pension coverage — because of either the nature of their work (part-time workers, in particular) or the nature of their employer (most small firms) — and who cannot afford to invest in RRSPs will be totally dependent on the public pension system. That will raise some major challenges as we look ahead to the aging of the population — the topic of Chapter 5.

## Inheritance

This brings us to a final question — the transfer of wealth from parent to child. This occurs at two stages — in the early years, through the care, upkeep, and education of children; and, later, through bequests left upon the death of the parents. Generally speaking, wealth accumulated by the older generation through lifetime earnings and savings is transferred to the following generation through bequests.

Given the greater affluence among older groups observed in Chart 4-2, will the transmission of wealth through



bequests effectively counterbalance the observed slowdown in the growth of real incomes of working generations? It is hard to say. The answer depends on the importance of bequests relative to other forms of wealth accumulation, as well as on the changes under way in the approach of the elderly towards bequests. Both are subject to much uncertainty. With respect to the importance of bequests, the available evidence for Canada suggests that inheritances account for just over 40 per cent of total savings.<sup>4</sup> As for the behaviour of the elderly, there are a number of different influences at work. On the one hand, many of them are now living longer, and they may have to draw down their savings during their retirement years. On the other hand, with the provision of assured public pensions and medicare, many of the elderly are maintaining their wealth. In Canada, little information is available on bequests and inheritances, but we can draw some inferences from data contained in the Asset/Debt Supplement of the Canadian Survey of Consumer Finance for 1984.

In both Canada and the United States, wealth is more unevenly distributed than income.<sup>5</sup> Pension entitlements (or wage income) apart, the median Canadian family with a head aged 65 and over had total assets of \$82,000 in 1984; the figure for unattached individuals in that age group was \$28,000. There is, however, a big difference between homeowners and those who rent or who are looked after by relatives in the latter's own home. Renters account for about 40 per cent of the elderly, and most of them depend on the public pension system for their income; few have assets that exceed \$10,000. At the other end of the spectrum are the roughly 60 per cent who own their own home and who will likely live there until they can no longer maintain it; they have assets that average about \$100,000, with home equity accounting for almost half of that amount. But because the distribution of these assets is so uneven, it is unlikely that bequests will do much to resolve the problems identified in this chapter – low income and limited opportunities for wealth accumulation for many workers, especially those with inadequate work skills and education.

## Conclusion

Putting all of this together, it is apparent that the 1980s have been years that warrant both a sense of achievement and a sense of concern. On the one hand, Canada achieved a significant restructuring of industrial activity, combined with employment growth that outpaced that of most other industrialized OECD countries. We also saw a massive reduction in the numbers of elderly with below-poverty incomes, thanks to public programs introduced in the 1960s and 1970s.

On the other hand, some labour-market developments offer reasons for concern. Most obvious are the persistence of historically high unemployment rates in many of the outlying resource-based regions of Canada and the seemingly permanent state of slackness there. Moreover, notwithstanding the high rates of growth in certain skilled white-collar occupations (such as management and administration), a good deal of evidence suggests that the skills quality of many newly emerging jobs is weakening. Real wage and salary levels have not risen over the past decade; proportionately fewer workers now are covered by private pensions; and many of the increases in employer fringe-benefit contributions, it turns out, serve merely to assure the actuarial soundness of the entitlement programs.

From a long-run perspective, an observed trend towards more-polarized earnings, coupled with the escalation of prevailing unemployment rates outside central Canada and the increasing appearance of part-time and part-year jobs, suggests that the labour market may be providing less economic security for Canadians. Investment income as a share of personal income has grown, but only for a minority of Canadians. And what high real interest rates (and, in some cities, the huge run-up of housing prices) are doing is to transfer income from one generation to another – from those in their net borrowing years to those who are net savers.

Canadians with good jobs at the high-income end of the scale, their savings and vested pensions fuelled by high interest rates, can look forward to a relatively affluent retirement; but for those currently in low-paying, entry-level jobs that have limited career prospects, the future may be bleaker. The picture that emerges is that of a fairly large number of jobs that generate only enough income to support a worker and his/her dependents at minimal levels, with little opportunity to save for old age. In the 1980s, many of these working Canadians have coped by having a second worker in the family. Labour-force participation by spouses and older children is already quite high. And among those families without a second worker, many have become more dependent upon transfer payments.

What we do not yet know is whether they can, over their lifetime, achieve greater economic security through the labour market or whether their dependency on government is likely to accumulate. Some among them, of course, are students who are using low-wage employment now to finance an investment in greater earning power in the future. And some, no doubt, are content with their situation. Hence it is too early to say that there is a well-defined group – a “lost generation” – experiencing persistent economic inse-



curity. Still, in parts of Canada there is cause for concern. In future research on unemployment and on social policy, we hope to shed light on this situation.

For those experiencing economic distress, the following questions must be answered:

Will their relative income and employment disadvantage haunt them the rest of their working life?

What are their chances of progressing up a career ladder to higher earnings?

Are there adequate training facilities and employment programs in a world where fewer and fewer jobs offer permanent tenure?

How mobile must they be?

How can they save for their declining years?

How adequate will the public pension infrastructure be when they retire?

We must keep these troubling questions in mind as we turn to some of the other factors that will influence the legacy of future generations.

## 5 Providing for Future Generations

Concern about the well-being of the current generations in Canadian society, discussed in the preceding chapter, can be extended to encompass a consideration of the legacy that will be left to future generations. Two longer-term issues have become a subject of increasing attention in this regard: the changing demographic structure of the population, and the effect of current activities on resources and the environment.

While the aging of the population will increase the responsibilities to be borne by future workers, changes in the environment and in the resource base of the economy will affect the wealth available to be transmitted to them and to their children. There is concern that current activities may be permanently impairing the quality of the environment and undermining the environmental legacy to be bequeathed to future generations.

The lot of the next generation of working Canadians will also be influenced by other factors. The federal government's fiscal problems, discussed in Chapter 3, represent another potentially major liability for the future. And the slower growth in productivity, highlighted in Chapter 2, will determine the rate of growth in real incomes over the longer term.

To put these issues into perspective, it is useful to present them as part of a general framework within which to view the longer-term impact of current activities and to broadly consider our obligations to future generations. This framework will provide a context for the subsequent examination of demographic developments and of resource and environmental issues.

### A Conceptual Framework

The stock of wealth (including knowledge) that we, the current working-age population, pass on to our children will be a major determinant of their standard of living. In assessing this bequest, the relevant question is whether it is consistent with our aspirations for our children. As a minimum, we might ask whether it will enable them, with a comparable effort, to enjoy a standard of living at least equivalent to our own. Ideally, we would want to assess living stand-

ards broadly – i.e., to measure the availability of public and private goods and services, and also to take account of environmental and other social costs that are not captured in existing income measures but have an important bearing on living standards.

The legacy to our children will depend on the choices that we make today between consumption and investment. Figure 5-1 (see box) attempts to illustrate the nature of those choices within a broad framework for measuring the nation's wealth.

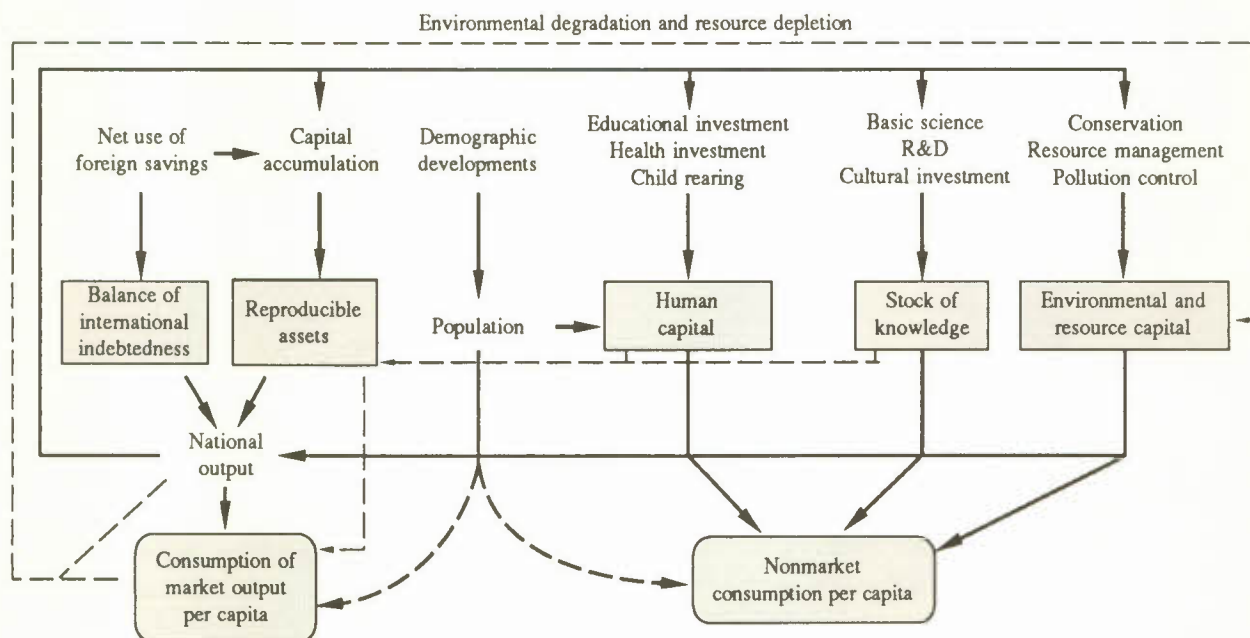
Figure 5-1 is not intended to be comprehensive. Other factors will influence the stock of capital available to support consumption over future periods. The stock of knowledge that can be passed on to future generations, for example, will depend much more on worldwide efforts to foster scientific discovery than on Canada's own investment in basic science. The condition of the Canadian environment will be influenced to a large degree by the environmental expenditures of other countries, as well as by natural events beyond any country's control.

The figure does, however, provide a framework within which to think about the problem of justice between generations. Consider, first, a generation whose current consumption is such that it is depleting the assets it has inherited and increasing the country's net foreign indebtedness. In other words, its net capital bequest to the next generation is negative. This scenario, which coincides with much of the experience of Latin America and Africa during the 1980s, would reduce future consumption opportunities – a result that might reasonably be judged to be unfair to the next generation. This contrasts with the situation where the working population augments the nation's net wealth and expands future opportunities for market and nonmarket consumption. This generation would generally be seen to have fulfilled its obligations because its children are better off when all its activities, including the saving and dissaving undertaken over its life cycle, are considered.

Does the behaviour of the current generation of working Canadians come closer to the first or to the second of these models? The analysis in this and previous chapters points to some disturbing trends, including the growth in foreign

Figure 5-1

## The Process of National Wealth Creation: Current Choices and Future Possibilities



The top of Figure 5-1 shows the public and private activities that influence the accumulation of wealth. Then, reading across the middle of the figure, the stock of wealth includes reproducible assets, such as buildings, machinery, and durable goods; human capital, knowledge and enterprise, together with laws and a system of justice; and environmental and resource capital.

The nation's net wealth depends on the value of its assets minus the amount of its net indebtedness to the rest of the world. While future generations will be richer to the extent that they are recipients of income-producing assets, they will be poorer to the extent that they inherit net foreign obligations that must be met through ongoing payments of interest and dividends to non-Canadians.

Figure 5-1 departs from current accounting conventions in several respects. First, it depicts a broader picture of the net national wealth. In the "national balance sheet" produced by Statistics Canada, it is primarily Canada's international indebtedness and the country's stock of reproducible assets that are measured. Though much of the nation's wealth is tied up in its investment in individuals, for example, there is currently no attempt to estimate human capital. Second, the figure recognizes that assets do not simply contribute to national output; some components of the nation's wealth, including some of our environmental capital and part of the available pool of knowledge, will generate services that are of direct value to individuals and to society.

A third aspect that is emphasized in the figure—one that is also not treated adequately in the national accounts—is the negative impact of production and consumption activities on the nation's stock of environmental and resource capital. The measurement of net national product is intended to allow for capital depreciation, but current national-accounts data only capture the depreciation of machinery and structures. In assessing the intergenerational implications of current activities, it is important to consider not only the amount of capital accumulation by the current generation, but also the amount of capital *decumulation* resulting from environmental degradation and resource depletion.

Population is included in the figure to show that demographic developments will affect both the total production of the economy and the division of national output among individuals and groups. Population growth will help determine the size of the nation's stock of human capital, but it can also have other potentially significant impacts on the productive potential of the economy, as well as on the income transfers among age groups.



indebtedness, along with the decline in the ratio of net wealth to GDP since 1980, and indications of mounting environmental problems.

## The Underlying Demographic Trends

Canada's social and economic agenda very much depends on the underlying demographic trends. To detect their influence, one must look at long periods of time, spanning decades. Past trends are illustrated in Table 5-1, which shows the impact of average fertility rates, death rates, and net migration rates on the age distribution of the population between 1921 and 1988.

Canadians, as a group, are becoming older. The proportion of those aged 65 and over has more than doubled – rising from 5 to 11 per cent – since 1921, and the proportion of the population aged 19 and younger is now much smaller

than it was 60 to 70 years ago. Since 1921, there have been two demographic cycles, related mostly to swings in fertility rates. Fertility rates dropped between 1921 and 1941, reflecting in part the impact of the Great Depression. By 1951, fertility rates had returned to the level recorded in 1921; and by 1961, these rates exceeded the 1921 rates by about 10 per cent. At the opposite end of the spectrum, advances in medical science have been lengthening the lifespan of Canadians. And immigration rates increased substantially after the Second World War.

Over time, these developments have had an important impact on the need for infrastructure related to education, health care, and old-age security. Indeed, it can be argued that the foundations of Canada's mix of private and public social policies developed by our grandparents or parents in the postwar years represented a "social compact" between generations. The design of the Canada and Quebec Pension Plans, for example, entailed a number of intergenerational

Table 5-1

### Demographic Trends in Canada, 1921-88<sup>1</sup>

	1921	1931	1941	1951	1961	1971	1981	1985	1986	1987	1988
	(Thousands)										
Total population	8,788	10,377	11,507	14,009	18,238	21,568	24,342	25,165	25,353	25,625	25,923
	(Per cent)										
Average annual growth rate for population	2.0	1.7	1.0	2.0	2.7	1.7	1.2	0.8	0.7	1.1	1.2
	(Per thousand population)										
Average birth rate	30.1	25.9	21.6	26.6	27.7	20.5	15.5	15.0	14.8	14.6	14.5
Average death rate	11.9	11.4	10.1	9.6	8.2	7.4	7.2	7.0	7.2	7.1	7.2
Average migration rate	1.9	2.8	-0.8	1.3	7.0	3.6	3.5	2.2	1.7	3.2	4.2
	(Per woman)										
Total fertility rate <sup>2</sup>	3.50	3.20	2.83	3.50	3.84	2.21	1.71	1.67	1.67	1.67	1.67
	(Per cent)										
Age distribution											
0-19 years	43.6	41.6	37.5	37.9	41.8	39.4	32.0	29.4	28.9	28.6	28.4
20-64 years	51.7	52.8	55.8	54.4	50.6	52.5	58.3	60.2	60.4	60.5	60.5
65 years and over	4.8	5.6	6.7	7.8	7.6	8.1	9.7	10.4	10.6	10.9	11.1
Dependency ratio <sup>3</sup>	93.6	89.4	79.2	84.0	97.8	90.4	71.6	66.0	65.5	65.3	65.3

1 All average rates are for the preceding 10 years with the exception of the rate for 1985, which is for the preceding four years. The rates for the years 1986 to 1988 are annual rates.

2 Defined as the average number of children that will be born to women if they survive through their reproductive years and bear children in accordance with the age-specific fertility rates observed in a given year.

3 Defined as the number of dependents (under 20 and 65 and over) per 100 persons of working age (20 to 64).

SOURCE Statistics Canada, *Historical Statistics of Canada*, 2nd edition, 1983; and data from Statistics Canada, Demography Division, October 1988.

commitments. The initial low contributory rates and the phasing-in of full benefit entitlements after a contribution period of only 10 years represented a transfer of income from the younger to the older generation of workers. In turn, the contributions of working Canadians were made available to the provinces at favourable terms, initially to finance postsecondary educational institutions for the young and the medical and hospital infrastructure, which benefits all groups, but principally the old. The public sector – federal, provincial, and local – administered and enforced this “social compact,” which tied generation to generation through their respective lifespans. The arrangement raised investment in education, as well as support for the sick and the elderly, to levels that only richer families could otherwise achieve.

## The Demographic Simulations

In projecting the future population, one cannot rule out the possibility that some trends may reverse themselves, as was the case for fertility rates and migration on two previous occasions. Barring the unforeseen, however, the consensus is that death rates in Canada – i.e. the proportions, within each age group, of people who die during any given period – will remain generally stable.

Hence the crucial factors related to future population growth and structure are fertility rates and net immigration levels. There are two possible trends in fertility rates. Although they have leveled off over the past few years, they could resume their decline in the 1990s. Factors such as the cost of raising children – including the cost arising from the interruption of a woman’s career – could contribute to a continued downward trend. Some argue, however, that appropriate incentives, including the expansion of child-care facilities, could lead to a return of fertility rates to a level that would maintain the normal growth rate of the population.

Ranges of future values for fertility rates and net immigration levels can be established, and one can speculate on what the boundaries of these ranges imply. Here, we consider three alternative demographic projections, which combine three possible developments for the fertility rate with two possible developments for net immigration. We project, for example, that the fertility rate could remain where it is currently; that it could gradually return (by 1998) to a level marginally above the replacement level (2.17 births per woman of child-bearing age), with no change thereafter; or that it could continue the downward trend at play since the mid-1960s, with a leveling at 1.17 births per woman of child-bearing age in 1998 and no change thereafter.

The spread between these two extremes is not as wide as that observed during the period from 1921 to 1988. But the case where a turnaround in the fertility rate is assumed is of substantial interest because of its impact on the age distribution during the early part of the next century. Higher fertility rates would slow the “greying” of the Canadian population and would imply a much different set of demands on the working population, who will have to cope with both the needs of their children and those of their own parents at the same time. The larger the numbers who must depend upon others for support, the more productive must be the work force.

With respect to future annual immigration, it seems reasonable to focus on two alternatives. The first would set average net migration levels at 60,000 persons per year – much the same as in the past. The second would raise the number to the high point recorded in recent years, phasing in a doubling of the current level of immigrants to 120,000 persons (net) per year by 1995. The high-migration case would account for a new net total, during the next decade, of 450,000 new Canadians over and above the first-case level of 60,000 per year. Table 5-2 shows the future population of Canada to the year 2040 under these alternative scenarios for fertility and immigration.

For comparison purposes, it is convenient to choose the scenario combining constant fertility rates and low net immigration as the base case. If no change occurs in those two variables, population growth rates would average less than 1 per cent per year by 1991. Thereafter, population growth would continue to slow down, falling below 0.5 per cent per year by the year 2030.

In the low-growth case – which includes a continuation of the decline in fertility rates, combined with low levels of net immigration – the annual growth rate of the Canadian population could fall below 0.5 per cent by the year 2000. Under those circumstances, the population would actually begin to decline by the year 2040.

At the other end of the spectrum, a return of fertility rates to replacement levels by 1998 and an increase in the level of net immigration to 120,000 persons per year by 1995 would maintain the growth rate of the Canadian population above 1 per cent until 2020. In fact, population growth during the following decade would average about 1.2 per cent and would remain strongly positive to 2040 and beyond.

By the year 2000, the spread between the high and low cases would be about 2 million persons. By the year 2040, the population in the high-growth case would be 15 million

Table 5-2

## Projected Population of Canada, Three Scenarios, 1988-2040

	1988	1991	1992	1993	1994	1995	2000	2010	2020	2030	2040
	(Millions)										
Base case <sup>1</sup>	25.9	26.6	26.8	27.0	27.3	27.5	28.5	30.3	31.9	33.3	34.6
	(Per cent)										
Change	1.2	0.9	0.8	0.8	0.8	0.8	0.7	0.6	0.5	0.4	0.3
	(Millions)										
Low-population-growth scenario <sup>2</sup>	25.9	26.5	26.7	26.9	27.1	27.2	27.8	28.6	29.2	29.6	29.7
	(Per cent)										
Change	1.2	0.8	0.7	0.7	0.6	0.6	0.4	0.3	0.2	0.1	--
	(Millions)										
High-population-growth scenario <sup>3</sup>	25.9	26.7	27.0	27.3	27.7	28.0	29.8	33.4	37.0	40.7	44.6
	(Per cent)										
Change	1.2	1.1	1.1	1.2	1.2	1.3	1.2	1.1	1.0	0.9	0.9

1 Assuming a constant fertility rate and low net migration.

2 Assuming a low fertility rate and low net migration.

3 Assuming a high fertility rate and high net migration.

SOURCE Estimates by the Economic Council of Canada, March 1989.

greater than in the slow-growth case. This shows the power of demographic developments to shape the size and structure of society over the long term.

The differences in age structure are also dramatic. Three broad age groups are discussed here – the under-20 group, the 20-to-64 group, and the 65-and-over group.

Whatever projection is chosen, there will be between 10 and 11 million Canadians aged 65 and over in the year 2040 (the difference being accounted for by immigration) – up from just under 3 million in 1988. The rate of increase of this group will be slow over the next 20 years, but it will then accelerate rapidly – from 5 million in 2010 to 10 million or more by 2040.

Depending on the course of fertility and immigration, the number of working-age Canadians able to support the elderly could vary between 15 and 23 million. That wide difference has enormous implications in terms of the burden that each worker would have to support, and the issue is compounded by the prospect that there could be a wide swing in the number of young dependents. In the low-growth case, the number of people under 20 falls from 7.4 million in 1988 to 6.7 million in 2000 and to 3.9 million

in 2040. In the high-growth case, the young population rises to 11.6 million in 2040. That is clearly the major swing factor in Canada's future.

Will there be a large youth population in need of such public services as child care and education? Or will the shrinking numbers of young people offset the demands of a now-older baby-boom generation? That will depend almost entirely on the choices made by women of child-bearing age in the intervening years. Their choices, in turn, will be influenced by their access to child-care services, by the kinds of jobs they have, and by their own personal values.

Indeed, it is the 20-to-64-year olds – the working population – who are most crucial to the cohesion of Canadian society. They will be the producers of the goods and services used by all age groups, and they will be the care givers to both the elderly and the children. In the low-growth case, their numbers will actually be shrinking after the year 2010. In all scenarios, their share of the population declines from 60 per cent in 1988 to about 50 per cent in 2040 (Table 5-3). This "sandwich" generation – which will, in fact, encompass several generations over the years – faces a very special challenge: its members must learn how to raise their own living standards at a time when their parents and their



Table 5-3

## Projected Age Distribution of the Canadian Population, Three Scenarios, 1988-2040

	1988	1991	1992	1993	1994	1995	2000	2010	2020	2030	2040
	(Per cent)										
Base case <sup>1</sup>											
0 to 19 years	28.4	27.7	27.5	27.4	27.2	27.0	26.1	24.0	22.2	20.7	19.5
20 to 64 years	60.5	60.7	60.7	60.6	60.6	60.6	60.5	59.6	57.0	53.7	50.5
65 years and over	11.1	11.6	11.8	12.0	12.2	12.4	13.4	16.4	20.8	25.6	30.1
Low-population-growth scenario <sup>2</sup>											
0 to 19 years	28.4	27.6	27.3	27.0	26.7	26.3	24.1	20.0	17.1	14.9	13.2
20 to 64 years	60.5	60.8	60.9	60.9	61.0	61.1	62.0	62.3	59.5	54.8	49.6
65 years and over	11.1	11.6	11.8	12.1	12.3	12.5	13.8	17.6	23.4	30.2	37.1
High-population-growth scenario <sup>3</sup>											
0 to 19 years	28.4	27.8	27.7	27.7	27.7	27.7	27.9	27.8	27.1	26.5	26.0
20 to 64 years	60.5	60.6	60.5	60.4	60.2	60.0	59.1	57.1	54.9	52.7	51.1
65 years and over	11.1	11.6	11.8	11.9	12.1	12.3	13.0	15.1	18.0	20.8	22.9

1 Assuming a constant fertility rate and low net migration.

2 Assuming a low fertility rate and low net migration.

3 Assuming a high fertility rate and high net migration.

SOURCE Estimates by the Economic Council of Canada, March 1989.

children will be placing high-priority claims on the public purse (and hence on the tax system) and on the allocation of private goods and services.

### Implications of a "Greying" Population

We have already witnessed some of the effects of the changing age structure. The aging of the Canadian population has affected the supply of workers and the demand for public- and private-sector goods and services. There has been a need, for example, to meet the demands of the elderly for increased public transportation, greater health care, and different forms of care-giving accommodation. In future years, and particularly after 2010, these pressures will intensify.

We might reasonably expect that in the future, as in the past, most of the economy's adjustments to demographic shifts will occur through the response of firms and individuals to changing market signals. Still, there remains the question of the overall implications of the very sharp projected rise in the ratio of retirees to workers. In the context of the framework set out earlier, we might ask whether the current

working population's pattern of saving and record of wealth creation is adequate to ensure that it will be reasonably self-sufficient in old age. Or will the working population of that day, faced with the increased resource requirements of the elderly, be poorer?

To address concerns about the growing proportion of retirees, it is necessary to look beyond the financial questions to consider the implications for the growth and allocation of the economy's real resources. As shown in Chapter 4, issues related to pension financing have been a prominent part of the public debate on aging. Prior to the recent reforms with respect to private registered pensions, concern was focused on the changes in contribution rates needed to maintain the solvency of the Canada and Quebec Pension Plans into the next century. Inevitably, these issues affect, and are affected by, the economy's productive potential or the share of output available to particular age groups.

In this connection, it is significant that social security in Canada, as in most other countries, is largely financed on a pay-as-you-go basis.<sup>1</sup> Essentially, this involves taxing the working generation to pay benefits to the retired generation. While there are a number of arguments for and against the pay-as-you-go system, what is probably most significant

about this method of financing is that it does nothing to ensure that the resource base of the economy will be expanded to cover the future requirements of existing contributors. That need not be a problem if other forces are generating the economic growth required to cover the C/QPP's promise of future real benefits. But if that does not occur, the fulfilment of commitments to the large cohort of elderly that will exist after about 2020 will limit the resources that are available to support consumption by the future working population.

Thus, if the productive potential of the economy does not expand to cover the increased needs of the elderly, particularly for the period after 2020, future workers will have to lower their consumption or reduce the public and private investment that adds wealth to society, and they will have to pass the costs on to their offspring. It is useful, therefore, to consider the growth in output and productivity that is necessary to ensure that the requirements of the elderly do not impinge on the well-being of future workers.

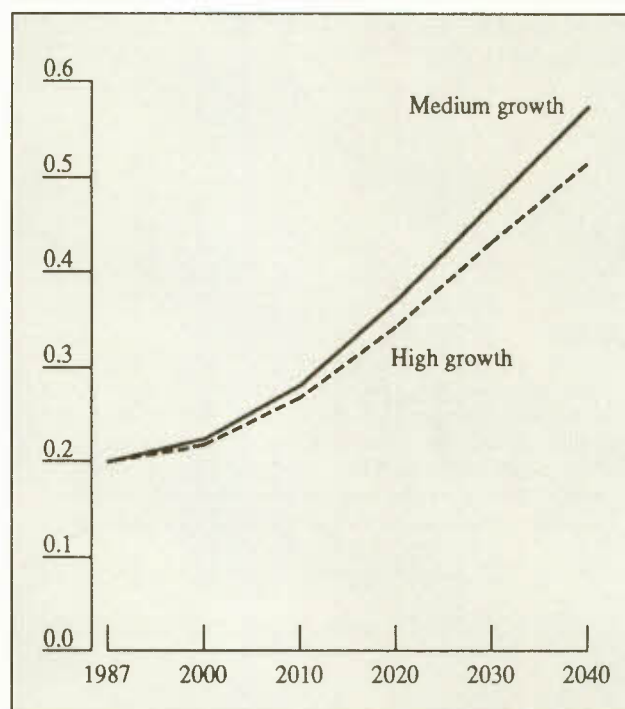
The population projections in Table 5-3 show the growth in the proportion of elderly to the year 2040. A better indication of the growing costs of supporting the elderly, however, can be gained by looking at changes in the size of the dependent population aged 65 and over relative to the size of the labour force. This "dependency ratio" is projected in Chart 5-1, using our base-case population estimates and two different sets of assumptions regarding labour-force participation.

In the medium-growth case, we assume that current trends to higher participation rates by women in all age groups and lower participation rates by men aged 55 and over will continue, but at a gradually diminishing rate until the year 2000. Thereafter, we assume that participation rates will remain relatively constant. In the high-growth case, we allow for the possibility of stronger labour-force growth, resulting from a somewhat sharper rise in female participation and increased labour-market involvement by men and women aged 55 and over. The evidence shows that the elderly are becoming healthier and more active. As employers become more sensitive to their special job needs, the participation rates of the elderly could conceivably reverse direction and move to significantly higher levels. In this case, the ratio of retirees to workers in 2040 falls from 57 per cent in the medium-growth case to 51 per cent in the high-growth case – a development that would both enhance the growth in real income in the economy and reduce the requirement of the older generation for income assistance.

In trying to set out the dimensions of the challenge posed by an aging population, we can assess the resources re-

Chart 5-1

Projected Old-Age Dependency Ratios,<sup>1</sup> Canada, 1987-2040<sup>2</sup>



1 Population aged 65 and over, as a proportion of the labour force.

2 The medium-growth projection is based on current trends in labour-force participation rates. The high-growth projection assumes somewhat higher participation, including a reversal of the downward trend in the participation rates of men aged 55 and over.

SOURCE Estimates by the Economic Council of Canada.

quired to meet the income and health-care needs of the elderly, under a range of assumptions. Using labour-force projections, we can also estimate the productivity growth that is required to meet those income and health-care needs and to sustain the living standards of the working population, as measured by the output per worker, net of old-age dependency costs. The results are set out in the three scenarios in Table 5-4.

- The base case, which uses the demographic assumptions described in Table 5-3, assumes medium labour-force growth and a 1-per-cent annual increase in public-sector real per-capita expenditures on health. This allows for some deceleration of recent trends in health-care costs, but it seems to be a reasonable projection for the longer term. The income requirements of the elderly are maintained at their base-case level (as is also done in scenarios B and C). In the base case, the rate of productivity increase required to meet the needs of the elderly population rises from 0.1 per cent in the period 1987-2000 to about 0.5 per cent in the period



Table 5-4

**Productivity Growth<sup>1</sup> Required to Cover Demographic Changes and Increases in Health-Care Costs, Three Scenarios, Canada, 1987-2040**

	Base case <sup>2</sup>	Case B <sup>3</sup>	Case C <sup>4</sup>
	(Per cent)		
1987-2000	0.10	0.17	0.06
2000-2020	0.33	0.56	0.24
2020-2040	0.46	1.15	0.31
1987-2040	0.32	0.68	0.22

1 Measured as the average annual rate of increase in labour productivity necessary to maintain the GDP/employee ratio, net of old-age dependency costs per employee, at the base-year level.

2 Assuming medium labour-force growth and a 1-per-cent annual increase in real per-capita health expenditures.

3 Assuming medium labour-force growth and a 3.5-per-cent annual increase in real per-capita health expenditures.

4 Assuming high labour-force growth and constant real per-capita health spending.

SOURCE Estimates by the Economic Council of Canada, March 1989.

2020-2040. The other two scenarios show that the outcome could be totally different if other assumptions are used.

- Case B uses the same assumptions for labour-force growth but allows health-care costs per capita to escalate at an annual rate of 3.5 per cent (in real terms). While this rate may seem highly pessimistic, it is consistent with recent Canadian experience.

- Case C employs a more optimistic set of assumptions: high labour-force growth and constant real per-capita health spending.

As Table 5-4 shows, the aging of the population involves a claim on productivity in the next decade, averaging somewhere between 0.06 and 0.17 per cent. Over the critical period between 2020 and 2040, however, the claim could rise to over 1 per cent. The latter rate of productivity improvement is quite possible; but what is highly unlikely is that there will be no other claims on that productivity gain. Indeed, what these figures demonstrate is that while the aging of Canada's population in the next century will not necessarily jeopardize the future living standards of the working population, their claims will cut deeply into the annual per-capita income-growth dividend. As a consequence of the increase in the ratio of retirees to workers, therefore, improvements in living standards may well be more difficult to achieve.

The foregoing calculations made no provision for real income gains by either the elderly or the workers. If we augment the base-case assumptions in Table 5-4 to provide for a 1-per-cent annual improvement in the living standards of both the elderly and the working population, that would require much faster labour productivity growth, averaging about 1.3 per cent a year over the period from 2000 to 2040 rather than the 0.32 per cent of the base case. Thus, looking beyond the turn of the century to the time when the baby-boom generation reaches the age of 65, the growth in the ratio of retirees to workers will pose a daunting challenge to the economy's performance and its capacity to generate growth in real incomes.

The crucial question is: How fast will productivity be growing in future years? Looking back in time, we observe wide fluctuations in productivity growth,<sup>2</sup> varying from almost 2.5 per cent over the period 1962-73 to about half that rate in the 15 years since 1974. Our projections in Chapter 3 had annual productivity growth rates averaging less than 1 per cent to the year 2000. If Canadians can do no better than that, the aging of the population becomes very significant indeed. In contrast, if, with the unfolding of the electronic age, productivity growth should rebound to over 2 per cent per annum, there would be no difficulty in ensuring rising living standards for both workers and retirees, particularly over the next several decades.

Our purpose, in exploring these possible scenarios, is first to determine whether there is a risk of a clash in priorities between future workers and retirees – and such a risk does indeed exist – and, second, to identify the policy levers at our disposal today to avoid such a clash in the future. Investments by the current working population – in infrastructure, in individuals, and in the development and application of ideas – are one lever, as they have the potential to generate productivity improvements over the longer term. The other levers are the factors affecting the requirements of a growing elderly population – i.e., affecting the cost of providing quality health care and the circumstances that determine their participation in the labour force. In short, there is considerable scope for public policy to enhance our legacy to future generations and to help fulfil expectations for continued improvements in living standards.

### **The Environmental and Resource Legacy: Some Qualitative Considerations**

In considering the implications of current developments for future generations, we must look beyond the published figures and the traditional national-accounts concepts of output and productivity in order to take account of the



impact of current activities on our environmental and resource legacy. For this, too, will have an important bearing on the quality of life and on the growth in real incomes.

In the past, environmental effects could be ignored because the potential of our natural assets seemed almost limitless. But events of the last few decades have drawn attention to the finite nature of Canada's supply of renewable resources and to the vulnerability of the ecosystem. There is now an awareness that, as one observer has put it, "the natural environment can no longer be viewed as a bathtub, where once each month the ring needs to be cleaned, but the drain never clogs."

### Natural-Resource Supply

The resource sector is particularly important to Canada, generating about half of its export volume and accounting for a large share of total output – over 20 per cent in a province such as Alberta, for example. In considering the environment as a whole, it is useful to distinguish between renewable and nonrenewable resources.

In the case of *nonrenewable resources*, such as fossil fuels and base metals, there is an ongoing process of discovery and depletion that must be taken into account in calculating the overall stock of assets that will be available to generate income in future periods.<sup>3</sup> That the current generation is rapidly consuming resources is not in itself undesirable. What is important, from the perspective of future generations, is the productive capacity and knowledge of substitutes that the next generation will inherit.

In considering the prospects for future generations, what is of interest is the rate at which we are depleting the nation's resource base. The available data, however, pertain not to the natural endowment itself but to the reserves that have been proven or that can be inferred from past exploration. And so, in the case of such base metals as copper, zinc, and lead, for example, there has been a very significant decline in Canada's reserves over the past decade. That decline, in turn, can be related to the fall-off in exploration since the mid-1970s, caused by weak demand and falling prices. In contrast, gold exploration has revived, with the result that the reserves of gold contained in ores have quadrupled. Similarly, the reserves of fossil fuels reflect economic as well as geological factors, and so they are not a true measure of future resource availability.

Governments have at times introduced explicit measures to ensure that public revenues from nonrenewable resources

go towards investment rather than current consumption. This was a prime consideration in the establishment of the Alberta Heritage Savings Trust Fund (AHSTF) in 1976. But the experience of the AHSTF also illustrates the difficulty of saving for the future; the fund initially received 30 per cent of the province's revenues from nonrenewable resources, but this transfer was reduced and then entirely eliminated in 1987-88, in response to the province's difficult economic and fiscal circumstances. However, the assets accumulated prior to 1987 continue to generate income for the province.

In contrast, in the case of *renewable resources*, it should be possible to preserve and even enhance the value of the resource base through appropriate long-term management. In practice, attempts to preserve the supply of renewable resources have been subject to a number of problems.

It was not long ago that access to the fishing grounds was totally unregulated. As one might expect, with the fisheries being treated as a common property resource, this eventually resulted in "too many boats chasing too few fish." Concern over the potential collapse of certain overfished stocks led to the introduction of federal controls, to improved conservation practices, and to the promulgation in 1977 of a 200-mile limit for Canada's fisheries jurisdiction. More recently, a quota system has been introduced that enables the government to control the quantity of catch for most species in designated management zones.

While these measures have had some positive results, the management of the fishery continues to pose a major challenge. This was vividly underlined by the recent finding that northern cod stocks are far below previous estimates, and that quotas must be sharply reduced to allow the stock off eastern Newfoundland and southern Labrador to replenish itself. Current problems off the East coast reflect a number of factors: the difficulties in scientifically assessing fish stocks; the inadequacy of Canadian government efforts to enforce fishing quotas; and the failure of the joint efforts by Canada and other countries (working through the Northwest Atlantic Fisheries Organization) to regulate fishing beyond Canada's 200-mile jurisdictional limit.

Problems of resource management have also been evident in the case of other renewable resources, such as forests and farmland, that do not have common-property characteristics. In the case of farmland, there is evidence that intensive farming practices have resulted in considerable soil degradation. It has been estimated that, as a result of years of inadequate long-term management, the organic content of soils has declined by between 36 and 49 per cent in the Prairies and by 50 per cent in Ontario and Quebec. In

a 1984 report, a Senate Standing Committee estimated that soil degradation costs \$1 billion a year in lost income.

Over 90 per cent of the forests in Canada are on Crown land. Long-term licences provide private firms with exclusive access to defined tracts of Crown land, while generally obligating the licence holders to invest in infrastructure development and forest regeneration. However, the forest-management practices of private firms and the policies of governments have not ensured adequate levels of reforestation. The amount of formerly productive forest land that has gone to waste has been increasing over time and, at last count, stood at 22 million hectares – about 10 per cent.

Annually, Canada loses almost twice as much productive forest land through fires and pests as it does through planned harvesting (Chart 5-2). This year was no exception, with the Prairie provinces, in particular, being scourged by fires that have destroyed more than 1.8 million hectares of forest and bush in Manitoba alone. Additions to the stock of productive forest through planting and seeding and through natural regeneration compensate for only about 70 per cent of the annual loss.

With the forests – as with the fishery – it is possible to rebuild resource stocks. Increased and improved silvicultural activities could alter the balance between depletion and growth of Canada's productive forest land; they could even lead to the recovery of some nonstocked land that has gone to waste. But since the benefits of actions taken today are unlikely to be realized for perhaps 75 to 80 years, appropriate forestry policy requires a strong sense of obligation to future generations.

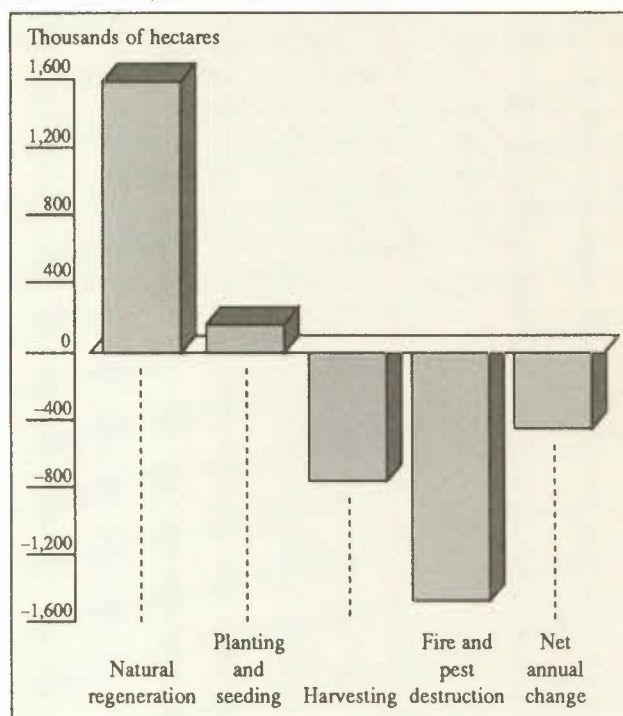
## Environmental Quality

To the extent that the current generation degrades the environment, it is consuming capital and reducing the heritage of future generations. But the quality of the environment has a direct influence on the welfare of individuals; environmental changes, therefore, cannot be evaluated solely in terms of their effect on the productive capacity of the economy. A decline in environmental capital, such as clean air and pure water, that conveys important qualitative benefits cannot easily be reversed or offset by other developments.

The social costs arising from environmentally harmful activities are largely absent from the national-accounts system. In the calculation of GDP, there is no imputation for the services provided by the environment and no attempt to reflect changes in the value of these services. Moreover,

Chart 5-2

Average Annual Change in the Area of Productive Forest Land, Canada, 1977-81



SOURCE Based on T. G. Honer and A. Bickerstaff, *Canada's Forest Area and Wood Volume Balance, 1977-81*, Canadian Forestry Service (Ottawa: Supply and Services Canada, 1985).

the pollution-control expenditures incurred by governments are treated as a final, rather than intermediate, outlay, leading to the paradox that environmental clean-up can increase GDP.

Attempts to fill in the missing data and to develop a picture of the changing state of the environment over time are complicated by the lack of information on the flow of wastes and pollutants, and on the absorptive and regenerative capacity of the environment. There is much that we must learn about the effects of environmental pollution, and this is particularly true as global environmental hazards are becoming of increasing concern.

There has been some success in addressing specific local contaminants that threaten individual and animal health.<sup>4</sup> At the same time, however, difficulties are mounting in meeting the growing requirements for waste management. In 1985, about one quarter of the population in large communities (over 100,000 people) was not served by waste-water treatment facilities – a situation that had not changed much from a decade earlier. While some progress has been



achieved in regulating the effluent from major industries (e.g., pulp and paper mills, and petroleum refineries), it has been difficult to control toxic discharges from the many smaller and more diffuse sources and to develop appropriate waste-storage or -disposal sites. As a result, mounting disposal costs have, in some cases, served as a magnet for criminal activities. Finally, there is the long-lingering conundrum of how to dispose permanently of Canada's growing stock of spent, but still radioactive, nuclear fuel.

The complexity of the issues confronting environmental authorities is illustrated by developments with respect to air quality. Ambient air quality has improved since 1975 in Canadian cities. By 1985, concentration levels were generally much closer to what is "acceptable" in terms of protecting human health, as well as in terms of visibility, animal life, and the quality of the soil, water, and vegetation. But there are areas of concern. Average ground-level ozone concentrations in urban areas have remained well above "maximum acceptable" levels, raising questions about the effectiveness of current federal vehicle-emission standards. Moreover, findings suggest that repeated exposure to traces of toxic metals, fibres, and organic compounds in the atmosphere can be severely detrimental to human health.

Also, despite the improvements achieved in ambient air quality, acid rain has resulted in costly damage to fisheries,

forests, agriculture, and wildlife in eastern Canada. The acid that is produced in the atmosphere has its origin in emissions of sulphur dioxide and nitrogen oxide; and while the former has been decreasing over time, the latter has been increasing (Table 5-5). Federal and provincial governments have introduced programs to reduce both types of emissions, but over half the acid rain in eastern Canada comes from the sulphur-dioxide emissions of coal-powered electric utilities in the midwestern United States. Progress in reducing acid rain depositions in Canada will be significantly influenced by President Bush's ability to implement his proposals to cut sulphur-dioxide emissions by 10 million tons and nitrogen-oxide emissions by 2 million tons over the next 10 to 14 years.

From a broader perspective, however, whatever progress has been achieved appears pitifully small in relation to the global environmental hazards that have captured attention and raised concern on a worldwide scale. Underlying the recent concerns in this area is the increasing body of evidence showing that the functioning of the planet's ecosystem is being impaired. The more alarming developments include: the warming of the globe from heat-trapping gases accumulating in the atmosphere (the so-called "greenhouse effect"); the threat posed by chlorofluorocarbons (CFCs) and other gases to the stratospheric ozone layer, which provides an important shield against solar ultraviolet

Table 5-5

**Trends in Sulphur-Dioxide and Nitrogen-Oxide Emissions, Canada and United States, 1955-85**

	Sulphur dioxide				Nitrogen oxide			
	United States		Canada		United States		Canada	
	Northeast and Midwest <sup>1</sup>	Total			Northeast and Midwest <sup>1</sup>	Total		
			Eastern <sup>2</sup>	Total			Eastern <sup>2</sup>	Total
(Millions of tonnes/year)								
1955	10.1	19.0	4.3	4.5	3.8	8.2	0.45	0.64
1965	12.8	22.5	5.5	6.6	5.5	13.1	0.56	0.85
1975 <sup>3</sup>	10.3	22.0	4.4	5.3	6.1	16.4	0.99	1.60
1980	8.9	24.1	3.8	4.6	5.5	19.3	1.05	1.75
1985	6.6	23.0	3.0	3.7	4.9	20.6	1.18	1.96

1 Includes Environmental Protection Agency Regions I, II and V (i.e., Connecticut, Maine, Maryland, New Hampshire, Rhode Island, New York, New Jersey, Illinois, Michigan, Minnesota, Ohio, and Wisconsin).

2 Includes Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland.

3 Canadian data are for 1976.

SOURCE "United States-Canada memorandum of intent on transboundary air pollution," Work Group 3B, Final report, June 1982; Environment Canada, Environmental Protection Service, personal communication, 1985; D. Zimmerman, et al., *Anthropogenic Emissions Data for 1985 - NAPAP Inventory*, Final report (November 1988).



radiation; the destruction of the world's tropical rain forests, which regulate oxygen balance and control global precipitation and moisture exchange; and waste build-up in the world's oceans, which is lethal to many forms of marine life.

In future years, as the world's population continues to grow, as industrial activity (particularly in developing countries) accelerates, and as urbanization advances, the pressures on the earth's life-support systems are likely to intensify. To counteract these pressures, what is required, as the report of the Brundtland Commission<sup>5</sup> pointed out, is a global commitment towards development that is environmentally sustainable. That, in turn, will require a recognition of the interdependence between economic development and environmental protection, and an understanding of the special problems that developing countries face in balancing present and future needs.

### Intergenerational Implications

Recent statements and initiatives by world leaders do indeed reflect a heightened sensitivity to environmental concerns. But favourable developments – such as the positive response to the Canadian Environment Minister's recent call for CFC production to be reduced by 85 per cent by 1999, rather than the 50 per cent agreed upon in the 1987 Montreal Protocol – should not blind us to the magnitude of the challenge ahead. It will be much more difficult to reach an agreement on reducing carbon-dioxide emissions,<sup>6</sup> given the dependence of many countries on energy from fossil fuels. And despite the urgency of the situation, there does not appear to be, at the present time, sufficient political will to achieve an international law-of-the-atmosphere accord.

For Canada's part, the response to warnings about environmental trends has taken a number of forms. A number of harmful substances are being phased out. These include hydrofluorocarbons, PCBs, and leaded gasoline (which is now to be eliminated by December 1990 instead of 1992). Government controls will also lead to a major reduction in sulphur-dioxide and nitrogen-oxide emissions by the mid-1990s. Recent revisions to the Environmental Protection Act will, among other things, provide the federal government with greater control over toxic substances through their full life cycle. In terms of water policy, efforts are being directed at restoring the water quality of the Great Lakes, reducing pollution in the Niagara River, and cleaning up the St. Lawrence River. Other significant recent initiatives include Ontario's Municipal Industrial Strategy for Abatement (MISA), which is aimed at the elimination of all persistent toxic chemicals from discharges to provincial waterways.

Still, there is an ever-growing agenda of urgent issues. Canada's carbon emissions per capita are among the highest in the world, partly because its economy is one of the most energy-intensive in the world. Much more effective policies are needed to address the problem of ozone concentration in urban areas. There is a need to expand and upgrade wastewater treatment facilities. The adequacy and effectiveness of the standards introduced under the Fisheries Act to control the effluents of a number of specific industries need to be reassessed.

To summarize this discussion of the resource and environmental legacy, we must acknowledge that we know too little about the value of the resource base that we are damaging or depleting now, and we have only limited knowledge of the public and private investments required in the future. In the case of nonrenewable resources, the rate of exploitation will depend on the extent to which higher prices draw forth new supplies. But there is considerable evidence that Canada has been managing its renewable assets poorly, especially its forests, arable land, and fishery. There is also a large amount of evidence suggesting that major investments are required to deal with industrial and municipal waste.

One recent attempt to estimate the increased investment required over the next decade to reach some reasonable baseline standards of air and water quality yielded a figure in the range of \$50 billion (in 1989 dollars).<sup>7</sup> In addition, the annual costs associated with maintaining that investment, including increased operating expenses in the private sector and increased administrative expenses in the public sector, are estimated to run in the order of \$12 billion (in 1989 dollars) – close to 2 per cent of today's GDP – by the year 2000. That estimate is admittedly speculative and it is partial, excluding, among other things, future investments required to reduce carbon-dioxide emissions. But it does show that environmental clean-up will make major demands on the economy over the next decade.

### The Policy Challenge

Traditionally, Canadians have presumed that technical progress would take care of the future and that increases in productivity would ensure continuing improvements in the standard of living and increasing prosperity for future generations. The issues we have explored in this chapter suggest that such complacency is inappropriate. Since the mid-1970s, we have been in a period of significantly slower productivity growth. On that basis alone, we might expect a future in which economic gains are modest by historical standards. In addition, the demographic changes that are under way, along with the social costs that are accumulating

as a consequence of the effect of current activities on the environment, pose some very significant downside risks to the well-being of future generations.

The demographic pressures associated with a growing elderly population will not be fully felt for some 25 years. But the well-being of those who will be in the work force at that time will, to a considerable extent, depend on the choices made in the intervening years. While much of the responsibility rests with individuals and firms, governments too have an important role in promoting wealth creation and in helping to ensure that our overall bequest to the next generation is adequate.

To meet this challenge, governments must proceed along a number of paths. First, they must get their finances in order. Our bequest to future generations depends on the nation's savings, and perhaps the most promising way for governments to increase national savings is to reduce the deficits or increase the surpluses in their own accounts. Correcting the problem of fiscal imbalance is an integral part of the longer-term challenge facing the public sector. By strengthening their fiscal positions and contributing to a higher rate of national savings, governments can help to alleviate the demographic pressures that will arrive early in the next century.

Second, despite the requirement for fiscal restraint, we cannot allow essential public services to deteriorate, nor can we avoid making critical investments in public infrastructure such as hospitals, educational facilities, and the environment. Indeed, a key element of our legacy will be our ability to pass on an efficient public sector. Our analysis of the potential cost of health care for an aging population demonstrates, for example, the overriding importance of

reducing the average cost per person as the system expands to look after larger numbers of elderly people. Another priority will be to improve environmental quality. Some of these costs will be borne by the private sector; but the public sector, including the federal government, will have to commit more resources to this objective if we are to leave a legacy of which we can be proud. In short, we must recognize that government services are an important component of our overall bequest to the next generation. The need to reduce the federal deficit forces governments to set priorities – to abandon or privatize the services that they can no longer perform effectively and to become more efficient in the services that are of the highest priority.

Third, we must try to understand better how wealth creation is affected by the plethora of incentives and constraints through which governments influence the activities of firms and individuals. This is a large and complex issue; in some areas, it is subject to considerable uncertainty. But the evidence available – including that based on studies undertaken by the Council over the years<sup>8</sup> – suggests that there is considerable scope for improvement. Fiscal and regulatory measures that influence saving and investment decisions can be made much more compatible with the objective of enhancing Canada's rate of wealth creation.

These proposals are not new; each of the policy areas has been the subject of much discussion over the years. What is new is our emphasis on the need for governments to adopt a more systematic approach to managing our legacy to future generations. The potential impact of slower productivity growth, building demographic pressures, and disturbing environmental trends provides a compelling argument for reorienting government policy so that much greater importance is given to the consequences of current activities for future generations.



## 6 Improving the Legacies

In this Review, we have emphasized three issues that affect Canadian income and employment expectations.

The first is the decline in productivity growth rates in virtually all of the mature industrial nations, including Canada. Whereas productivity gains averaged over 3 per cent annually in the late 1960s and early 1970s, more recently – apart from the recovery from the 1981-82 recession – they have slipped to 1 per cent or less, and they are expected to remain on that course over the next decade.

The second issue has to do with how Canadians are faring, given the slow but steady aging of the population. In the late 1970s and the 1980s, a distinct shift occurred in economic opportunities, with younger age groups failing to achieve the relative income gains of earlier generations. By the year 2020, the “baby boomers” will be retiring, and they will account for one fifth of the population – almost double the proportion of the elderly today. Balancing their needs against those of the young – in child care, education, and training – and against the concerns of other Canadians will create important new demands for investment and saving by both governments and citizens.

The third issue examined in the Review is the persistence of the federal deficit and the mounting legacy of federal and foreign debt that is being left to future generations. In the course of the coming years, there is a clear “window of opportunity” – before the “greying” of the population begins to accelerate – for the federal government to eliminate the deficit, to significantly reduce the overhang of public debt, to lower unemployment, and to intensify efforts to improve environmental quality.

In spite of the emphasis on competitive forces and private initiative in the 1980s, the role of the Canadian public sector is currently defined by the concept of the public interest, as articulated through government policies of the 1950s, 1960s, and early 1970s. Underlying this vision was the belief that governments could promote cohesion and generate a sense of community through redistributive policies that would reduce the disparity between regions, between rich and poor, and between the winners and losers from economic change. The view, as Tawney put it, was that “community” requires “a common culture,” which

involves . . . a large measure of economic equality – not necessarily in the sense of an identical level of pecuniary incomes, but of equality of environment, of access to education and the means of civilization, of security and independence, and of the social consideration which equality in these matters usually carries with it.<sup>1</sup>

That vision gave substance to a form of social compact, expressed through the political process, that secured support for social and industrial change, in exchange for an understanding that much of the cost of contingencies (such as unemployment, illness, and old age) would be borne, and paid for, collectively through government-administered programs.

These programs, which embraced all generations and regions, set in train individual entitlements and federal expenditure obligations that were not unduly onerous when economic growth was fueling large revenue increases. But when productivity growth flagged after the mid-1970s, financing the social compact, along with all the new claims on the public purse, became a problem.

### The Productivity Slowdown

In North America, the productivity slowdown occurred after the baby boom had run its course. It coincided with two profound social changes: more and more women were electing to enter the labour force, in part to supplement the family income and in part to share in the social satisfaction of gainful employment; and increasing numbers of urban-based, relatively unskilled sales and service jobs were being created in response to shifts in consumer demand. Essentially, then, families coped with the slowing of productivity growth by increasing the numbers of full- and part-time earners. During the 1960s, only two thirds of persons aged 20 to 64 worked full or part time, while most of the others managed a home or were in school. But the productivity increases of those who worked were such that real income per capita grew by over 3 per cent a year. In the 1980s, with slower growth, smaller families, and close to 80 per cent of the 20-to-64 age cohort in the labour force, the gains in per-capita real income averaged only 2 per cent annually. And if productivity gains do not improve, the per-capita growth dividend could shrink to less than 1 per cent annually by the



year 2020, when at least part of the baby-boom generation will have retired. The annual expansion of the nation's economic pie could be so slow that meeting the new entitlement claims of one group could well require shrinking the entitlements of others. Canada would then be close to a "zero-sum" economy.

While families adjusted to slower growth by increasing their work effort, the political system had more difficulty adapting. The entitlement programs that had been initiated or enriched in the 1960s and early 1970s were formally or informally indexed; and as both inflation and unemployment rose during the 1970s, they created mounting expenditure claims. These could be met, even with slow growth, as long as inflation swelled government revenues from personal income taxes.

But the federal government's decision, in 1974, to index the basic income tax exemptions and tax brackets to the rate of increase in the consumer price index eliminated the inflation-induced revenue dividend. That, together with the introduction, in subsequent years, of a host of tax exemptions or tax preferences favouring both individuals and corporations, eroded the federal government's revenue base, which was already being sheared by slower growth in real incomes. Whereas previously deficits and surpluses alternated around a relatively balanced budget, the government found itself facing a rising chronic deficit. From a surplus in 1974, the federal budget reached a deficit equivalent to 7 per cent of GDP a decade later, fueled by a rising interest burden on the ever-increasing amount of federal debt outstanding.

What caused the growth rate in productivity to slow down to such an extent?

The Canadian slowdown must be viewed in the context of international developments. After the first OPEC oil shock in 1973, a slowdown in productivity growth was observed in both Europe and North America. While the sudden awareness of the importance and scarcity of energy may have induced an initial period of adjustment and a productivity slowdown in industrial societies, this does not offer a realistic explanation for the sluggish rate of measured productivity growth in the 1980s.

Indeed, there is no common agreement as to the reasons for this development. The productivity slowdown cannot be explained as a cyclical phenomenon: it is too pervasive; it has lasted too long; and it continues to prevail at a time when most Western countries are operating at close to full capacity. Part of the explanation may lie in an unfortunate combination of macroeconomic policies that gave rise to high inflation rates in the late 1970s and high real interest

rates in the 1980s. While part of the slowdown may be associated with the pervasive shift to service-sector activities, this cannot explain the significant setback that took place in manufacturing. Other possible explanations include the working inexperience of the baby-boom population as it entered the labour force, insufficient research and development, and the growing use by governments of quotas and subsidies designed to favour domestic producers and slow the dislocation of labour and capital that inevitably accompanies industrial change and adaptation. But no single explanation suffices.

The participants at a recent OECD seminar on "Science, Technology and Economic Growth," which had been convened to study the economic reasons for the productivity slowdown, could not arrive at a consensus. The explanations furnished covered a whole range of possible causes: from measurement problems, which may result in the slowdown being, in part, "a statistical artifact" to the disappearance of some uniquely favourable factors, such as the potential for countries other than the United States to engage in "technological catch-up"; and from the "sclerosis" of Western economies resulting from government policies (i.e., regulations, transfer-payment programs, higher marginal tax rates, and so on), which often act as a disincentive to productive effort, to inadequacies in the internal organization of firms (including their tendency to become more bureaucratic and inflexible), which may have been made worse by recent changes in technologies and market conditions.

Whatever the cause, governments in most countries are seeking to remedy the problem with measures to encourage innovation, best-practice techniques, and safer and more harmonious working conditions. But the ultimate response must be at the micro level of the industry and the enterprise. The opportunities inherent in today's science and technology offer the potential for efficiency gains, but management in both the private and public sectors must take the initiative in adopting the new technologies and in training and organizing the work force so that it may use them effectively.

Thus, as we peer into the next few decades, it is clear that while productivity is never the sole determinant of well-being, the incomes and opportunities of future generations will be strongly influenced by the rate of productivity growth. At the moment, it appears that because of the disappearance of some uniquely favourable factors, productivity has settled onto a slower growth track. Our projections in Chapter 3 indicate that the growth in productivity will average less than 1 per cent for most of the 1990s.

It is conceivable that recent trends reflect, in part, the lag between scientific discovery and the exploitation of the

resulting knowledge. If so, recent advances in science and technology could translate into much more robust rates of future productivity and income growth. But it would be foolish to base our planning for the future on such hopes, for several reasons: the easier opportunities for productivity advance through technological catch-up have largely been exhausted; net wealth accumulation has slowed; and the aging of the population will likely redirect some of the improvements in living standards away from the working population. In addition, there is growing concern that environmentally detrimental activities are creating a heavy cost burden for future generations.

## Intergenerational Concerns

The impact of the demographic crunch associated with the retirement of the baby-boom generation will not be felt for some 25 years. In that interval, with some good fortune and prudence, we have an opportunity to shore up the economy by re-establishing fiscal balance and creating more national wealth. At the same time, we will have to address more seriously a host of environmental problems, including the steady erosion of the natural endowment as a result of neglect or mismanagement. While much of the required investment and capital accumulation must come from the private sector, governments have a special responsibility to serve as the trustees of future generations.

Federal and provincial governments have an important influence on the capital bequest, directly through their own saving and investment decisions, and indirectly through their influence on private-sector wealth creation. What does that role imply? It requires, first of all, continuing strong efforts at deficit and debt reduction. By reducing the government's net borrowing requirements, domestic savings will be freed for other uses. This, in combination with an easier monetary policy, would lead to less dependence on foreign savings and help to curtail the growth in the nation's foreign debt obligations.

Second, and within the context of deficit reduction, all governments – federal, provincial, and municipal – must attempt to maintain and improve their own public infrastructure of roads, schools, and so on, and to make the positive longer-term investments that the private sector is unable or unwilling to do. It is far from clear that governments have maximized the return from their investment in human capital, public infrastructure, and the conservation of renewable resources. For example, action to correct a variety of deficiencies in the pricing systems of municipal water

utilities would undoubtedly contribute to a more efficient and fairer use of that precious resource.<sup>2</sup>

Third, governments must reassess their influence on private-sector wealth creation. In some areas where markets are working reasonably well, the unfortunate effect of government intervention has been to distort private saving and investment away from their most economic and efficient use. Most people would now agree that such was the legacy of the National Energy Program, which was predicated on the expectation of high and rising energy prices. Another example was that of the ill-fated federal tax credit for scientific research. In other areas – notably, with respect to the environment – government intervention has often been required to improve both resource use and waste management. But in most cases, it is not an “either/or” situation. Additional efforts by governments at all levels, by industry, and by individuals, acting in concerted and cooperative ways, will likely be needed if society's broader environmental goals are to be met.

In Chapter 5, we emphasized the need for a more comprehensive view of output and productivity than that provided by existing economic accounting conventions. This broader perspective enables us to recognize that some of the most important consequences of current activities may reflect the desire of present and future generations for qualitative, or “nonmarket,” satisfactions, such as are found in education, health, and outdoor recreation. Those parts of the nation's wealth which convey such qualitative benefits have a unique role, as do private initiatives and government policies aimed at conserving and enhancing them.

We also pointed to matters of longer-run concern associated with the “greying” of Canada's population, and we put the question: Will the “productivity growth dividend” be sufficient to deal with the income, health, and housing claims of a rapidly growing elderly population? The short-term answer is yes; but as we have seen, the response will become more problematic beyond the year 2015, when the baby-boom generation begins to retire from the work force. Much will depend on the size of that dividend and on the other claims that are placed upon it. For the growing numbers of elderly persons, a host of issues – ranging from considerations about the age of retirement, about pension coverage, about health care, and even about immigration – will warrant public debate.

For example, there is a need to explore the sorts of changes in government and private-sector work arrangements that could create an environment more conducive to useful activity by the elderly. This might involve continuing to work beyond the age of 65, establishing new careers or



businesses, or participating in voluntary activities. We believe that there are many unfilled opportunities in this area that will serve to increase the productive potential of the early years of retirement, given the desire of retirees, appropriate financial incentives, and flexible work arrangements.

We must also be concerned about the adequacy of the existing programs that provide financial support to the elderly. Unquestionably, there have been major improvements over the past decade, as reflected in the declining proportion of elderly individuals and families that are below the poverty line. But there undoubtedly remain gaps in the existing set of arrangements: as we saw in Chapter 4, less than half the present work force contributes to a private, work-related pension plan or to an RRSP. Accordingly, the pension system and, in particular, the relationship between public and work-related pensions will require both attention and foresight.

If current patterns of hospital use continue, the aging of the population could result in a dramatic increase in hospital costs over the next 50 years. Yet many studies point to the scope for controlling the growth in health-care costs. The possibilities include: encouraging the elderly to engage in healthier, more active lifestyles; introducing incentives in the hospital reimbursement system to cut costs and improve efficiency; subjecting proposed health-care investments to more rigorous economic evaluation; and more fully exploiting clinics, convalescent facilities, and other health-care delivery arrangements that can meet a significant share of the needs of the elderly. As we approach the year 2000, it is important that governments pursue these and other opportunities for achieving greater cost effectiveness in health care.

It has been suggested that one way to reduce the rising ratio of the elderly to the working population would be to gradually increase the number of immigrants who are younger than the baby-boom generation. Traditionally, Canada has had one of the most generous immigration policies of all nations, and it has benefited enormously as a result. This country is an envied destination for political refugees and others seeking relief from chronic poverty, as well as for those who seek new roots or who wish to join families that immigrated here earlier. On strictly economic grounds, we see no reason why Canada could not increase the inflow of immigrants dramatically. But practically, that would require appropriate institutional arrangements for their screening, reception, and gainful transition to Canadian citizenship – matters that involve provincial as well as federal concern. This Council has commenced a study of the economic and social implications of Canada's immigration policy and will be issuing its report on the matter in late 1990 or early 1991.

## Performance Targets: Changing the Policy Mix

Although the federal government has managed to narrow the gulf between expenditures and revenues since 1984, the mix of economic policies in the 1980s has been damaging to the nation's long-run potential. Persistent fiscal deficits have been matched with firm monetary restraint – witness the level of real interest rates and the size of the Canada/U.S. interest-rate differential – in order to stabilize the pace of growth and to offset inflationary pressures. This “twist” to economic policy has forced Canadians to operate with excessive costs of capital, which have slowed aggregate demand, discouraged some new investments, and encouraged firms to use labour rather than capital, thus contributing, as noted in Chapter 2, to rapid growth in employment and sluggish growth in productivity.

In last year's Review, we observed that

should the economy move into a period of accelerating inflation, the burden of combatting it would fall squarely onto monetary policy. But monetary restraint would entail higher interest rates and, quite likely, a stronger Canadian dollar. The rise in interest and exchange rates would have a number of interrelated adverse effects. Higher interest rates slow down the investment that is essential to enhanced productivity and competitiveness. A stronger Canadian dollar also affects the competitiveness of industries and regions whose goods and services are exported, particularly those which are priced in U.S. dollars. The commodity-dependent regions of western Canada would be particularly hard-hit. All regions could be damaged, but those with the highest unemployment rates might fare relatively worse.<sup>3</sup>

Since that was written, the Bank of Canada's interest rates have moved up roughly 250 basis points – from less than 10 per cent to 12.4 per cent – and the Canadian dollar has appreciated from US\$0.80 to over US\$0.84. As a result, while this has undoubtedly helped to contain inflation, Canadian manufacturers and exporters to the United States are now being subjected to a severe competitive squeeze.

Nonetheless, it must be acknowledged that Canada has experienced seven years of real growth, free from recession – a performance rivaled only by the prosperous period that ended with the 1973 oil shock. This more recent period of prosperity has enabled Canadians to put some distance between themselves and the economic problems of very high unemployment and high inflation that they faced during the late 1970s and early 1980s.

There is now growing evidence that the economy is entering a period of slower growth. At the same time, how-



ever, there is ample evidence that many industrial sectors are currently operating at or near capacity. The Council's setting of performance targets in 1988 took into account the absence of a gap between actual and potential performance. Since then, labour markets have tightened in the major metropolitan areas (particularly in central Canada), and inflation rates have been drifting upwards, as have wage settlements. Accordingly, our targets for real growth, the unemployment rate, and the inflation rate must not only be consistent with each other but also be sensitive to the dangers of an overheating of the economy.

This year, we reaffirm the targets of last year (Table 6-1), and we extend them to cover the period 1989-93, with one exception. Those targets include:

- 1 a trend rate of increase in productivity, as measured by output per employed person, of between 1.5 and 2 per cent annually;
- 2 a trend rate of employment growth of 1.5 to 2 per cent annually, so as to reduce unemployment to a rate between 5 and 7 per cent of the labour force by 1992, thereby making progress towards a longer-range goal of between 4 and 6 per cent;
- 3 a rate of real GDP growth of 3 to 4 per cent;
- 4 a rate of annual inflation of 4 per cent or less;
- 5 a rate of domestic savings high enough to contain Canada's average dependency on net capital inflows to around 2 per cent of GDP or less;
- 6 the preservation of the objectives and the substance of existing social programs, insofar as they provide affordable benefits to Canadians; and
- 7 the achievement of regional balance with respect to growth, employment opportunities, and social infrastructure.

Our eighth target is the federal fiscal position. The implementation of the April 1989 budget, together with the impending introduction of the goods and services tax, measurably alter the federal government's fiscal stance, relative to the situation a year ago. Last year, the Council set a target for the deficit of 2.5 per cent of GDP (or less), to be reached by 1992 even though our base case projected a deficit equal to 3.7 per cent of GDP for that year. That target was compatible with our sense of the potential of the economy to generate tax revenues under the budget regime then in place and to stop the rise in the ratio of debt to GDP

Table 6-1

## Performance Targets and Projections, 1989-93

	Targets	Base-case projections
	(Per cent)	
Growth in:		
Productivity	1.5 to 2	1.1
Employment	1.5 to 2	1.9
Real GDP	3 to 4	2.6
Level of:		
Unemployment rate	5 to 7 by 1992	7.4*
Inflation rate	4 or less	5.2
Federal balance as a proportion of GDP	-1.5 or less by 1993**	-1.9*
Net capital inflows as a proportion of GDP	-2 or less	-1.2
Social programs	Maintain objectives and substance of social programs; improve efficiency; and, where possible, fill the most urgent gaps	
Regional development	Balanced growth, employment opportunities, and social infrastructure	

\*End of period.

\*\*Target changed from 1988.

over the five-year horizon. It also allowed for the fact that a certain portion of government spending consists of capital investment.

Our analysis in Chapter 3 shows that, as a result of the new tax and expenditure regime announced in the April 1989 budget, the deficit will shrink to 2.4 per cent of GDP by 1991 and could reach 1.9 per cent by 1993. Nonetheless, we believe that the target for 1993 should be more stringent, for two reasons.

First, Chapter 3 showed how sensitive fiscal balance is to shifts in economic growth and in interest rates. In addition, we have learned, over the course of the 1980s, that gradual projections are easily thrown off course by new expenditure priorities. We now foresee an international financial and

economic context in which real interest rates are likely to exceed real rates of growth in Canada for some time to come. This unfavourable relationship creates an uphill battle in reducing the debt/GDP burden, in the sense that Canada will be constantly vulnerable to tensions in international financial markets or to a shift in monetary policy in the direction of fighting inflation.

In this kind of environment, we believe that the federal government's fiscal policy must do all it can to forestall a debt crisis. Because we believe the April 1989 budget – including the goods and services tax – has raised taxes to about the limit that Canadians can digest, this means that every available opportunity must be used to reduce expenditures in order to speed up the process of deficit reduction. The timing and extent of these expenditure cuts will have to be judged on the basis of the risks of recession and inflation. Prime candidates for expenditure cuts are obviously those which encourage the continuation of excessively high-cost activities or those which now offer few benefits to Canadians. Accordingly, our target for deficit reduction over the medium term is:

8 a steady reduction of the federal deficit, so that by 1993 it will be equal to 1.5 per cent of GDP or less.

These are ambitious targets, even though we feel they are consistent with Canada's potential. (The 1.5-per-cent target for the reduction of the federal deficit, for example, compares with our projection of 3.6 per cent in 1989; see Table 3-1.) It is worth noting, however, that several of our key projected economic performance indicators – which incorporate only the April budget measures – are expected to be well below the designated targets. Projected real growth falls far short of the target range; the consumer price index is projected to approach the target only after 1992; and the expected annual productivity growth weakens after 1990. Only employment growth is projected to meet its potential; and if additional federal expenditure cuts are introduced, it too will falter in the short term. On the other hand, a modest monetary relaxation would, with a lag, provide enough stimulus to offset the negative employment effects of additional restraints in federal expenditure, and it could bring the economy closer to potential.

We believe that further restraints, applied at the right time, will be a prudent course to take because the government has run out of room in which to manoeuvre. The pressure of debt service is already forcing painful cuts in current commitments, with the result that there is no room to introduce new expenditure programs. The Council's work shows that even with the greater economic efficiencies imparted by replacing the existing federal sales tax with the proposed

new goods and services tax, the path of deficit reduction could be jeopardized by future shocks or recessions.

In addition, our work on intergenerational issues shows that new demands on the federal treasury will be substantial in the future. Governments will need room to alter the mix of expenditure programs, to tax, and to promote private saving if they are to cope with the long list of "public goods" that are high on the priority list for the 1990s and beyond (environment, care of the elderly, child care, and so on). Delaying deficit reduction could seriously erode the legacy that we will leave to future generations. Once the present growth pause is over, it will be time to introduce additional measures of expenditure restraint.

We therefore expect that, provided that inflationary pressures are held in check, progress on the deficit-reduction front should enable the Bank of Canada to ease credit. Lower interest rates improve the federal fiscal stance in two ways: directly, by lowering the government's debt servicing costs; and indirectly, by stimulating the economy and increasing government revenues. The alternative scenarios developed in Chapter 3 clearly showed that an easing of monetary policy, prudently timed, would offer the most effective means of reducing the deficit. If combined with additional federal expenditure restraint and favourable U.S. monetary and fiscal initiatives, it could speed up the process of deficit reduction by four years (see Chart 3-7). In our view, the Administration and the Congress in the United States have made some progress in achieving fiscal restraint, and already there are signs of a modest easing of interest rates there.

The big uncertainty, of course, is how the various economic agents will respond to the implicit incentives that will emerge from the tightening of fiscal policy and the measured relaxation of monetary policy. It is unclear as yet what effects increased federal and provincial payroll taxes will have on new business initiatives and hirings. More specifically, the public response to the goods and services tax remains unclear. Our base-case projection shows that the consumer price index could reach almost 7 per cent in 1991; preventing this from becoming embedded in a wage/price spiral will undoubtedly require firm resolve, not only by federal and provincial governments but within the private sector as well. While reform of the current federal sales tax is essential in order to maintain the integrity of the revenue base, it is also important not to trigger inflationary pressures that, in turn, would require a renewed tightening of credit.

While the Council believes that additional federal expenditure restraint will be needed over the next few years, we



stress that the alternatives discussed in Chapter 3 – a two-year freeze in five program areas – were examples only. This reflects our view that the restraints should be relatively even-handed but should fall somewhat more severely on programs such as business subsidies, whose cost effectiveness many believe is suspect.<sup>4</sup> The Cabinet Expenditure Review Committee will be the determining body in deciding what programs should be rationalized, where additional expenditures could be made, and when they should be introduced. We believe that the guiding principles for these decisions should be:

- Keep the deficit-reduction target front and centre, but balance the choices along the way.
- Recognize that a climate of falling interest rates provides a substantial offset to any negative effects imparted by deficit reduction.
- Use any positive decision by the U.S. government in respect of its own monetary and fiscal policies as an opportunity to speed Ottawa's progress on deficit reduction.
- In initiating new fiscal-restraint measures, concentrate on expenditure cuts.

## Conclusion

In terms of the economy's potential, our principal medium- and longer-term concern remains the failure to generate productivity improvements anywhere close to the pre-1975 growth rates. It is that failure which has slowed the income expectations of Canadians and put into question the continuing competitiveness of many Canadian businesses. The Canada-U.S. Free-Trade Agreement and the completion of the Uruguay Round of GATT negotiations, if successful, will contribute to a more vigorously competitive international marketplace. This raises the question of how Canadian producers should adapt to the catching-up by other countries. Can they raise their productivity performance to levels that are within reach of the best-practice technology? For without significant improvements on this front, there is the danger that they will lose out in competition with their U.S. counterparts or that they will respond to the trade challenges of the Pacific Rim and other industrializing countries with appeals for more protection. At the

same time, there are many parts of the Canadian economy that are not involved in international trade. Most of the commercial-services sector is in this category; and here, in particular, there is evident need for increased productivity.

Second, we must be concerned about the effects of poor productivity performance on the income expectations of Canadians. Already, there has been an evident slowing-down of real income growth and, indeed, an apparent reduction in the real income of young Canadians. Will the failure of individual enterprise to adopt best-practice technology, to move to higher-value-added production, or to encourage participatory and harmonious working relations doom many of them to low-income, high-turnover jobs and frustrated careers? Will it jeopardize their ability to invest in a home and to save for their later years? And as they age, will it impede the governments they elect from initiating or enriching programs in their own or their children's interest?

Only the future will reveal the answers to those questions. But the future is conditioned by the present, just as the present has been conditioned by the past; and a legacy of the past is the federal deficit and the debt load.

The federal government, through its latest budget, has set fiscal policy on a course that should lower the deficit and encourage growth in the longer run. (The next step will be the introduction of the goods and services tax in 1991.) Our simulations show that, combined with the present approach to monetary policy, these initiatives will return the federal government to a balanced budget by the turn of the century. That, in our view, is too gradual and fragile a course. Thus we believe that further expenditure reductions will be required over the next few years, combined (as appropriate) with action on the monetary side. That will take pain and sacrifice, and tough governmental decisions; it will take determination to face up to single-interest groups and lobbies; and it will take a searching review of individual programs. But it is no less necessary for governments to be cost-effective and to increase their productivity than it is for the private sector.

The most appealing legacy that this generation can leave to the next is an efficient, competitive economy, capable of meeting the economic and quality-of-life needs of its citizens, unencumbered by a huge overhang of public and foreign debt.



## Comments and Dissent

### Comments by William Mackness

The 26th Annual Review fails entirely to grasp the urgency of dealing promptly and effectively with the Ottawa deficit. Fifteen years of wreckless spending and massive reliance on deficit finance have now brought the national finances to the brink of disaster. Notwithstanding, the Council's analysis continues to support the long-standing Canadian practice of borrowing today and deferring tough decisions to the future.

Rather than dealing forcefully and promptly with Ottawa's massive fiscal imbalance, the Council's analysis recommends a gradual approach relying on the passage of time and optimistic economic assumptions. Regrettably, this is precisely the sort of ill-founded, short-sighted analysis that has guided Ottawa policy for the last 15 years. At this point, the last thing that Ottawa needs is policy advice recommending continued delay and inaction on fiscal reform.

The Council's analysis compares highly questionable estimates of the costs of a more timely re-establishment of fiscal balance against presumed costs of about zero for inaction and a continuation of long-standing gradualist policies. This analysis is unbalanced and unhelpful. In fact, the cost of inaction is very high. Today, deficit finance is adding well over \$30 billion of new debt and \$3 billion of added interest costs every year. The longer the deficit is allowed to run out of control, the larger becomes the eventual size of spending cuts and tax increases that will be required to re-establish solvency. The Council's analysis largely ignores these and other consequences of allowing the deficit to run rampant year after year. There is great danger in deferring fiscal reform, and the Council should say as much.

### Dissent by Diane Bellemare and Marcel Pepin

While we are generally in accord with the Council's treatment of intergenerational issues and while we share the Council's view that the federal deficit is a problem, we do not believe, as the Review's concluding chapter seems to

imply, that the federal deficit is *the* problem. It is a problem because its persistence, along with the interest that must be paid on the accumulated debt, limits the government's ability to address more urgent issues having to do with people and with the lack of employment, of employable skills, of day care, and of adequate housing. The deficit is a consequence of problems elsewhere – a gap between expenditures and revenues that has arisen as a result of myriads of decisions in the past. And the deficit problem must be resolved through a holistic approach using broadly based adjustments in both revenues and expenditures.

What *is* a problem is the extraordinarily tight monetary policy currently adopted by the Bank of Canada, which has resulted in interest rates that are crippling some sectors of the economy, contributing to an overvalued Canadian dollar, squeezing exporters, and putting the competitiveness of some of our manufacturing plants in jeopardy. As we look at double-digit unemployment rates in most provinces outside Ontario, we do not share the view that without the present tight monetary policy, inflation will become rampant. Nor do we share the view expressed in this Review that such a policy is made necessary by the federal deficit and the looseness of the federal fiscal stance. Without the interest payments, the federal budget is a balanced budget; indeed, the federal deficit is, in large part, the result of a high-interest-rate policy.

Of course, international rates of interest are high. As the Review states, as long as interest rates are higher than the nominal growth rate of the Canadian economy, there is the danger of explosive growth in the ratio of debt to GDP and of a persistent erosion of the government's ability to manoeuvre as debt-servicing costs absorb an increasing proportion of revenue. Moreover, it is not the federal deficit but high domestic rates that encourage provincial and municipal governments and the private sector to borrow abroad, thereby increasing our foreign liabilities, strengthening the exchange rate, damaging our export prospects, and so on.

So if there is a single message that this Review should convey, it is that Canada's monetary policy should be much more accommodating. The U.S. Federal Reserve Board is already moving in that direction, and the Bank of Canada should follow its lead. Indeed, the simulations presented in the Review show clearly that it is not expenditure restraint

that will restore fiscal balance and create jobs in the process so much as the easing-up of an unnecessarily tight monetary policy.

In this regard, we do not believe the new goods and services tax should be a solution to deficit reduction. In its true form, the GST is preferred to the manufacturers sales tax, being more broadly based, uniformly applied, and favourable to exports. But there is the danger that by increasing

prices in the year during which it is applied, it could provide a rationale for the Bank of Canada to apply a tighter monetary policy and even higher interest rates than we are now experiencing, with all the attendant negative effects on the economy. There is also the danger that the government may be tempted to use the GST as an easy source of additional revenues. The GST is a flat tax on consumption; and even with tax credits to low-income Canadians, it is more regressive than the personal income tax.

## Appendix

### Assumptions Regarding the U.S. Economy

At a time when trade linkages are stronger than ever, the world economic cycle has once again become desynchronized. Not since the 1960s had the cycles of demand of the world's major economic partners moved out of phase. What appears to be a paradox may, in fact, turn out to be a double-edged sword.<sup>1</sup>

#### The Base Case

North America is now in its seventh year of recession-free growth, but there are signs that this expansion may be running into trouble. In contrast, Europe is currently experiencing a period of investment-led growth, as it prepares for full integration by the end of 1992. Japan has already completed (at break-neck speed) a first phase of adjustment associated with the appreciation of the yen. A second phase of consolidation is already under way, with emphasis now being placed on the modernization of production technology through the adoption of advanced microcomputers. Other Asian Pacific Rim countries are quickly following suit.

In the short run, desynchronization may be helpful as a global phenomenon. U.S. and Canadian exporters to Europe and Asia will benefit from it, even if a "hard landing" occurs in North America. In the long run, however, the issue of competitiveness will remain. The high level of investment in Europe and Asia today will mean stiffer competition tomorrow and thus a continuation of the current tendency towards world imbalance. A more immediately troublesome aspect of the imbalance is its chronic nature after seven years of healthy growth. A softening of the North American economy would only worsen the problems, particularly those related to the U.S. fiscal imbalance. Those related to U.S. external imbalance may improve, even if only for the duration of any future slowdown.

The evidence of a slowdown in the United States is most notable in the growing weakness found in new home construction and automobile sales. Other indicators are more ambiguous. The unemployment rate, for example, has leveled out in the middle of the 5- to 6-per cent range.

There is mounting evidence that the current softness in the United States may, in part, be policy-driven. In the wake

of the highest capacity-utilization rates observed over the past 15 years, the Federal Reserve Board has been concerned for more than a year about the possibility that a new bout of spiraling inflation might erupt. As the rate of inflation crept upward, this concern has been reflected in a tightening of monetary policy.

More recently, the desire to avoid recession seems to have gained more prominence in the formulation of U.S. monetary policy. The Federal Reserve Board seems to be more concerned with engineering a "soft landing," now that the early signs of weakness are visible. The medium-run outlook for the United States, upon which our assessment of the Canadian outlook is based, does assume a "soft landing" during the period 1989-91 rather than a deep protracted recession (Table A-1).

Following this period of readjustment and consolidation, potential growth in the U.S. economy will be influenced largely by labour-force growth and productivity developments (Table A-2). The most notable factor, with respect to labour-force growth, concerns the expected slowdown in both population increase and participation-rate growth. When combined with a productivity growth rate that averages just above 1 per cent for the decade, the net effect of this slowdown, which has its origins in the changed working habits of women, implies an average potential real growth rate in the United States that ranges between 2.5 and 3 per cent. Such a growth rate is consistent with unemployment rates at or around 5 per cent. Given the current U.S. fiscal stance, however, this performance would leave the United States in a state of chronic budget imbalance during the period 1990-95.

There is considerable disagreement in the United States concerning the action necessary (and the timing of such action) to bring the federal deficit into balance. The Gramm-Rudman-Hollings Act calls for an incrementally cumulative action, which would bring balance by 1992. No consensus currently exists as to the steps required to meet this target. If anything, the recent package agreed to by the Congress and the Administration can be described as vague and rife with accounting tricks. There is little doubt, however, that between the current period and the target date of 1992, the pressure will mount on both the Congress and the Administration to put into place a fiscal regime that



Table A-1

## U.S. Base Case: Assumptions, 1989-2000

	1989	1990	1991	1992	1993	1994	1995	Average, 1991-95	Average, 1996-2000
External environment:									
	(U.S. dollars/barrel)								
Price of crude petroleum	17.03	14.94	16.69	17.79	18.47	19.06	19.67	18.34	21.64
	(Per cent)								
Growth in:									
Commodity prices	12.7	13.1	10.1	6.5	5.3	5.3	5.3	6.5	5.3
Real GNP	3.5	3.2	2.9	3.1	3.0	3.0	3.0	3.0	3.0
United States:									
Federal funds rate	9.7	9.5	8.7	8.4	8.2	8.3	8.4	8.4	8.9
	(Dollars)								
Wages									
Minimum wage	3.35	3.47	3.95	4.25	4.25	4.25	4.25	4.19	4.25
	(Per cent)								
Growth in:									
Federal wages	4.6	5.8	3.6	3.1	2.6	4.1	4.1	3.5	4.1
State and local wages	4.7	5.3	5.5	5.6	5.0	4.7	4.7	5.1	4.7
Level of tax rates:									
Personal income tax	11.3	11.3	11.4	11.7	11.7	11.7	11.7	11.6	11.7
Statutory corporate income tax	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
Growth in real federal expenditure									
Defence	-2.3	-2.0	-0.6	1.9	2.9	2.9	2.9	2.0	3.0
Goods and services <sup>1</sup>	4.7	5.6	5.9	6.9	6.5	6.5	6.5	6.5	6.5
Total	3.4	-0.1	0.8	2.7	3.4	3.4	3.4	2.7	3.5
	(1980 = 100)								
U.S. dollar index	170.9	178.9	179.5	174.9	168.3	164.3	161.3	169.7	153.0

1 Excluding Commodity Credit Corporation payments.

SOURCE Estimates by the Economic Council of Canada, July 1989, based on projections by The WEFA Group.

contains more than asset sales and off-budget accounting tricks as solutions to a structural problem. Judgments differ as to when this will occur. One argument suggests that during the coming period of consolidation and adjustment, there is little likelihood that a large tax increase or a large cut in spending will gain consensus among the U.S. electorate. For that reason, in our analysis we have assumed that no substantial change would be implemented until 1991. By then, the U.S. economy will have regained strength. This assumed tightening of fiscal policy in 1991 is designed to produce a balanced budget by 1995 and systematic surpluses thereafter through 2000 (Table A-3).

That, however, is not true of the current-account balance. Although we have assumed that the U.S. dollar will weaken, moving down from its current high level, the current-account position of the United States is expected to remain stubbornly negative. This is in contrast to the pattern for the real trade balance, where we do see steady improvement. The implication of our current-account assumption is that the United States must become super-competitive in order to service the past (and future) build-up of foreign debt and that the trade balance must become positive and remain high in order to offset debt-servicing costs. The prospect of the United States becoming super-competitive

Table A-2

## U.S. Base Case: Selected Indicators, 1961-2000 (Five-Year Averages)

	1961-65	1966-70	1971-75	1976-80	1981-85	1986-90	1991-95	1996-2000
	(Per cent)							
Growth in:								
Population	1.5	1.1	1.0	1.1	1.0	1.0	0.9	0.8
Real GDP	4.6	3.0	2.2	3.3	2.8	3.1	2.8	2.4
Real GDP per person	3.1	1.9	1.1	2.2	1.8	2.1	1.9	1.6
Consumer price index	1.3	4.3	6.8	8.9	5.5	3.9	5.1	5.8
Real wages	2.5	2.1	1.2	0.1	0.4	0.9	0.8	0.5
Civilian labour force	1.3	2.2	2.5	2.7	1.5	1.8	1.3	1.3
Labour productivity	3.3	1.4	1.5	0.6	1.4	1.1	1.1	0.9
Level of labour-force participation								
Males, aged 20 and over	84.6	83.1	81.2	79.7	78.5	78.0	77.2	76.2
Females, aged 20 and over	38.5	41.7	44.5	49.3	53.3	57.0	60.6	63.6
As a percentage of GDP:								
Federal balance	-0.4	-0.6	-1.8	-1.9	-4.3	-3.3	-0.6	0.9
Current-account balance	0.8	0.2	0.2	-0.2	-1.4	-2.8	-2.1	-2.1

SOURCE Estimates by the Economic Council of Canada, July 1989, based on projections by The WEFA Group.

Table A-3

## U.S. Base Case: Selected Indicators, 1989-2000

	1989	1990	1991	1992	1993	1994	1995	Average, 1991-95	Average, 1996-2000
	(Per cent)								
Growth in:									
Real GNP	2.9	2.1	3.0	2.9	2.9	2.7	2.6	2.8	2.4
Consumer price index	5.1	4.6	5.0	5.1	4.9	5.0	5.2	5.0	5.8
Population	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.9	0.8
Labour force	2.0	1.5	1.4	1.3	1.3	1.3	1.3	1.3	1.3
Productivity <sup>1</sup>	0.3	1.2	1.4	1.2	1.1	0.9	0.9	1.1	0.9
Employment	2.1	1.0	1.7	1.7	1.7	1.6	1.6	1.7	1.4
Level of participation rate	66.6	66.9	67.2	67.4	67.7	67.9	68.1	67.7	68.8
Rate of unemployment	5.4	5.8	5.5	5.2	4.8	4.4	4.2	4.8	4.0
As a proportion of GNP:									
Federal balance	-2.8	-2.3	-1.4	-1.0	-0.6	-0.2	0.2	-0.6	0.9
Current-account balance	-2.3	-2.2	-2.2	-2.2	-2.1	-2.1	-2.1	-2.1	-2.1
Real trade balance (in 1982 dollars)	-2.2	-2.3	-2.1	-1.8	-1.5	-1.2	-1.1	-1.5	-1.0

<sup>1</sup> Nonfarm private sector.

SOURCE Estimates by the Economic Council of Canada, July 1989, based on projections by The WEFA Group.

appears to be weak, since the underlying aggregate productivity growth in that country remains low, compared with that of its Asian competitors.

This chronic current-account deficit has serious implications for nominal and real rates of interest on North American money markets. To attract foreign capital, the United States will undoubtedly have to maintain an extremely competitive position in international financial markets. With inflation rates averaging between 4 and 5 per cent and with real interest rates between 3 and 4 per cent, the implication is that nominal interest rates will remain high, particularly during the period of consolidation and adjustment when the Federal Reserve Board must weigh recession against inflation in formulating policy. The corresponding implication for Canada is equally clear: high nominal and real rates of interest are likely to be the rule rather than the exception.

### **The Hard Landing and Proactive Cases**

There are, however, other possible outcomes (Table A-4). One is the "hard landing" scenario. Events related to the U.S. current-account position could turn sour, a crisis of confidence could develop, provoking a flight from the U.S. dollar. This could lead to a rapid devaluation of the U.S. dollar vis-à-vis the yen and the mark, and to a subsequent spike in U.S. interest rates.

This roller-coaster outcome for exchange rates and interest rates would no doubt imply a stop/go situation for real

growth and possibly for inflation in the United States. The immediate effects would be a peak in interest rates and a softening of export markets. A spike in North American interest rates and a fall-off in demand in U.S. markets would certainly make quick resolution of Canada's fiscal-imbalance problem more difficult.

A second alternative is also worth considering: U.S. economic policy could become proactive. Both the timing and the magnitude of any future change in the U.S. fiscal regime could take on more favourable dimensions. This would allow for an earlier easing of monetary policy than is contained in the U.S. base case. This alternative carries with it some drawbacks, however. The pattern of growth that emerges from such a proactive case would eventually stimulate U.S. imports more than exports, unless a substantial devaluation of the U.S. dollar were to take place. Without an exchange-rate adjustment, the U.S. current-account position would worsen.

Such a turn of events would nonetheless have positive aspects, in particular with respect to the domestic destination of capital inflows into the United States. A smaller proportion of savings would be devoted to public consumption as the federal deficit declines, leaving more room for private investment and strengthening the ability of the United States to service its foreign debt. The implications of the U.S. proactive case for Canada are also straightforward: there would be less pressure on interest rates, and higher demand would result for Canadian products in U.S. markets. As a result, a smaller portion of the burden of correcting the fiscal imbalance in Canada would rest with domestic policy.



Table A-4

## U.S. Base Case and Alternatives: Selected Indicators, 1989-2000

	1989	1990	1991	1992	1993	1994	1995	Average, 1991-95	Average, 1996-2000
(Per cent)									
Growth in:									
Real GNP									
Base case	2.9	2.1	3.0	2.9	2.9	2.7	2.6	2.8	2.4
Recession case	2.9	1.1	2.0	3.5	2.7	2.2	2.3	2.5	2.4
Proactive case	2.9	2.1	3.3	3.1	3.0	2.8	2.6	3.0	2.4
Employment									
Base case	2.1	1.0	1.7	1.7	1.7	1.6	1.6	1.7	1.4
Recession case	2.1	0.6	1.0	1.7	1.6	1.4	1.4	1.4	1.4
Proactive case	2.1	1.0	1.8	1.8	1.8	1.7	1.6	1.7	1.3
Consumer price index									
Base case	5.1	4.6	5.0	5.1	4.9	5.0	5.2	5.0	5.8
Recession case	5.1	4.6	4.8	5.1	4.8	4.4	4.4	4.7	5.0
Proactive case	5.1	4.6	4.9	5.2	5.1	5.2	5.4	5.2	5.9
Level of:									
Unemployment rate									
Base case	5.4	5.8	5.5	5.2	4.8	4.4	4.2	4.8	4.0
Recession case	5.4	6.2	6.6	6.2	5.9	5.7	5.7	6.0	5.5
Proactive case	5.4	5.8	5.4	5.0	4.5	4.1	3.9	4.6	3.8
Federal funds rate									
Base case	9.7	9.5	8.7	8.4	8.2	8.3	8.4	8.4	8.9
Recession case	9.9	11.1	9.7	8.4	8.2	8.3	8.4	8.6	8.9
Proactive case	9.7	8.4	7.1	6.9	6.7	6.8	6.9	6.9	7.9
(1980 = 100)									
Trade-weighted exchange rate									
Base case	170.9	178.9	179.5	174.9	168.3	164.3	161.3	169.7	153.0
Recession case	170.9	166.4	146.4	153.4	160.8	161.9	161.3	156.8	153.0
Proactive case	170.9	178.9	179.5	174.9	168.3	164.3	161.3	169.7	153.0
(Per cent)									
As a proportion of GNP:									
Federal balance									
Base case	-2.8	-2.3	-1.4	-1.0	-0.6	-0.2	0.2	-0.6	0.9
Recession case	-2.8	-2.9	-2.6	-1.9	-1.6	-1.4	-1.2	-1.7	-0.6
Proactive case	-2.8	-2.1	-1.0	-0.3	0.4	0.6	1.1	0.2	2.0
Current-account balance									
Base case	-2.3	-2.2	-2.2	-2.2	-2.1	-2.1	-2.1	-2.1	-2.1
Recession case	-2.3	-2.1	-1.6	-1.2	-1.5	-1.6	-1.5	-1.5	-1.5
Proactive case	-2.3	-2.3	-2.4	-2.3	-2.3	-2.3	-2.3	-2.3	-2.4

SOURCE Estimates by the Economic Council of Canada, July 1989, based on projections by The WEFA Group.

## Notes

### CHAPTER 1

- 1 Economic Council of Canada, *Back to Basics*, Twenty-Fifth Annual Review (Ottawa: Supply and Services Canada, 1988).

### CHAPTER 2

- 1 Published in English as *American Challenge* (New York: Avon Books, 1978).
  - 2 Economic Council of Canada, *A New Frontier: Globalization and Canada's Financial Markets* (Ottawa: Supply and Services Canada, 1989), p. 4.
  - 3 In the medium term, the repayment burden will become more onerous if, as many expect, renewed cyclical weakness in resource prices is accompanied by a decline in the exchange rate of the Canadian dollar.
  - 4 ECC, *Back to Basics*, p. 25.
  - 5 The G-7 (Group of Seven) countries include the United States, Britain, Canada, France, West Germany, Italy, and Japan.
  - 6 See Economic Council of Canada, *Adjustment Policies for Trade-Sensitive Industries* (Ottawa: Supply and Services Canada, 1988), p. 54.
  - 7 See George L. Brinkman, "The competitive position of Canadian agriculture," *Canadian Journal of Agricultural Economics* 35 (July 1987); and Colin Carter, Alex F. McCalla, and Andrew Schmitz, *Canada and International Grain Markets: Trends, Policies, and Prospects*, Economic Council of Canada (Ottawa: Supply and Services Canada, 1989).
  - 8 See Alan V. Deardorff and Robert M. Stern, "A computational analysis of alternative scenarios for multilateral trade liberalization," Economic Council of Canada, Discussion Paper 363, Ottawa, August 1989.
- eral debt on a public-accounts basis amounted to 53.2 per cent of GDP in fiscal 1987-88; by comparison, the net debt of the federal government (excluding its enterprises) was 39 per cent of GDP in 1988, according to the national balance sheet. Unless otherwise indicated, all references in this chapter are to national-accounts data.

### CHAPTER 3

- 1 This is based on the "national balance sheet," which, in turn, is based on the national-accounts definitions of government revenue and expenditure. The national-accounts deficit is lower than the budgetary deficit recorded in the public accounts, primarily because of the inclusion of the annual surplus in the superannuation account for government employees. Net fed-
- 2 This measure of net worth is based mainly on tangible capital, and it excludes other potentially important components of government investment. The ratio would be different, for example, if government contributions to human capital development (primarily through education and health spending) were included. But much federal spending in this area takes the form of transfer payments, and the net contribution of transfers (even if they are directed at education or health) may be not so much to increased investment as to increased consumption.
  - 3 We recognize, of course, that there may well be changes in the actual details of the tax and the accompanying fiscal legislation, following a Parliamentary study and further discussions with the provincial governments.
  - 4 There are admittedly differences of view on this matter. For further analysis of the GST, see the statement and testimony of the Chairman of the Economic Council to the Standing Committee on Finance, 27 September 1989.
  - 5 We examined the impact of an increase in potential economic growth, involving higher investment, more immigration, and more-rapid increases in productivity. Such an alternative would strengthen Canada's ability to cope in a highly competitive world over the long term. However, it would not provide a quick solution to fiscal imbalance.
  - 6 We also considered a scenario with a more draconian expenditure restraint, in which not only is a freeze instituted but substantial cuts become part of the picture. In this case, the following reductions would be made during the first quarter of 1990: the monthly benefit for family allowances, by 10 per cent; business subsidies, by 10 per cent; capital assistance, by 10 per cent; and transfers to the provinces as well as employment in the federal public service, by 5 per cent each. Here again, we assume no catch-up. The reduction in spending attributed to the freeze and the cuts would not be recouped. Under those circumstances, spending would be reduced by \$8 billion in 1992. This would be offset by a \$3-billion revenue loss because of reduced economic activity. This case would speed up the return to fiscal balance by only one year (compared to the freeze case in the text), and it would cause a sharp increase in unemployment.

- 7 These ratios were calculated differently from the historical series depicted in Chart 3-2. In the model from which Chart 3-11 is derived, federal debt is computed on the basis of the value of the outstanding stock of Canada Savings Bonds, Treasury Bills, and other government long- and short-term securities.
- 8 It should be noted that opinions are divided as to whether that inflationary spiral was of the cost-push type.

## CHAPTER 4

- 1 Hans Messinger and Frank Fedyk, "The impact of government income transfers on poverty in Canada," a paper presented at the June 1988 meeting of the Canadian Economics Association.
- 2 J. Myles, G. Picot, and T. Wannell, "Wages and jobs in the 1980s: Changing youth wages and the declining middle," Statistics Canada, Social and Economic Studies No. 17, Ottawa, July 1988; David K. Foot and Jeanne C. Li, "Youth unemployment: A reply," *Canada Public Policy* 14, no. 1 (1988):109-11.
- 3 Myles, Picot, and Wannell, "Wages and jobs."
- 4 See James B. Davies, "The relative impact of inheritance and other factors on economic inequality," *The Quarterly Journal of Economics* (August 1982); and James B. Davies and France St-Hilaire, *Reforming Capital Income Taxation in Canada*, Economic Council of Canada (Ottawa: Supply and Services Canada, 1987).
- 5 R. K. Chawla, "Distribution of wealth in Canada and the United States, 1984," *Perspectives on Labour and Income*, Statistics Canada, Cat. 75-001 (forthcoming).

## CHAPTER 5

- 1 The CPP and QPP are both partially funded, unlike true pay-as-you-go schemes. The accumulated funds held by the CPP amounted to almost five times its annual expenditures in 1986. Based on the contribution rates set in the January 1987 amendments to the plan, that ratio is projected to decline by more than two thirds by 2030.
- 2 To be consistent with Table 5-4, productivity growth is measured by the rate of increase in real GDP per employee.
- 3 The concern here is strictly with inadequacies in existing measures of output and real economic growth. We are not addressing concerns that resource exhaustion will limit the longer-term opportunities for economic expansion. In fact, the expected negative consequences of exploiting nonrenewable resources have largely been avoided through technical innovations in resource extraction, substitution in the use of re-

sources, and substitution between resources and other factors of production. Current national-accounting procedures do not adequately capture the reductions in "nature made capital" owing to depletion. Failure to account for this form of depreciation overstates not only our capital bequest to future generations but also real net national income.

- 4 For example, progress has been achieved in reducing chemical hazards through the banning of DDT and the regulation of industrial compounds such as PCBs (polychlorinated biphenyls) and mirex. Restrictions on the use of some detergents have contributed to the reduction of phosphorus levels in the Lower Great Lakes. Carbon monoxide and lead concentrations in Canadian cities have declined as a consequence of the introduction of vehicle-emission standards and the progressive replacement of the stock of older vehicles. And there has been a significant reduction in radiation exposure since the early 1960s, following the cessation of atmospheric nuclear testing.
- 5 World Commission on Environment and Development (Gro Harlem Brundtland, Chairman), *Our Common Future* (Oxford: Oxford University Press, 1987).
- 6 At the Global Conference on the Changing Atmosphere, held in Toronto in 1988, scientists called for a 20-per-cent reduction in the world's carbon emissions by 2005. This was seen as the first step towards a longer-term objective of a 50-per-cent reduction.
- 7 C. A. Sonnen, "The environment-economy linkage: An exploration of issues and impact," *Informetrica*, Ottawa, April 1989.
- 8 See, especially, Economic Council of Canada, *Road Map for Tax Reform: The Taxation of Savings and Investment* (Ottawa: Supply and Services Canada, 1987).

## CHAPTER 6

- 1 Richard H. Tawney, *Equality* (New York: Capricorn Books, 1981), p. 32.
- 2 See *Currents of Change*, Final report of the Inquiry on federal water policy (Ottawa: Supply and Services Canada, 1985).
- 3 ECC, *Back to Basics*, p. 62.
- 4 Economic Council of Canada, *Managing Adjustment: Policies for Trade-Sensitive Industries* (Ottawa: Supply and Services Canada, 1988).

## APPENDIX

- 1 This appendix is based on R. S. Preston, H. M. Saiyed, and B. Cain, "Spending cuts as an option to the solution of fiscal imbalance in Canada," a paper prepared for the Economic Council of Canada, August 1989.



## List of Tables, Charts, and Figures

### Tables

2-1	Structure of Merchandise Exports, Selected Countries, 1965 and 1986	7
2-2	Shares of High-Technology Products in World Exports, by Trading Country or Area, 1971-86	7
2-3	Saving and Investment in Selected Countries, 1970-86	8
2-4	Distribution of Foreign Direct-Investment Inflows by Major Region, 1975-85	9
2-5	Change in the Volume Composition of Canadian Exports, 1980-88	10
2-6	Ranking of Commodity Groups by Their Comparative Advantage, Canada, 1971 and 1986	12
2-7	Unit Labour Costs in the United States Relative to Canada, 1980-88	15
2-8	Extent of Quantitative Restrictions in International Trade in the 1980s	16
3-1	Selected Indicators of Projected Performance, Canada, 1989-2000	26
4-1	Average Income, and Income Composition, of Young and Middle-Aged Families and Unattached Individuals, Canada, 1973 and 1986	33
4-2	Average Income, and Income Composition, of Elderly Families and Unattached Individuals, Canada, 1973 and 1986	34
4-3	Proportion of Households Who Own Their Residence, Canada, 1961-86	36
4-4	Contributions of Occupational Categories to Total Employment Change, Canada, 1981-86	38
4-5	Unemployment Rates, Canada, by Province, 1968, 1980, and 1988	38
4-6	Distribution of FTE Jobs by Major Sector, Canada, 1981 and 1986	41
4-7	Net Change in FTE Jobs, by Wage Level, Canada, 1981 and 1986	41
4-8	Components of Supplementary Labour Income, Canada, 1980 and 1988	43
4-9	Incidence of Pensions and RRSP Holdings among Labour-Force Participants Aged 15 to 64, by Earnings Category, Canada, 1984	44
5-1	Demographic Trends in Canada, 1921-88	51
5-2	Projected Population of Canada, Three Scenarios, 1988-2040	53
5-3	Projected Age Distribution of the Canadian Population, Three Scenarios, 1988-2040	54
5-4	Productivity Growth Required to Cover Demographic Changes and Increases in Health-Care Costs, Three Scenarios, Canada, 1987-2040	56
5-5	Trends in Sulphur-Dioxide and Nitrogen-Oxide Emissions, Canada and United States, 1955-85	59
6-1	Performance Targets and Projections, 1989-93	67
A-1	U.S. Base Case: Assumptions, 1989-2000	74
A-2	U.S. Base Case: Selected Indicators, 1961-2000 (Five-Year Averages)	75
A-3	U.S. Base Case: Selected Indicators, 1989-2000	75
A-4	U.S. Base Case and Alternatives: Selected Indicators	77

### Charts

1-1	Average Annual Growth in Real Labour Income and Productivity, Canada, 1966-87	2
-----	---	---

1-2	Distribution of Population by Age Group, Canada, 1988-2040	2
1-3	Federal Government Revenues and Expenditures as a Proportion of GDP, Canada, 1861-87	3
1-4	Interest Payments as a Proportion of Federal Revenues, Canada, 1950-88	4
2-1	Foreign Debt as a Proportion of Total Debt, by Level of Government, Canada, 1952, 1967, and 1987	9
2-2	Changes in Output per Person-Hour, by Industry, Canada and United States, 1980-87	11
2-3	Level of Labour Productivity in Manufacturing (Output per Hour) in Selected Countries Relative to That of the United States, 1951-87	13
2-4	Measures of Competitiveness in Manufacturing, Four Industrialized Countries, 1980-87	14
3-1	Public Debt as a Proportion of GDP or GNP, Selected Countries, 1975-88	19
3-2	Revenues, Expenditures, and Net Debt of the Federal Government as a Proportion of GDP, Canada, 1961-88	20
3-3	Composition of the Federal Government's Expenditures, Canada, 1968-88	21
3-4	Ratio of Government Assets to GDP, Canada, 1961-87	22
3-5	Projected Deficit of the Federal Government as a Proportion of GDP (Base Case), Canada, 1989-2000	23
3-6	Crossover Point (at Which the Federal Government's Deficit Becomes Surplus) under Different Assumptions, Canada, 1989-2000	24
3-7	Factors Influencing the Potential Growth in GDP, Canada, 1966-2000	25
3-8	Projected Impact of Three External Scenarios on Selected Economic Indicators, Canada, 1989-2000	27
3-9	Projected Impact of Three Canadian-Policy Scenarios on Selected Economic Indicators, Canada, 1989-2000	29
3-10	Projected Impact of Combined Canada-U.S. Policy Change on Selected Economic Indicators, Canada, 1989-2000	30
3-11	Projected Impact of Alternative Scenarios on the Ratio of Net Federal Debt to GDP, Canada, 1989-2000	30
4-1	Growth in Real Family Income, by Age of Head, Canada, 1967-87	35
4-2	Relative Wealth of Families, by Age of Head, Canada, 1977 and 1984	36
4-3	Distribution of Annual Earnings, Canada, 1967-86	37
4-4	Change in Real Labour Income and Productivity, Canada, 1966-87	39
4-5	Labour and Investment Components of Personal Income, Canada, 1977-89	40
4-6	Change in the Wage Distribution of FTE Jobs, by Industrial Sector, Canada, 1981-86	42
5-1	Projected Old-Age Dependency Ratios, Canada, 1987-2040	55
5-2	Average Annual Change in the Area of Productive Forest Land, Canada, 1977-81	58

## Figures

2-1	Canada's Science and Technology Performance	15
5-1	The Process of National Wealth Creation: Current Choices and Future Possibilities	50

## **Project Contributors**

### **Research**

R. A. Jenness, Director

G. Betcherman

C. Caron

R. Hirshhorn

N. Leckie

B. Lodh

S. Magun

P. Mercier

S. Rao

F. Tcharkari

### **Performance and Outlook**

R. S. Preston, Director

A. Burns

B. Cain

P. E. Nevin

H. M. Saiyed

M. E. Willis

Thanks are due to Lise Sabourin and Mary Rowe, and to various support groups at the Council, in particular the Informatics Division, the Publications Division, and the Registry Service, for their contribution to this report.



HC/111/.E26/n.26

Economic Council of Canada  
Legacies.

effi

c.1 tor mai

~~DEC 12 1989~~

~~JAN 3 1990~~

FEB 4 1990

FEB 24 1993

APR 29 1993

JUL 23 1993

OCT 6 1993



Economic Council  
of Canada

Conseil économique  
du Canada