ONE IN THREE

Pensions for Canadians to 2030

ECONOMIC COUNCIL OF CANADA

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1979

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This report reflects a consensus of the Economic Council of Canada. However, dissenting comments by Messrs. Kaplansky, McCambly, and Pearse appear at the end of Chapter 10.

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READER'S NOTE

In a departure from previous reports, the notes to the text in *One in Three* may be found at the back of the report, after the appendixes. They are followed by the list of the notes and sources for the charts and tables.

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

. . figures not available

. . . figures not appropriate or not applicable

— amount too small to be expressed

– nil or zero

e estimated figures.

One in Three

1 A Comprehensive Approach

By the time today's high school students reach the age of retirement — around the year 2030 — approximately one out of every five Canadians will be 65 years old or over, compared with roughly one out of every ten now. At the same time, the proportion of elderly people among the population aged 20 and over could jump from about one in seven now to nearly one in three 50 years hence.

The age profile of the Canadian population is undergoing dramatic changes. The causes of this evolution have been at work for some time: the generation born during the "baby boom" that took place in the decade following the Second World War is aging, and birth rates in Canada have fallen sharply in the 1960s and 1970s.

Demographic transformations of this magnitude have profound effects on society. The "baby boom" of the late 1940s and the 1950s, the "student boom" of the 1960s and the early 1970s, and the rapidly evolving "adult boom" of today have brought about a succession of social, political, and economic changes in various fields — in health and education systems, in the demand for foods and fashions, in the work place and in the polling booth, to name but a few.

The coming explosion in the older population — what has been called the "pension mountain" — also has far-reaching implications for economic and social policy. Changes in the age structure of the population or in policies designed to provide secure sources of income for older people — income from public and private pension programs, from individual savings, and from work — can affect the economy in two ways. They can alter the claims of older people on the economy's total output of goods and services, and they can also affect the economy's capacity for supplying these goods and services. As time goes on, more and more people will be leaving the labour force because of their age, and there will be fewer and fewer young people to replace them. The task of producing the basic necessities — food, shelter, clothing, appliances, and so on — for a growing number of older people will therefore rest on the shoulders of a work force that will be increasing much more slowly.

The treatment of the elderly is already a controversial issue in Canada. Despite recent improvements in public and private programs directed at our older citizens, some of them are still in difficult, even desperate, and certainly socially unacceptable circumstances. There have been pressures to expand the services aimed at the elderly and to improve the coverage and benefits of retirement income packages. There have also been warnings, however, that the expected increase in the proportion of older people will increasingly threaten Canada's capacity to provide even the existing level of benefits. Some observers have suggested that further expansion of commitments to the old might even bring about a collapse of the economy that would jeopardize the well-being of Canadians of all ages.

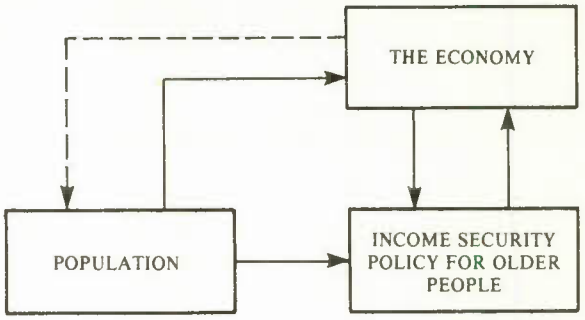
These two opposite views delineate the question that is at the core of our report: Can Canada ensure its older generation — which, 50 years from now, will represent one-fifth of its total population — an adequate income without risk to the economy? The matters discussed here are very complex, and many aspects of the question are subtly but closely interrelated. In order to clarify and elucidate them, our approach involves the following elements: 1/ reference to a comprehensive framework, or "model," that sets out the relationships over time between demographic and economic changes and changes in the policies and institutions that form this country's system for providing income for older people; 2/ an attempt to define the objectives of this particular group of policies; 3/ the setting out of a number of alternative ways to achieve these objectives; and 4/ the production of information having a bearing on the choice of these alternatives.

The Council's interest in these issues stems in part from its continuing concern about the implications of a changing age structure for the economy. Our report does not describe in detail the situation of those elderly people who, in 1979, are suffering from want. This question has been well documented elsewhere, and further elaboration by the Council would contribute little of interest to the discussion. We focus instead on a major obstacle that has impeded action to alleviate the problem and that has received surprisingly little attention: the uncertainty about the longer-term repercussions of such action on the economy. This report is an attempt to dispel some of that uncertainty, and our analysis is therefore somewhat more oriented towards the future than other current investigations of these issues. This does not mean that it is an abstract exercise in futurism: reducing the uncertainty will no doubt assist those who are now in the older age groups. Besides, it is worth repeating that, although we refer often to the elderly population of the year 2030, those "old people" of tomorrow are, in fact, the high school students of today.

A CONCEPTUAL FRAMEWORK

In its simplified version, the general framework employed here consists of three major blocks or subsystems: the population, the economy, and the income security policies directed at older people (Chart 1-1). The population block takes into account the various factors that influence the size and age-sex composition of the population — that is, births, deaths, and migration, and the causes underlying them. The economic block comprises those factors that directly affect the economy's output of goods and services and their allocation among various uses — the size and composition of the labour force, the stock of real capital, employment, savings and investment, and the rate of technological progress, to mention but a few. The policy block focuses attention on the various institutions and policies, both private and public, that directly affect the flow of income to older people — the contribution and benefit structure of various types of pension plans, tax legislation, and programs designed to provide special services. This block is broader than the pension or retirement income system narrowly defined, since pensions are only one method — albeit the most important one at present — of providing income to older people.

CHART 1-1
THE GENERAL MODEL



The three blocks are closely interrelated. Changes in population, for example, can affect the output of the economy by altering the size of the labour force. Economic factors such as income levels may also have a bearing on the size of the population, although our knowledge of such effects is rather limited (that is why this "feedback" is shown as a broken line in Chart 1-1). Population changes may affect the economy by way of the income policy subsystem as well. The claims of older people on total output are determined not only by their numbers but by the level of pension benefits. Some features of the income policy block may affect the economy directly; for example, certain programs for older people may affect the incentive to work or to save. Economic factors may in turn affect decisions about these programs.

Although the basic framework outlined above underlies our analysis throughout the report, our work is not based on a single, detailed economic model. Given the present state of our knowledge and the limitations on our time and resources, we have drawn instead on several models, each differing in the comprehensiveness of its treatment of the subsystems mentioned above.

THE NEED FOR PRECISE OBJECTIVES

The primary objective of the group of public and private policies that is the focus of this report is something we have as yet defined only loosely as "income security for older people." It does not take long to find out, however, that individuals, unions, employers, and other groups differ greatly in their conceptions of such security and in the importance they assign to it relative to other goals of our society.

Income security for older people is only one of a variety of broad national objectives in Canada. Some of the others include improving the health and education of the population in general, ensuring the protection of persons and property, and providing support to the unemployed. Our society is also concerned with the performance objectives of the economy — increases in real income over time, full employment, reasonable stability of prices, and a more equitable distribution of income among different groups and regions. And, of course, there are many noneconomic objectives as well. One of the most important, in the context of this report, is the provision of a large measure of freedom of choice to the individual.

There are strong interrelationships — and, at times, conflicts — between many of these objectives. The achievement of one may well hinder the achievement of others, sometimes simply because the total resources of the economy are limited. To achieve greater efficiency it is necessary to seek ways of realizing one objective more adequately without sacrificing the others or, at least, by minimizing such sacrifices. To this end, the costs and benefits of a variety of approaches must be compared — a task that is possible only if the objectives are reasonably precise.

Pension policies are often used to achieve more than one objective. In Italy, for example, the pension and social security systems are used to promote regional development and economic stabilization objectives; employer contributions have been reduced during business slowdowns, and labour subsidies to particular regions have been made available through the system. Sweden allows elderly persons to draw pensions at an earlier age rather than attempt to move them to regions with better employment prospects. The Canada Pension Plan has been used as a source of financing for provincial governments.

Even when retirement income policies are not deliberately directed at more than one objective, they may have "spillover" effects that must be taken into account when designing an efficient policy system. If, for example, income security for the elderly were to be defined only in terms of the proportion of pre-retirement income replaced, the system would simply help to perpetuate regional income disparities in Canada, whereas reduction of these disparities is also a national objective. Perhaps the greatest concern, however — at least in Canada and the United States — is the possibility that present retirement income policies will reduce economic growth. It is therefore necessary to determine whether the most efficient methods are being used to achieve given objectives and how any undesirable spillover effects can be minimized or desirable effects reinforced.

The possible conflict between income security for older people and freedom of choice is a subject that has received far too little attention. As well as affecting the allocation of income among individuals, Canada's system involves efforts to change patterns of consumption and saving over the lifetime of individuals, partly through the use of various forms of compulsion. How much compulsion can be justified and on what grounds? Are employer-sponsored pensions a barrier to the free mobility of workers? Can ways be found to permit greater freedom of choice without sacrificing income security?

ALTERNATIVE WAYS TO ACHIEVE INCOME SECURITY FOR OLDER PEOPLE

Just to begin moving towards a more precise definition of objectives requires recognition that income security for older people has a dual purpose. The first, one that emerged in most Western countries many years ago, is to prevent people from becoming destitute by providing a basic, or floor, income regardless of previous circumstances. As progress has been made in that direction, attention has been directed increasingly to the need for some level of income replacement that would prevent an unduly large decline in the standard of living of individuals between their prime and later years.

The latter concern is an explicit recognition of the difficulty of defining poverty or social deprivation:

> "What would have seemed a tolerable standard of living in 1900 would not be so regarded today in any developed country. What would be felt to be bitter hardship by most Americans would be affluence to most of the inhabitants of Africa or India.... Clearly the concept of poverty has a relative aspect which is of crucial importance to an understanding of the problem."[1]

Linking retirement income to pre-retirement income is one way — albeit an imperfect one — of dealing with this problem. But it does help to avoid the situation in which an individual who had been earning an adequate income while working suddenly finds himself with a very sharply reduced living standard after retirement.

The two goals may or may not coincide. When an individual's pre-retirement income is low — and there will always be people who, for various reasons, are unable to work or who receive only low incomes — even a high level of income replacement will not provide sufficient basic income. When pre-retirement income is high, on the other hand, some level of replacement will accomplish both goals. But

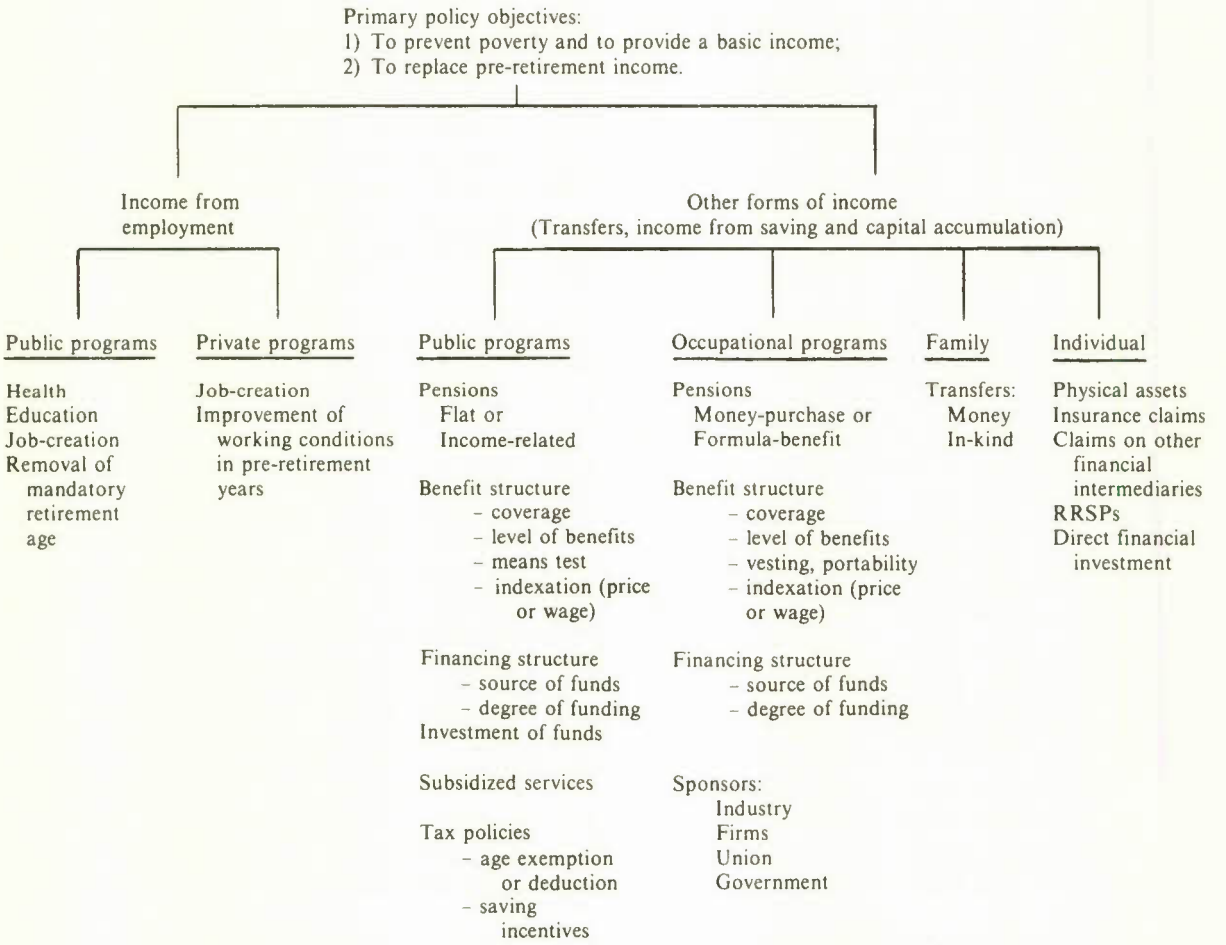
the provision of a basic old-age income sufficiently high to prevent, by itself, a sharp drop in the retirement income of middle- and upper-income workers would be extremely expensive and could involve serious distortions of work and saving incentives. For these reasons, many countries use separate methods to achieve each goal.

These dual objectives involve many complex issues. What is poverty? What income is adequate to prevent destitution? Who should be eligible for a basic income? At what age? Should a means test be used to determine eligibility? Should the basic-income payment be indexed to the wage or price level? How much income is required to maintain one's standard of living after leaving employment? Why shouldn't individuals provide for their own income replacement? To what extent are governments — or even private firms — justified in forcing their present workers to save in order to provide benefits beyond the basic minimum? How far can the retirement income system be expected to go to take care of problems that may have their roots in much earlier periods of individuals' lives — insufficient education, low-income jobs, or poor health, for example. Answers to these questions also require precise definition of the objectives and a careful assessment of the alternative ways to achieve them.

The goal of income security for the elderly can be pursued by enabling them to work to a more advanced age and thus receive employment income or by providing other forms of income, including transfers from the active work force or income from capital — that is, the return on savings. There is an almost bewildering variety of methods or programs that could be used to implement these two broad approaches — some involving direct government intervention and others involving the private sector, including regulations and legislation concerning that sector (Chart 1-2). This report is largely concerned with providing information that may help in assessing the various alternatives and in choosing the appropriate mix of policies and the methods through which to implement them.

CHART 1-2

INCOME SECURITY FOR OLDER PEOPLE: THE OPTIONS



The first level of choice mentioned above is between an approach that would enable or encourage people to work to an older age and one that would involve nonemployment sources of income. Obviously, the former would be of little use to the very old or to those who, for health reasons, might not be able to work. It is clear, too, that the first approach would involve a good deal of emphasis on programs that might be brought to bear even long before retirement, in such areas as education, retraining, health, and accident prevention, as well as on programs directed at those already in the older age groups, such as the creation of full- or part-time jobs designed specifically for them. It is necessary to know just how effective these various methods would be, how much they would cost, and how much they might add to the economy's output. Even if the economic returns should prove to be limited, such programs might well be encouraged in order to increase freedom of choice or psychological satisfaction.

Other forms of income may be provided through universal (government) schemes, occupational (mainly employer-sponsored) plans, or through families or individuals, with many variations in each approach. Not too long ago, the family unit was the main channel for transferring income from active workers to the elderly. With the transition to an industrialized, urban society and a more mobile work force, however, the characteristics of the older population have changed, and as families have become more widely dispersed, their role as providers of income for their older members has diminished in importance.

Beyond the family's contribution, individuals were expected to save during their working lives in anticipation of their own retirement. That emphasis too has shifted in favour of collective or institutional action because of the high social costs entailed by inadequate provision for retirement, the uncertainties facing the individual in planning for retirement, and, quite simply, myopia with respect to retirement needs. With the rise in real incomes, higher levels of education, the availability of basic old-age income, and the development of financial markets, however, the use of government assistance, compulsion, or tax privileges to promote collective, as opposed to individual, preparations for retirement could at least stand re-examination. There is also the question, though, of the ability of the individual or of private pension plans to deal with the discouraging effects of inflation.

OUTLINE OF THE REPORT

For policy-makers to choose wisely from among the various collective approaches or to choose between these and the family or individual approaches, a great deal of information and analysis is required. Chapter 2 describes Canada's present retirement income system with a view to revealing both its strengths and its weaknesses, and it does so in such a way as to facilitate economic analysis. It points out too that alleviation of present problems cannot be discussed sensibly without reference to cost, especially because of the substantial increase expected in the numbers of older people. Chapter 3 examines this aspect by linking various demographic scenarios to the proportion of current production that will be required to support our retirement income system in the future.

Depending upon how the system is set up, however, production itself may be influenced. Chapter 4 shows how retirement income plans can redistribute income or wealth between generations as well as between individuals of the same generation. Such redistribution may bear directly on the adequacy of benefits. It may also do so indirectly through its repercussions on the economy by way of its implications for the choices between consumption and saving and between work and leisure. Chapter 5 looks in more detail at the first choice, especially at how it may be affected by the method of funding public pension plans or by the mix of private and public plans. The choice between public and private plans, or between various types of private plans may also be conditioned by the ways in which different plans invest the savings entrusted to them. That is the subject of Chapter 6.

Chapter 7 looks at how the sources of finance for retirement plans, and the conditions surrounding benefit payments may alter the choice of how much to work and where to work — that is, the supply and mobility of labour — as well as at the costs and benefits of extending freedom of choice with respect to age of retirement. The choice between public and private pension plans may also be affected by their ability to adjust benefit payments over time to rising prices or rising real wages. These problems, which have assumed great importance in recent years, are the subject of Chapter 8.

Because of the great complexity of the subject, the Council itself found it useful to pause for a while to draw its findings together and to summa-

rize the implications of the available options and alternatives. The results are set out in Chapter 9. Chapter 10 then reviews the costs of various policy packages and makes a number of recommendations for increasing the adequacy and viability of the system in the future.

2 The Holes in the Fabric

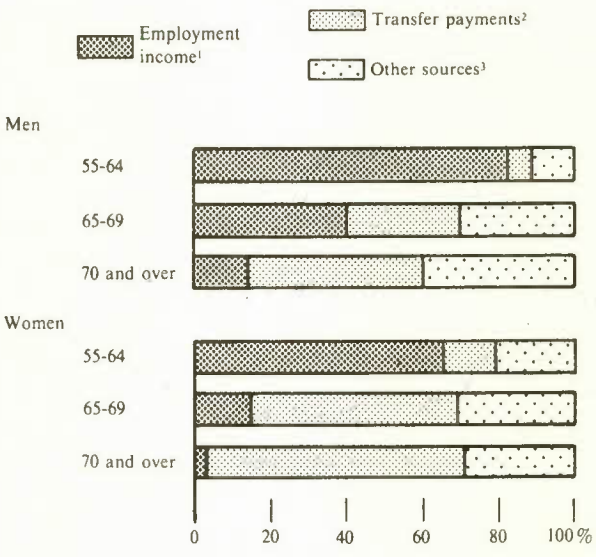
Canada's system for ensuring that older men and women can live decently, with adequate incomes, is now much better than it was even a few years ago. Like any system — and especially any system that is a great melange of public and private initiatives — it misses some of the people it is designed to help: some couples and individuals are still in distress. These "holes in the fabric" are the subject of this chapter.

What we have now has been shaped by history. It was not 50 years ago that the aged depended largely on their families or on their own thrift. Canada is now a very different society. We have higher living standards, earned by wholesale economic reorganization — a shift from an essentially rural, agricultural existence to a highly industrial, urbanized economy that, for all its immense benefits, has required us to reorganize the family as well. Although the pressures, controversies, and changing perceptions of needs that have brought Canada's retirement income system to its present state make a fascinating story (see Appendix B), we must concentrate here on today's issues and concerns.

Canada's older people have come to depend very little on income from employment (Chart 2-1). Their participation in the labour force is now far below what it was even 20 or 30 years ago. This decline reflects, at least in part, the deliberate decision of society to provide them with other sources of income. It may also reflect mandatory retirement provisions and a lack of job opportunities for older workers.

There are a number of public, publicly funded, and private programs designed to provide opportunities for older Canadians to use their talents.[1] In most cases, however, they are not designed primarily to supplement the individual's income. One exception is the federal "Over 55" program, which provides free job-placement and counselling services for qualified mature persons in good health and with specific skills. We know of no special programs in Canadian industry to provide part-time employment to older workers, like those that exist in the United Kingdom, the Netherlands, and Sweden.

CHART 2-1
INCOME DISTRIBUTION OF OLDER AGE GROUPS, BY MAJOR SOURCE, CANADA, 1975



Thus our major concern here is with those government and private programs, both institutionalized and individual, that provide older people with their major sources of nonemployment income. Not surprisingly, the programs designed to provide a basic retirement income for the elderly — that is, to achieve the anti-poverty objective — are all established by government. The objective of providing income replacement above this income floor is met by a mixture of public and private programs (Table 2-1).

TABLE 2-1
CANADA'S RETIREMENT INCOME PROGRAMS, 1977

Objective	Program	Contributions	Benefits	Value of assets
			(Millions of dollars)	
Income floor	Old Age Security[1]	. . .	3,669	. . .
	Guaranteed Income Supplement[1]	. . .	1,078	. . .
	Provincial income supplements[1]			
	Nova Scotia	. . .	7	. . .
	Ontario	. . .	108	. . .
	Manitoba	. . .	2	. . .
	Saskatchewan	. . .	6	. . .
	Alberta	. . .	34	. . .
	British Columbia	. . .	35	. . .
	Income in kind	. . .	. .	. . .
	Tax programs	. . .	. .	. . .
Income replacement	Canada Pension Plan	1,828	998	12,596
	Quebec Pension Plan	611	359	4,618
	Occupational pension plans			
	Public	3,005e	1,106e	34,586e
	Private	2,247e	786e	22,137e
	Other saving			
	Registered Retirement Savings Programs	2,369	. .	7,000e
	Registered Home Ownership Savings Program	476	. . .	. .
	Tax programs	. . .	. .	. . .

TAX POLICIES

Various taxation policies and regulations have an important bearing on the income security system for older people, in respect of both the basic-income and the income-replacement objectives. These measures include exemptions as well as measures — tax deferrals and reductions, certain tax deductions, and tax shelters — aimed at encouraging individuals to save some of their employment income for their retirement through pension plans and various forms of individual saving.

The Canadian income tax system provides a personal exemption ($1,520 in 1978) for individuals who are over 65 years of age, beyond the basic exemption ($2,430 in 1978) available to all taxpayers. These exemptions are adjusted for changes in the cost of living, helping to ensure a basic-income level as well as a higher level of income replacement. There is an exemption for aged dependants ($840 in 1978) offered to families supporting their older members. In addition, there is a deduction of up to $1,000 for pension income.

Within certain limits, the contributions paid by employers, employees, and self-employed people to pension plans are deductible from current income. In many cases, this enables individuals to defer payment of the tax until their taxable income is considerably lower and therefore subject to a lower marginal tax rate. The Income Tax Act also provides incentives to save by allowing deduction of the first $1,000 of interest and dividend income from gross income, in addition to the basic personal exemption for older people and the pension income deduction.

Finally, the investment earnings of pension funds — except those involving employee profit-sharing — are, for the most part, not taxable. Such investments can therefore produce a considerably higher rate of return than similar ones made by individuals or institutions subject to tax. Pension funds cannot, however, claim the tax credits for dividend income that are available to individual taxpayers. In addition, they are liable to a tax if, at

the end of any month, more than 10 per cent of their holdings is in foreign assets.

No matter how generous they may be, tax policies do not, however, provide income directly to older people, unless they involve some form of negative income tax. At best, they can only supplement the more positive basic-income and income-replacement programs.

INCOME-FLOOR PROGRAMS

Among the schemes designed to guarantee a minimum income for older people, the most important is the Old Age Security (OAS) program. In the 1977-78 fiscal year, a total of $3,669 million was paid in OAS benefits to over 2 million pensioners, half of whom also received Guaranteed Income Supplement (GIS) payments, totalling an additional $1,078 million (Table 2-1).

A number of provinces (Nova Scotia, Ontario, and the four western provinces) have their own programs of supplementary assistance to provide some form of guaranteed income for the retired. The provincial supplement programs vary in terms of both benefits and eligibility. Nova Scotia, Ontario, Manitoba, Saskatchewan, and Alberta guarantee a basic income for persons aged 65 and over and for their spouses. British Columbia guarantees a minimum income for persons aged 60 and over. All basic-income programs are now financed from the general revenues of the governments concerned. The provincial supplements are provided on a shared-cost basis with the federal government, subject to certain conditions.

Both the OAS and GIS benefits are adjusted automatically for cost-of-living increases. Until 1972 this adjustment could not be more than 2 per cent a year, but the programs have since then been modified to compensate for the actual increase in the consumer price index. Benefits are not, however, indexed to wage increases or general growth, nor is there any procedure for a regular review of their adequacy. None of the provincial supplementary income programs are adjusted automatically.

The adequacy of present basic-income benefits for older people is a complex question. It involves consideration of what constitutes poverty. In fairness, it must also involve comparison with programs available to those in other age groups who are unable to participate in the labour force, such as the disabled. And it cannot be considered in isolation from the availability of other services for the aged, such as medical care and housing.

As of January 1979, the Old Age Security program provided a monthly payment of about $167 ($2,007 on an annual basis) to all Canadian residents aged 65 or over, subject only to a minimum length-of-residence qualification. In addition, the GIS program provided a maximum income-tested supplement of $1,647 a year for an unattached individual and $2,740 for a married couple. This meant that the maximum annual OAS and GIS benefit for married couples was $6,753, slightly above the national average low-income line of $6,563 calculated by Statistics Canada. But the maximum benefit for an unattached individual ($3,654) was nearly $900 below the low-income cutoff for this category.

By contrast with persons aged 65 and over who receive a large proportion of their income support from federal programs, especially through OAS and GIS benefits, individuals under age 65 who are unable to work because of various forms of disability rely more on provincial programs (50 per cent of whose costs are financed by the federal government under the Canada Assistance Plan). In most provinces, the maximum monthly social assistance payable for ordinary needs (food, clothing, shelter, and household and personal needs) to disabled persons under 65 years of age is less than that available to older people whether they are disabled or not (Table 2-2).

The estimates of disability payments do not lend themselves to an interprovincial comparison of income-maintenance programs. These estimates must be treated with caution, in particular because they do not include other forms of assistance that may be granted to eligible recipients. Indeed, provincial and municipal governments also provide a wide variety of ancillary services for both the disabled and the elderly, often at little or no cost to the recipient.

Health care and housing facilities have a particularly important bearing on the adequacy of basic-income benefits. Canada has eliminated much of the severe income risk confronting those in need of health care through the provision of medical care and hospital insurance programs administered by the provinces. In most cases, these programs are funded in part by contributory premiums; persons aged 65 or over are either exempt from premiums or entitled to rebates, depending on income. In some provinces, prescription drugs and certain other health services are available to older people without cost. But older people do require more health care than younger individuals. In 1976 the 65-and-over group accounted for an estimated $3.1 billion of

TABLE 2-2

MAXIMUM MONTHLY BENEFIT PAYABLE TO THE DISABLED COMPARED WITH MAXIMUM OLD-AGE INCOME SUPPORT, BY PROVINCE, AS OF 31 MARCH 1979

		Under 65	Over 65			
		Disability payment under social assistance[1]	Pension payable under OAS/GIS	Provincial supplement to the elderly	Old-age income support (2) + (3)	Disability payment as a proportion of old-age income support (1) ÷ (4)
		(1)	(2)	(3)	(4)	(5)
				(Dollars)		
Newfoundland	Individual	271.00	304.49	–	304.49	.89
	Couple	451.00	562.72	–	562.72	.80
Prince Edward Island	Individual	. .	304.49	–	304.49	. .
	Couple	. .	562.72	–	562.72	. .
Nova Scotia	Individual	267.00	304.49	13.50	317.99	.84
	Couple	392.00	562.72	27.00	589.72	.66
New Brunswick	Individual	242.00	304.49	–	304.49	.79
	Couple	387.00	562.72	–	562.72	.69
Quebec	Individual	276.00	304.49	–	304.49	.91
	Couple	439.00	562.72	–	562.72	.78
Ontario	Individual	286.00	304.49	38.88	343.37	.83
	Couple	572.00	562.72	104.02	666.74	.86
Manitoba	Individual	263.50	304.49	7.82	312.31	.84
	Couple	404.00	562.72	16.86	579.58	.70
Saskatchewan	Individual	390.00	304.49	25.00	329.49	1.18
	Couple	530.00	562.72	45.00	607.72	.87
Alberta	Individual	303.00	304.49	45.01	349.50	.87
	Couple	522.00	562.72	94.40	657.12	.79
British Columbia	Individual	342.00	304.49	38.88	343.37	.99
	Couple	673.00	562.72	99.66	662.38	1.02

health-related public expenditures — a figure not much different from that of total OAS payments — and these expenditures will increase as the population ages.[2]

Fortunately, many people aged 65 and over own their own homes — 75 and 55 per cent of male and female household heads, respectively, according to the 1971 Census — often free of mortgages. Those homes are among the most important, relatively inflation-proof assets that the elderly have. Yet shelter costs can still loom very large in their budgets. In a 1975 survey, the Metropolitan Toronto Social Planning Council reported that one-half of all elderly homeowners and more than two-thirds of older renters, in that city at least, were paying shelter costs in excess of 25 per cent of their income.[3]

The provinces have come to play a larger role in the provision of housing or rental supplements and tax credits and grants enabling older people to continue to rent or own dwellings of reasonable quality and encouraging them to remain in the neighbourhoods and communities familiar to them. This type of assistance is probably preferable and less costly than public housing projects, senior citizen hostels, nursing homes, and other forms of institutional care that tend to isolate older people from others in society. At the same time, however, the growing number of much older people — those 75 years of age or over — is bringing problems in this regard also. A substantial majority of them are women living alone or with relatives, and this has led to increased demand for self-contained apartments, hostels, nursing homes, and home-care services. While these institutions vary widely in the amount of individual care they provide, most entail expenditures that are well beyond the individual means of the pensioners who use them. Most provinces, in fact, subsidize the elderly in nursing homes and senior citizen residences.

INCOME-REPLACEMENT PROGRAMS

There is wide public support in Canada for some measure of basic income support, although there may be disagreement about the levels of support and the methods used. The income-replacement goal is more contentious, especially as a matter of public policy. Nevertheless, governments have stepped in, partly because of a growing realization that the income-replacement levels provided by the private system have not been high enough for a large proportion of those who have retired from the work force.

There remain strongly conflicting views about the adequacy and potential cost of the income-replacement system. There is concern that benefits are too low, yet it is quite possible, under existing programs, for some people to have higher incomes after retirement than before.[4] The problem is that there are indeed "holes in the fabric." Some people have been left behind — many workers in private industry, especially in small firms; workers who change jobs; and, in many cases, women.

THE PUBLIC/PRIVATE MIX

Canada's existing income-replacement system consists of the universal public plans, the Canada and Quebec Pension Plans, and a variety of private plans (Table 2-1). The term "private pension plan" refers here to occupational and personal plans, both of which supplement the public programs. Occupational plans are related to employment. The vast majority of them are sponsored by the employer, although some are backed by other sponsors such as labour unions or professional associations.

We shall distinguish here between plans sponsored by public and private employers. The plans sponsored by public employers are of three types: consolidated-revenue plans, trusteed plans, and insured plans. Contributions to the first type go directly into the consolidated-revenue fund of the government concerned. Trusteed and insured plans derive their name from the organization — often a trust or insurance company — or group of individuals who provide facilities for the accumulation of assets and payment of benefits under the plan. Occupational plans for employees in private industry are largely trusteed or insured or a combination of the two. Personal plans include Registered Retirement Savings Plans (RRSPs) and Registered Home Ownership Savings Plans (RHOSPs).

Canadian pension funds together (excluding RRSPs) held assets equal in value to about one-fifth of GNP in the early 1960s. That ratio had risen to one-third by 1977 (Chart 2-2). By far the largest part of this growth stemmed from the Canada and Quebec Pension Plans (Charts 2-2 and 2-3); together they have accumulated a surplus fund that exceeded $17 billion at the end of 1977, although this covered only a fraction of their outstanding liabilities.[5] Nevertheless, government consolidated-revenue plans and the trusteed and insured pension plans — the two types of occupational schemes — still accounted for about one-quarter and one-half of total pension fund assets, respectively, in 1977. In addition, an estimate made for the Council suggests that assets in RRSPs probably totalled about $7 billion in 1977.

The public programs aimed at income replacement — the Canada and Quebec Pension Plans — paid out benefits (including survivor and disability benefits) in 1977 that amounted to only one-third of those provided under the OAS program, although this will change as the CPP and QPP mature. The occupational pension plans — the most important part of the private retirement income system — involved contributions of $5.2 billion in 1977, more than double those paid into the CPP and QPP, while their benefits amounted to $1.9 billion, compared with $1.4 billion for the two government plans. Total contributions to RRSPs amounted to $2.4 billion in 1977.

CHART 2-2
BOOK VALUE OF PENSION FUND ASSETS AS A PROPORTION OF GNP, BY TYPE OF PLAN, CANADA, 1962-77

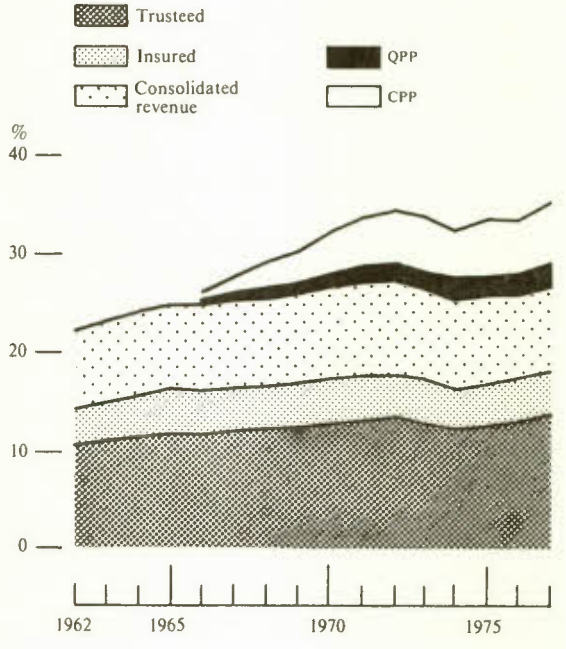
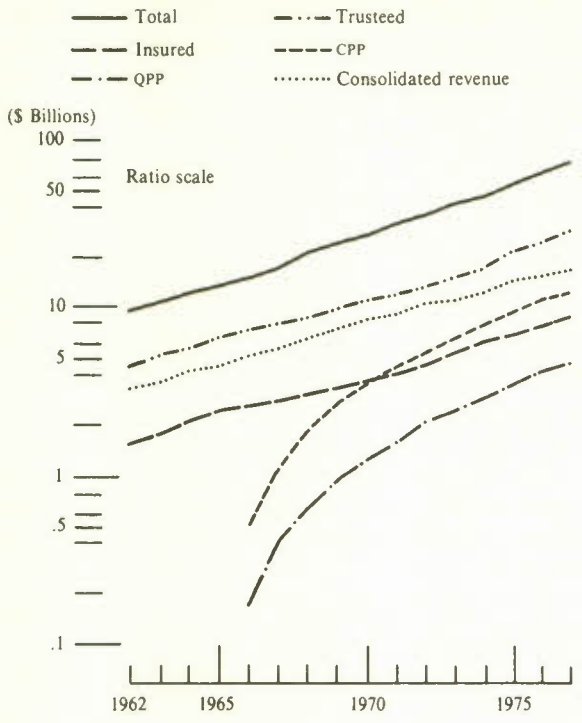


CHART 2-3
BOOK VALUE OF PENSION FUND ASSETS, BY TYPE OF PLAN, CANADA, 1962-77



For many people, however, the opportunities for accumulating savings to supplement other sources of retirement income are quite limited. We noted earlier that "stocking up" for old age through home ownership can be very important. This type of saving can be said to benefit from the fact that Canada does not tax imputed rent on owner-occupied homes or capital gains from the sale of an individual's principal residence. In contrast with the United States and Britain, however, mortgage interest payments have not been tax-deductible. The RHOSPs, introduced a few years ago, are designed more to stimulate home ownership than to promote retirement savings, although they may contribute to such savings.

Detailed descriptions of all of these programs designed to supplement basic income are available from a number of sources.[6] Thus, rather than examine each plan in turn, the discussion that follows will focus on those aspects that are most important for an analysis of economic impact and social concern.

Benefit Structure

Although experts may argue about the technical details, the concern that most people have about pensions centres on the level of benefits that they will receive. Will their pensions be sufficient to provide them with a decent standard of living in their older years? What opportunities will be available to them to build up their benefits? The introduction of the Canada and Quebec Pension Plans, as well as recent improvements in some private plans, have gone a long way to redress the deficiencies of a few years ago; yet many problems remain.

Eligibility and Coverage — The Canada and Quebec Pension Plans, which are completely portable, cover about 98 per cent of the work force. Membership in, and contributions to, the plans are compulsory for almost all employees and self-employed individuals between 18 and 65 years of age. The few exceptions are those whose participation would raise difficult constitutional or administrative problems. Unfortunately, confining coverage to the work force as it is usually defined excludes one particularly large group — housewives working in the home; these women are unable to accumulate their own benefits.

Contributions to the CPP and QPP are based on earnings from employment, within a range bounded by a basic exemption on the one hand and a yearly maximum pensionable earnings level (YMPE) on the other. In 1978 the exemption was $1,000, and the maximum was $10,400. Provided they have contributed to either plan for a minimum number of years, workers who leave the labour force at age 65 or who are disabled receive benefits based on an average of their annual earnings up to the YMPE. The maximum benefit in 1978 was $2,333, or 17 per cent of the earnings of an individual at the average industrial wage. A surviving spouse receives 60 per cent of a participant's entitled benefit. Those who decide to work beyond age 65 may continue to contribute to age 70 if they wish to do so, in order to improve the average on which benefits are based.

There are several reasons, however, why the benefit actually paid may fall below the maximum. Those who became eligible for the pension before 1976 — that is, before contributing to either plan for at least ten years after its inception — will receive less. Then, too, some workers earn less than the YMPE even though they are regularly employed; many of them are women, since they have a higher incidence of low-paying jobs than men. Others may, as a result of unemployment, have earnings that fall below the YMPE for prolonged periods during the contributory phase. To compensate for years of low earnings, 15 per cent of a contributor's years in the plans can be dropped out of the lifetime average earnings calculation. Under the QPP, further years can be dropped out of the average calculation by parents who have to look after young children — a provision that is of particular importance to women.

Legislation amending the CPP in similar fashion has been passed by the Parliament of Canada, but it cannot come into effect until ratified by the Province of Ontario.

Occupational plans are designed exclusively for paid workers, thereby excluding the self-employed, those who work for small family businesses without pay, and, once again, those who work in the home. The growth in the numbers of these plans slowed down after the establishment of the CPP and QPP, although membership in existing plans has continued to grow (Chart 2-4). In 1976, there were nearly 16,000 occupational plans, the majority of which were employer-sponsored, covering 3.9 million workers. This amounted to 39 per cent of the total labour force — roughly the same level as in 1970 — or to about 46 per cent of employed paid workers. But coverage, as well as several other features bearing on the structure of benefits, differ considerably among industries and sectors, especially between the public and private sectors generally, and between men and women.

Virtually all employees in public administration and defence were covered by occupational plans (Chart 2-5). Indeed, if the public sector is defined more broadly to include, for example, government-owned business enterprises and educational institutions, slightly less than one-half of all full-time paid workers covered by occupational plans were public employees in 1976. Some areas of the private sector, such as mining, do have fairly extensive coverage also; in others such as trade (largely retail trade), coverage is very low. Unfortunately, these are areas in which a higher proportion of women are employed. In fact, in 1974 only 32 per cent of female workers were covered by occupational plans, compared with 48 per cent of male paid workers.

Even among larger enterprises, coverage is less than complete, although it is much lower still in smaller firms. An examination of collective bargaining agreements in force in January 1974 for firms with 200 or more employees showed that roughly one-third of those with 500 or more employees and close to one-half those with between 200 and 500 employees had no private pension provisions.[7]

Some 40 per cent of occupational plans are now integrated with the Canada and Quebec Pension Plans.[8] While integration covers 97 per cent of public employees, however, it includes only one-half of the members of occupational plans in the private sector.

For those firms with private pension plans, eligibility conditions do not significantly inhibit participation. Some plans restrict membership to specific classes of employees, but many employers operate separate plans for groups excluded from the general plans. Most plans — over 80 per cent in 1976 — have requirements related to service (one year or more) and/or age (usually a minimum of 18). These requirements are designed mainly to keep out high-turnover employees, such as the very young or short-service workers. In practice, however, as a result of labour mobility and present vesting, portability, and locking-in arrangements, the number of workers who qualify for a full pension based on their whole lifetime of work may be drastically reduced.[9] This is particularly true of private industry, where vesting periods are generally much longer than in the public sector (see Chapter 7). Once again, the situation is worse for women, since they are more concentrated in low-paying, high-turnover jobs.

In 80 per cent of all plans — covering 72 per cent of the total membership in 1976 — the age of eligibility for full benefits is 65. Again, there are differences between private- and public-sector plans. In the former, over 93 per cent of the men and some 82 per cent of the women were in plans with this feature, whereas corresponding figures for public-sector plans were only 61 and 56 per cent, respectively. Fewer than 11 per cent of all covered workers were in plans with an eligibility age of 60, and most of these were in the public sector. Moreover, 87 per cent of the members in the public sector are in plans that provide widow's pensions, compared with only 33 per cent in the private sector.

CHART 2-4
GROWTH OF OCCUPATIONAL PENSION PLANS IN CANADA, 1960 TO 1976

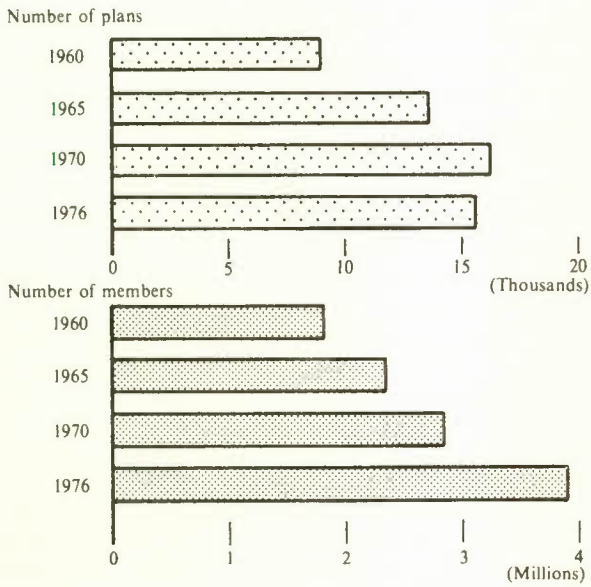
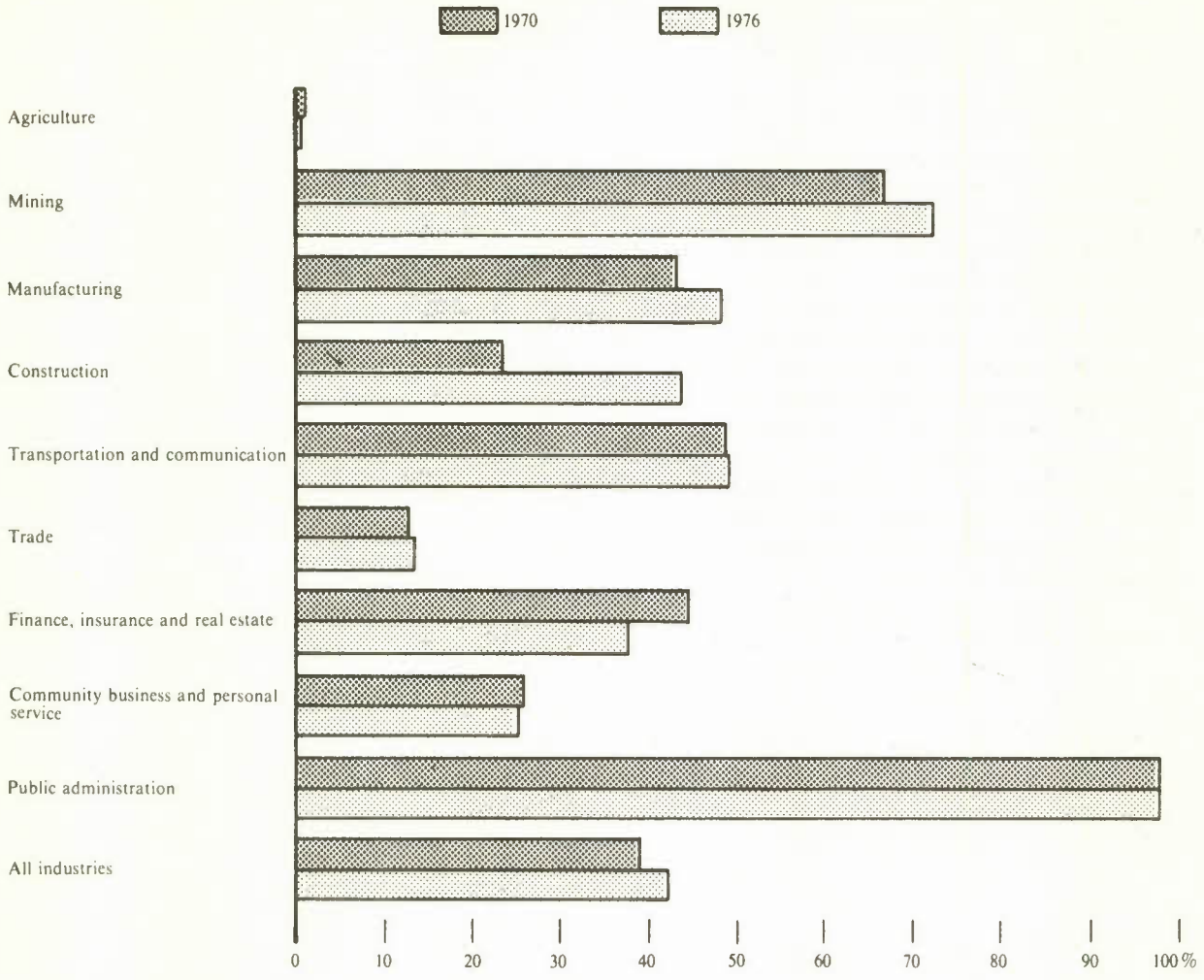


CHART 2-5
PERCENTAGE OF PAID WORKERS IN THE LABOUR FORCE COVERED BY PENSION PLANS, BY INDUSTRY, CANADA, 1970 AND 1976



Eligibility conditions for RRSPs are very broad, and the number of contributors grew from about 348 thousand in 1971 to over 1.4 million in 1977. Persons not participating in a registered occupational pension plan may contribute 20 per cent of their earned income (but no more than $5,500 in 1978) to an RRSP, and the contributions qualify as deductions from gross income for tax purposes. Members of an occupational plan who contribute less than 20 per cent of their income (or less than $3,500, whichever is lower) may contribute the difference to an RRSP. Moreover, in contrast with many private employer-sponsored plans, RRSPs are completely portable. Participation in the RRSP program is largely confined, however, to taxpayers with relatively higher incomes, those most likely to have savings and most likely to gain because of their higher marginal tax rates. Indeed, RRSPs may be used as much for tax-deferral purposes as for retirement savings.

As for RHOSPs, all Canadian residents aged 18 and over may contribute to these plans, provided they or their spouses do not own homes. These contributions may not exceed $1,000 annually or $10,000 over the lifetime of the participants; they are specifically for the purchase of a home or for home improvement, and they are deductible from earned income for taxation purposes.

Adjustment to Change — Pension benefits that may appear to be quite adequate at one time can be eroded very quickly if they are not somehow adjusted for increases in prices and in real wages. In recent years, there has been a growing emphasis in Canada on preserving pension benefits, both as they accumulate before retirement (we often refer to this as pension credits or rights) and as they are paid out after retirement, in the face of inflation and rising real wages. To some extent, both pension rights and

benefits paid under the major income-replacement schemes have been "dynamized" — that is, more or less automatically adjusted for price and wage increases. Such protection is less prevalent, however, in private-industry plans than in those backed by governments.

Under the Canada and Quebec Pension Plans, pension rights are protected in two ways. First, the YMPE, which serves as the upper limit of the basis for contributions, is to be increased by 12.5 per cent a year until it catches up in the 1980s to the national average of industrial wages and salaries. Subsequently, it will be adjusted upward annually, in line with a three-year moving average of those wages and salaries. Second, pension rights are adjusted for wage and cost-of-living increases by a procedure that converts past earnings into current dollars, thereby compensating for increases in the average wage level. Since 1976, pension benefits paid have been adjusted annually to compensate in full for cost-of-living increases, as measured by the consumer price index. There is no regular procedure for adjusting benefits for general wage increases in the economy.

In occupational plans, preservation of pension rights in the face of a rising cost-of-living or real-wage increases depends mainly on the nature of the contractual arrangements with employers (Table 2-3). The best protection is provided by final-average or average-best earnings plans, though protection is provided in a less systematic fashion in other types of occupational plans.[10] In some career-average and flat-benefit plans, the benefit structure is periodically updated to compensate for inflation. Since many of the flat-benefit plans are the result of union negotiations, such updating takes place regularly as part of the collective bargaining process.

The proportion of employees covered by average-best earnings plans has increased in recent years (Table 2-4). As recently as 1976, however, only about 24 per cent of the members of plans sponsored by private employers were in this category, compared with almost 90 per cent in public-employer plans.

Moreover, because of the prevalence of rather long vesting periods and the lack of portability among private-employer plans, the expansion of

TABLE 2-3

PRE-RETIREMENT PRESERVATION OF PENSION CREDITS AGAINST INFLATION, BY TYPE OF PENSION PLAN

		Defined benefit				
		Flat benefit	Unit benefit			
	Defined contribution (Money purchase)		Final earnings	Final average earnings	Average best earnings	Career average earnings
Method of determining benefits to be paid in each year of retirement:	Contributions accumulated with interest; on retirement life annuity purchased out of proceeds.	Specified dollar amount of benefit for each year of service.	Specified percentage of: Earnings in last year of service for each year of service.	Average earnings in last specified number of years of service for each year of service.	Average best earnings for a specified number of years of service for each year of service.	Average earnings for total years of service for each year of service.
Percentage of covered employees in plans in 1976[1]:	4.7	19.7	0.2	3.2	52.8	17.5
Degree of pre-retirement preservation of credits:	Only to extent that final contributions increase.	None, unless benefit increased arbitrarily or through collective bargaining.	Total; but if final earnings decline, so do benefits.	Almost total.	Almost total. Unaffected by decline in final earnings.	Partial. Depends on pattern of income over career.
Who bears pre-retirement inflation losses?	Member.	Mostly member, some by sponsor.	Sponsor.	Mostly sponsor, some by member.	Mostly sponsor, some by member.	Partly by sponsor, partly by member.

TABLE 2-4

DISTRIBUTION OF MEMBERS COVERED BY MAJOR TYPES OF PUBLIC- AND PRIVATE-SECTOR OCCUPATIONAL PENSION PLANS, CANADA, 1960, 1970, AND 1976

	1960			1970			1976		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
					(Per cent)				
Defined-benefit plans									
Final average	..	..	15.2	4.0	7.7	6.0	0.8	5.2	3.2
Average best	..	..	34.0	77.0	18.2	44.7	88.6	23.5	52.8
Career average	..	..	25.1	11.3	34.6	24.1	8.9	24.6	17.5
Flat benefit	..	..	9.5	1.7	26.0	15.0	0.7	35.3	19.7
Other	..	..	0.6	–	0.5	0.3	–	0.3	0.2
Subtotal	..	..	84.4	94.0	87.0	90.1	99.0	88.9	93.4
Money-purchase plans	..	..	13.0	0.9	8.1	4.9	0.9	7.8	4.7
Profit-sharing plans	..	..	1.3	–	1.4	0.8	–	0.9	0.5
Other	..	..	1.3	5.1	3.5	4.2	0.1	2.4	1.4
Total	..	..	100.0	100.0	100.0	100.0	100.0	100.0	100.0

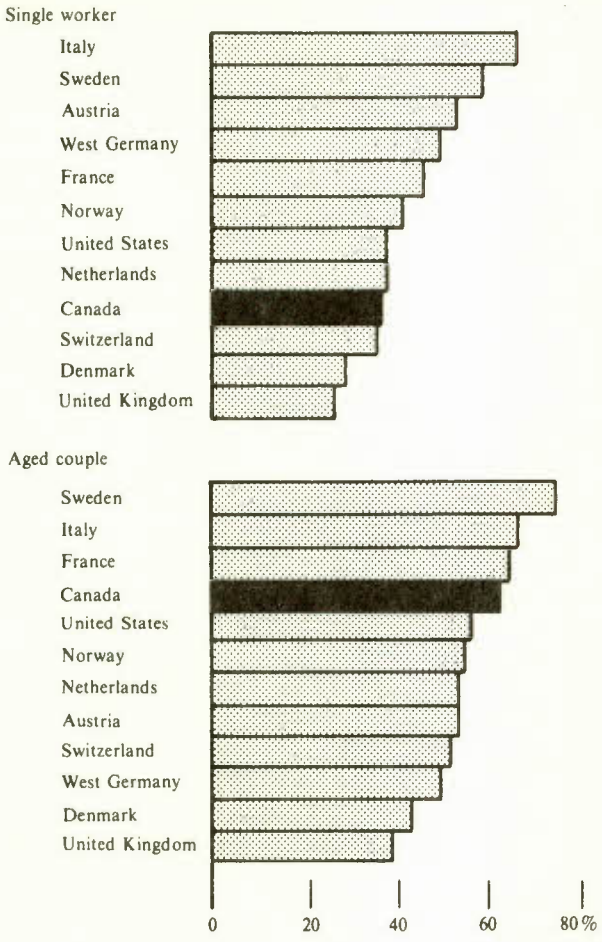
best-earnings plans has done little for employees who change employers. In most provinces, such employees are treated in either of two ways. If their benefits are not vested, they will not get back their employer's contribution or its benefit equivalent. They will receive only their own contributions to the plan, with accumulated interest; they can, if they wish, then use those funds to purchase an RRSP. If their benefits are vested, they must take them in the form of a deferred annuity based on final earnings or final-average earnings up to the time of the shift. They rarely have the option, except in some public-sector plans, of having their past-service credits integrated into the benefit formula of their new employer's plan. Unlike wages, these annuities will not be adjusted upward as prices increase. Thus individuals who change employment several times during their working career, whether by choice or not, would receive much smaller pension benefits than those who worked for the same employer for all of their career. This would be true even if total working years and total contributions were the same for both groups, because a deferred annuity (and to some extent an RRSP) would be eroded by inflation and because average-best earnings over a whole career would not apply to the total number of years employed.

The divergence between public- and private-sector plans is even more marked with respect to the post-retirement protection of benefits. By 1976, some 53 per cent of the members of public-sector plans were automatically protected against inflation during their retirement years. In contrast, less than 5 per cent of the membership in private-sector plans had this advantage. According to a recent survey of large private employers, however, 80 per cent of the plans they sponsored (covering more than 80 per cent of the total membership of those plans) had undertaken some type of post-retirement adjustment, usually on an *ad hoc* basis, at the employer's discretion.[11] Over the 1971-75 period, this adjustment amounted, on average, to 55 per cent of the increase in the consumer price index. It should be noted that the Public Service Superannuation Act is being amended to reduce its indexation to something less than the full annual increase in the CPI.

Adequacy — In terms of the level of income replacement, Canada's public pension plans (including OAS/GIS, the CPP, and QPP) appeared to fall somewhat below those of a number of European countries and the United States in 1975, at least insofar as an unattached individual earning the average manufacturing wage was concerned (Chart 2-6). Canada came somewhat higher in rank in its treatment of married couples.

Such international comparisons must, however, be treated with great caution. It is difficult, first of all, to put the data for each country on a completely consistent basis. Secondly, the comparison can

CHART 2-6
PRE-RETIREMENT EARNINGS REPLACED[1] BY PUBLIC INCOME SECURITY PLANS, SELECTED COUNTRIES, 1975



change from year to year since the way in which pension systems adjust to movements in prices and real wages may differ among countries. Canada's replacement ratio shifts very little in response to such changes, whereas in some other countries — West Germany, Sweden, and Belgium, for example — the ratio increases with real wages; indeed, preliminary estimates suggest that Canada's international rank has declined since 1975. Finally, a more comprehensive comparison of adequacy would also look at such factors as age of entitlement, the level of income on which replacement is based, tax provisions that may augment or modify the income of the elderly, and the availability of private occupational pensions.

For older people whose pre-retirement wages are equal to the national industrial average, OAS/GIS and CPP/QPP benefits combined now replace slightly more than one-third of the pre-retirement income of unattached individuals and close to three-fifths that of individuals whose spouses were never in the labour force. When the replacement rate is calculated on the basis of after-tax income, it increases slightly for a single individual and somewhat more for a married couple. The replacement rate in both cases is higher still for those with pre-retirement incomes that are below the national industrial average wage, and below it for those above that average.

Nevertheless, some 40 per cent of Canada's older workers experience a drop in before-tax income of roughly one-quarter after retirement (Table 2-5). They are mainly women and semiskilled, nonunionized workers who are not well covered by occupational plans and do not benefit fully from public plans. Research carried out in the United States suggests that 86 per cent of the pre-retirement income is required to prevent a post-retirement drop in the standard of living.[12]

The introduction of the CPP and QPP has gone a long way to redress some of the worst of the pension inequities, and the combination of these plans with OAS and GIS, with benefits indexed to the consumer price index, provides the elderly with a reasonable post-retirement income floor. But, despite these initiatives, the income of many pensioners is below the poverty line. In 1977, some 20 per cent of families with heads aged 65 and over were in the low-income category as defined by Statistics Canada, while 60 per cent of all unattached elderly people were in that same category.[13]

A high proportion of those below the poverty line are unattached women. Their chances of being in this position are much greater than the national average if they are over 70 and live in the Atlantic provinces or Quebec. Of the Atlantic provinces, only Nova Scotia has a provincial "top-up" program to supplement the basic OAS/GIS payment. A major reason for the high incidence of low incomes among the old, especially among older women, is that they have not had adequate opportunities to build up earnings-related pension entitlements.

MENDING THE HOLES

Few would deny that action is needed to remove some of the deficiencies in the present retirement income system. But there is another side to the story. Improving benefit levels or extending them to groups not now covered, and providing better protection against price or wage changes, will not be

TABLE 2-5

AVERAGE INCOME BEFORE TAX OF PERSONS AGED 65 TO 74 YEARS BEFORE AND AFTER RETIREMENT, BY INCOME QUINTILE, CANADA, 1975

	Average income (Constant 1975 dollars)		
	Pre-retirement[1]	Post-retirement	(2) as % of (1)
	(1)	(2)	(3)
Income quintile:			
First, lower-income	2,162	2,083	96.3
Second	5,282	3,877	73.4
Third	8,234	6,301	76.5
Fourth	11,799	9,946	84.3
Fifth, upper-income	21,939	20,233	92.2

costless. The problem will be accentuated in the future by the very large increase in the size of the older population relative to the numbers still in the work force. There is concern, too, that the attempt to achieve adequate benefits will conflict with other goals, including economic growth.

Financing Retirement Programs

In contrast with the OAS and GIS programs, which are financed out of general taxation revenues, the Canada and Quebec Pension Plans are financed by payroll contributions from employers and employees — at present, each pays 1.8 per cent of the employee's pensionable earnings — and by the interest earnings of the plans' reinvested funds. The contribution rates are significantly lower than those of public plans in Europe, as a result of both the immaturity of the Canadian system and its lower benefit levels. The latter in turn reflect the stated objective of the Canadian plans not to discourage the provision of pension protection by the private sector.

The majority of public-sector occupational plans also depend upon contributions from both employers and employees. In the private sector, noncontributory schemes — that is, plans financed by the contributions of employers only — represented less than 24 per cent of all plans but as many as 47 per cent of the members of private-sector occupational schemes in 1976. Employee contribution rates also vary a great deal, although they average about 6 per cent of gross salary or wages in the public sector and perhaps closer to 5 per cent in the private sector.

The CPP and QPP are now partially funded in the sense that, in the aggregate, current contributions received exceed current benefits paid out. The excess — the accumulated reserves — has been available to the provinces for various purposes. Recent estimates indicate that by the mid-1980s current contributions will equal benefits paid out, so that the funds will not increase thereafter. Unless contribution rates are raised, payment of subsequent benefits will then draw down the reserve funds. Under existing arrangements — without any further increases in benefit levels — these funds would disappear early in the coming century.

In the case of employer-sponsored occupational plans, private employers are generally required by law to aim for full funding; that is, within certain limits, accumulated assets must match benefits promised to date, and contribution rates are set accordingly. Public-sector occupational plans exhibit more variation. The largest of these, the federal Public Service Superannuation plan, provides regular benefits plus supplementary payments — the latter at present being fully indexed against inflation. The regular benefits are fully matched by obligations of the federal government, again with contributions set accordingly. The supplementary price-indexed benefits, however, are not matched in the same way; as noted earlier, legislation limiting the indexed benefits was introduced, though not passed, by the last Parliament.

There are two major concerns in connection with financing arrangements. The first is that taxes to finance OAS and GIS benefits, and payroll contributions to finance the CPP and QPP, will have to rise as the number of the elderly rises, even without further increases in benefit levels. And, for plans such as those sponsored by private employers, which are already fully funded, contributions will have to increase if there are further improvements in benefits. Rising taxes and contribution rates have

implications for the workers of the future and for the competitive position of Canadian industry.

The second concern relates to the method of funding. Questions have been raised about the possibility that pay-as-you-go partly funded schemes reduce incentives to save and to work and, in turn, the rate of economic growth. Lower levels of GNP in the future would make it more difficult to achieve adequate retirement benefits.

Investment of Funds

Since pension plans are already so large in Canada, the way that any surplus of contributions over current benefits is invested could have a significant impact on the allocation of savings in the economy (see Chapter 6). The surplus funds of the CPP are loaned to the provinces in proportion to the contributions paid by their residents, at interest rates related to the average paid on Government of Canada bonds of similar (long-term) maturity. The provinces have used the funds for both specific and general purposes.[14] As for the QPP surplus, it is invested through the "general fund" of the Caisse de dépôt et placement du Québec. In the past, only about two-thirds of those funds (69 per cent in 1977) have gone into government securities, principally those of the Province of Quebec. The remainder have been invested in corporate securities, mortgages, real estate projects, and various short-term investments.

The funds of nontrusteed government-employee pension plans — the consolidated-revenue plans — are used for the general purposes of the sponsoring government. As far as trusteed funds are concerned, government securities form a considerably higher proportion of the total investments of public-sector than of private-sector schemes. The latter, on the other hand, invest more in corporate securities.

In connection with the use of pension savings, concern has been expressed that too high a proportion is already being captured by governments, much of it bypassing the financial markets entirely. It has been suggested that this may make it more difficult for business to raise funds from domestic sources and that it will increase the inflow of foreign capital. There is concern, too, that pension savings are concentrated in too few hands, with implications for capital market efficiency, and that industry may eventually be controlled to a large extent by pension funds.

CONCLUSION

Canada's system of income security for elderly people has made major advances in recent years, particularly since the mid-1960s. Yet the expansion of the system has made people even more aware of its problems and deficiencies.

There are indeed problems. There are strongly conflicting views about the adequacy of the system; while some Canadians have done very well under it, others have been left behind. There are many old people still in poverty, particularly older women. There are disparities of treatment, insofar as income-replacement plans are concerned, between employees in the public and private sectors, particularly those in small private-sector firms; between mobile workers and those who remain a long time with the same employer; and between men and women. The establishment of the CPP and QPP has helped to redress some of the inequities, but many gaps remain, especially in the private-employer pension plans.

Alleviation of these problems cannot, however, be discussed sensibly without reference to cost — cost in terms of taxes, contribution rates, and other goals such as economic growth. In order to determine the appropriate mix of programs that will reconcile these conflicting objectives and to achieve some level of "adequate" benefits at the least possible cost in the future, we must learn a great deal more about the impact of the present system or of possible changes therein. How will costs vary under different assumptions about population and program mix? What mix of public and private programs will best satisfy the several, sometimes conflicting, objectives at the same time? In answering these questions, care must be taken to avoid putting undue emphasis on present, perhaps temporary, problems. Care must also be taken to give due consideration to future circumstances — such as significantly higher average real wages or the presence of many more better-educated individuals — in deciding on the general policy thrust.

3 The Pension Mountain

To many Canadians, the problems of the aged are someone else's. While concern has been expressed about the effects of changes in the age structure of the overall population, interest has focused on the immediate problems of today's younger groups and on such issues as the expansion of the education system or the lack of employment opportunities for an expanding labour force. Indeed, we concentrate here on these same groups, but our time horizon differs: we seek to determine how they will fare 30, 40, or 50 years hence, when the "baby boom" that occurred after the Second World War matures into the "pension mountain."[1]

To approach this question, we examine the demographic block of the broad framework suggested in Chart 1-1, as well as its links with the economic system. The size and composition of Canada's population depend on the number of births and deaths and on net immigration. By and large, death rates and life expectancy change only slowly, while changes in immigration and, to an even greater extent, in fertility and birth rates can be expected to produce more rapid population shifts. Such shifts have implications for the economy in terms of both the demands that are placed on it — notably the cost of supporting nonworking members of the population — and its ability to meet those demands.

Demographic projections are subject to many uncertainties, however, and these increase as the projection period is extended into the future. Long-range planning requires preparation for the unexpected through a "distant early warning" system enabling policy-makers to detect the first signs of changes that might affect the economy and society as a whole. To provide one element of such a system, the Council has studied a variety of population and labour force growth projections, three of which — high, medium, and low — are used here.[2] The projections incorporate a wide range of assumptions — some of them rather extreme — about birth rates, life expectancy, immigration, and labour force participation, in order that factors having the greatest influence on the size and age composition of Canada's future population and work force may be revealed. In other words, the projections are designed less to portray the most likely trends of the future than to illustrate what would happen if birth rates, for example, moved towards either extreme. It is worth noting, however, that Statistics Canada's most recent population projections fall between the Council's medium and low projections; indeed, they appear to be closer to the latter.[3]

THE OLD, THE YOUNG, AND THE WORK FORCE

The number of old people will grow considerably in Canada in the future. It is a sobering thought that those who will be 65 years old or over in the year 2031 — roughly the point at which the coming shift in age composition will reach its peak — are already alive and that their future numbers will be affected only by migration or death. Based on the medium projection, the number in the 65-and-over group will more than triple in the intervening period, to reach 7 million by 2031, while the number of much older people (aged 75 and over) — particularly women — will increase even more rapidly (Charts 3-1 and 3-2). Support for those 7 million, as well as for young dependants, must come from the work force at that time (which could include some of the older people). It is more difficult, however, to predict the size of that work force and of the young-dependant cohort in the year 2031.

Our projections suggest that there will be a sharp increase in the number of those aged 65 and over relative to those of work-force age — 20 to 64 — at least until about the year 2031 (Chart 3-3). This increase is more pronounced, the slower the population growth assumed. If the present trend towards

CHART 3-1
DISTRIBUTION OF OLDER POPULATION, BY MAJOR AGE GROUP, CANADA, 1976 TO 2051
(Medium population growth projection)

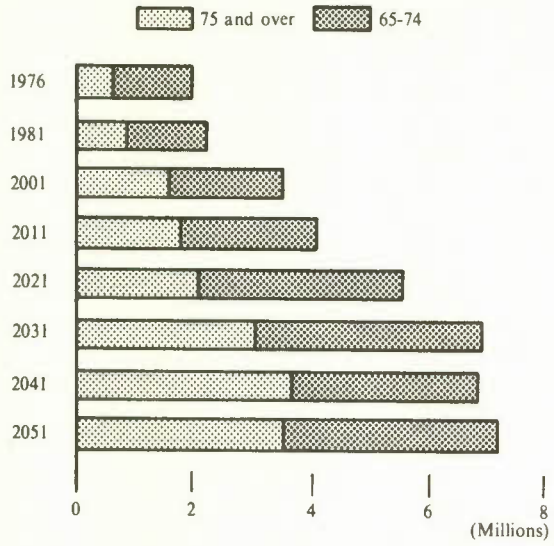
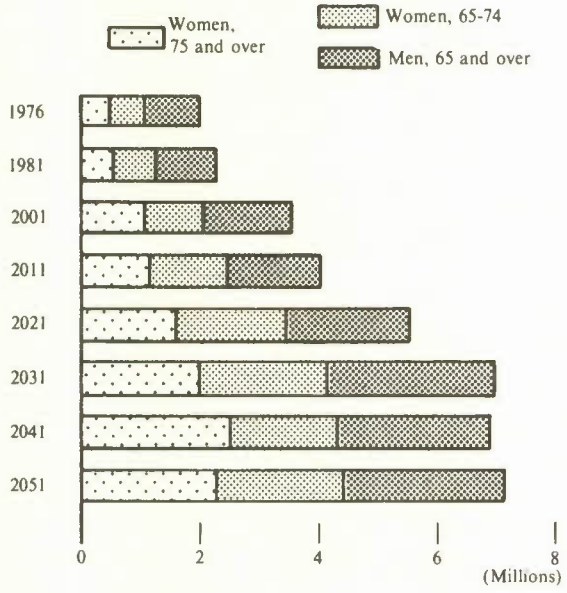
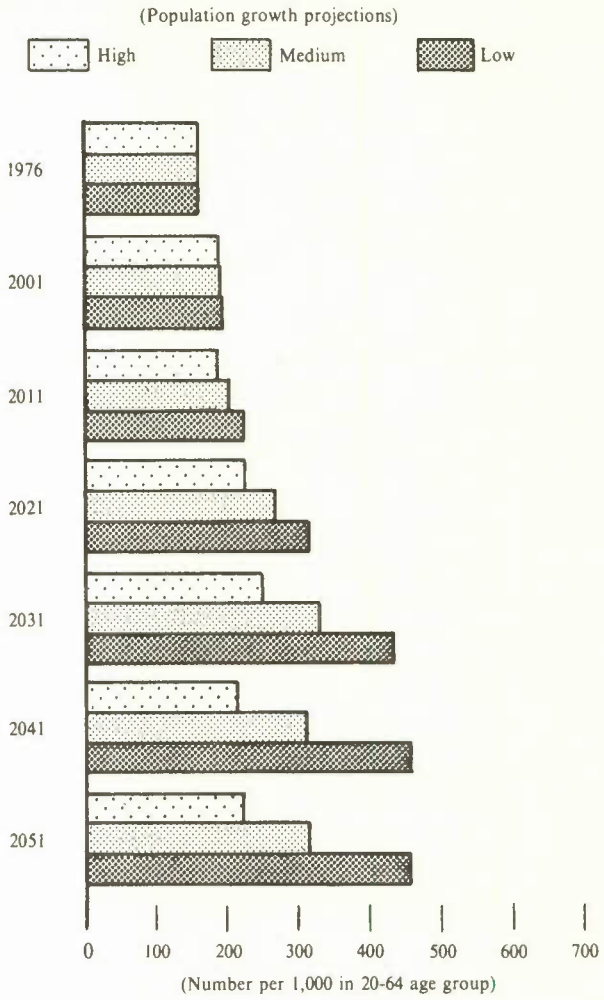


CHART 3-2
DISTRIBUTION OF OLDER POPULATION, BY AGE GROUP AND BY SEX, CANADA, 1976 TO 2051
(Medium population growth projection)



earlier retirement continues and the normal retirement age declines to 60, the shift in the older-generation/labour-force ratio could become very large indeed (Chart 3-4). Numerically, however, the increasing potential "burden" on the work force is

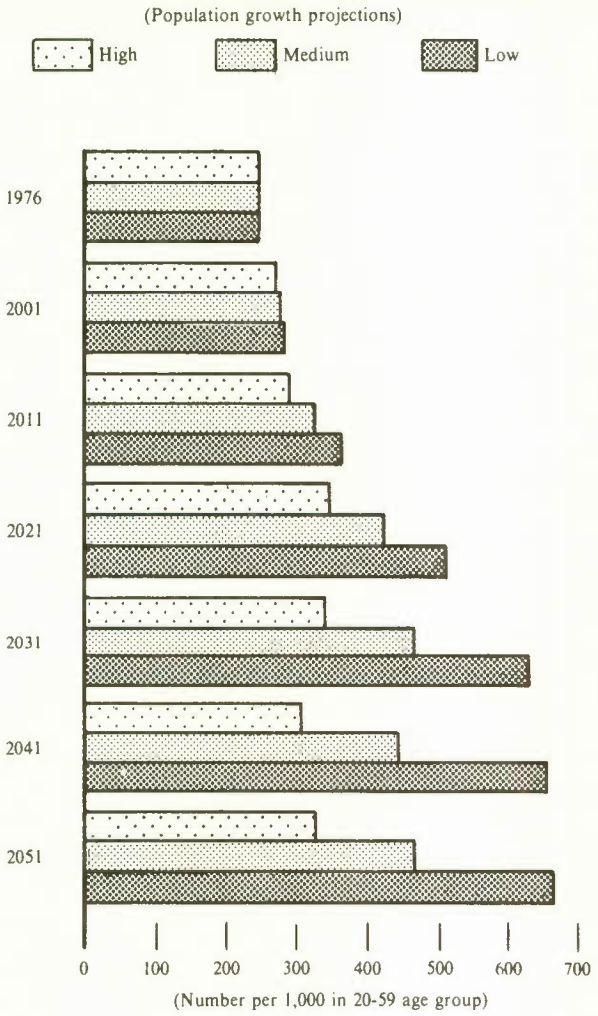
CHART 3-3
POPULATION AGED 65 AND OVER PER 1,000 PERSONS AGED 20 TO 64, CANADA, 1976 TO 2051



likely to be offset to some extent by a decline in the number of young dependants, at least until early in the next century (Chart 3-5). Of course, some members of the younger and older groups participate in the work force, while some of those in the prime-age group do not. When allowance is made for these differences in participation rates, the increase in the ratio of potential nonworkers to workers is smaller (Chart 3-6).

It should be noted that Canada is not the only country whose population is aging. The proportion of the total population who will be 65 years of age or over in the year 2001 will still be lower in Canada than it was in many European countries in 1975 (Chart 3-7). Our projections suggest, however, that by the second decade of the coming century this country will experience the same high levels of aging as now exist in Europe; by 2031 it will surpass them.

CHART 3-4
POPULATION AGED 60 AND OVER PER 1,000 PERSONS AGED 20 TO 59, CANADA, 1976 TO 2051



THE DEMANDS ON THE ECONOMY

For the work force, the costs of supporting the old and the young are far more significant than the actual numbers in each group. In fact, the use of such numbers as an indication of cost can be quite misleading because the needs of, and expenditures on, the young and the old differ considerably. To provide at least an approximate indication of the cost of support in the future, it is useful to calculate the proportion of total output that would go to both groups under various demographic and policy assumptions. How difficult it would be to provide that proportion would also depend on the actual level of GNP and on how the costs would be shared by various groups of the population, including the older people themselves.

The costs of supporting the young and the old may be either private or public. Unfortunately, information on private expenditures is almost nonexistent. On the other hand, there are a number of studies on the effect of the changing age composition of the population on public expenditures for both Canada and the United States. The evidence suggests that public expenditures per capita are roughly three times as great for the old as for the young.[4] This divergence is likely to increase for several reasons — among them, the growing political strength of the older groups, the general pressure to improve income security for the elderly, the growing interest in education and other services for them, and the fact that health care expenditures are greater for the much older.

CHART 3-5
POPULATION AGED 19 AND UNDER PER 1,000 PERSONS AGED 20 TO 64, CANADA, 1976 TO 2051

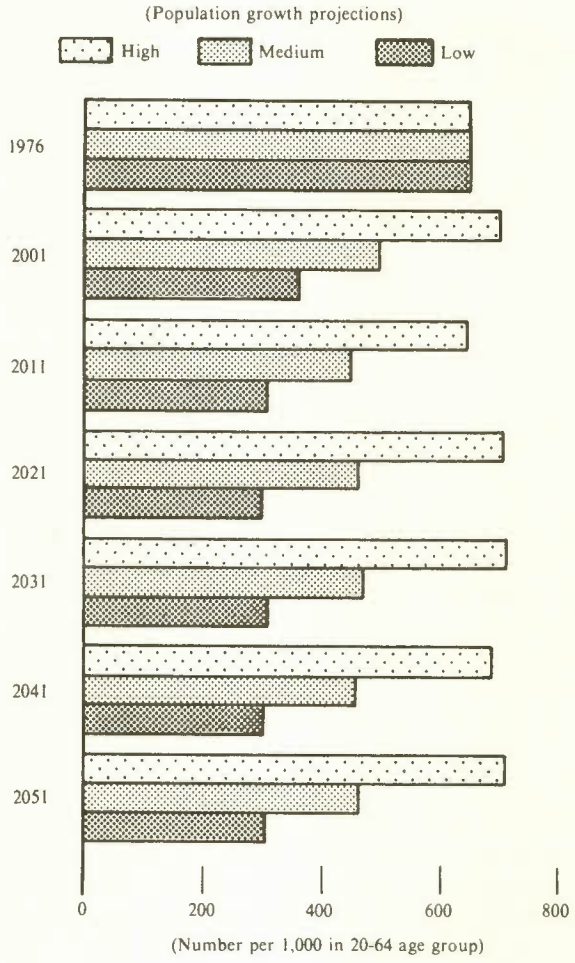
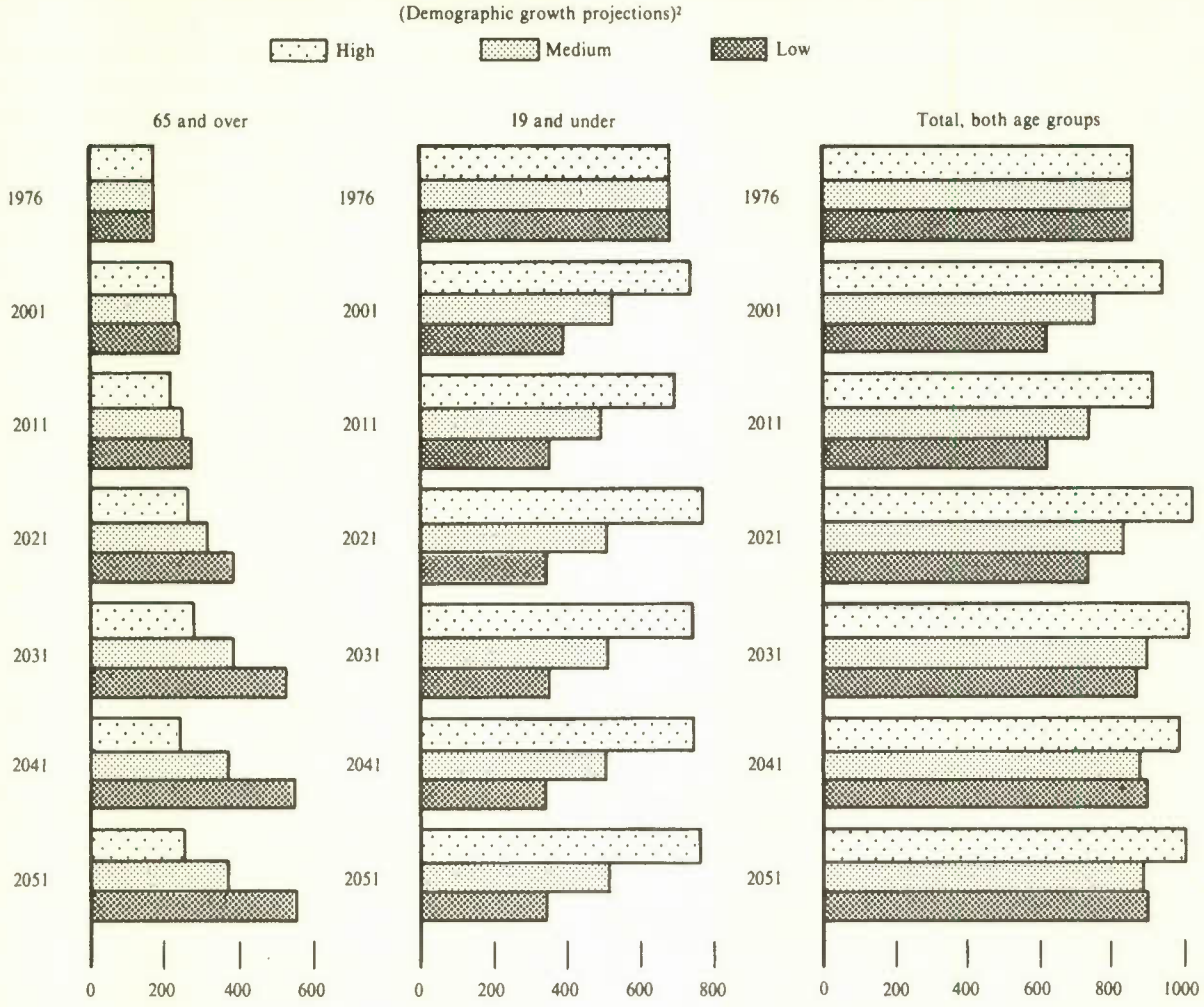


CHART 3-6
INACTIVE AS A PROPORTION OF ACTIVE POPULATION,[1] CANADA, 1976 TO 2051

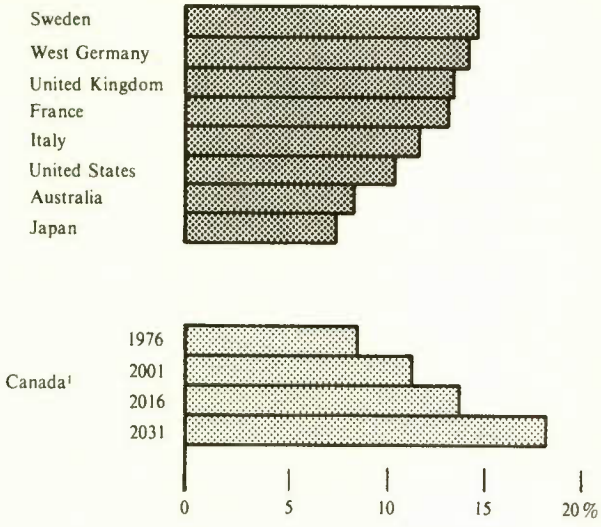


For present purposes, we have projected total retirement benefits under various assumptions about benefit levels and age of eligibility as if they were provided by an expanded version of the existing public system. In other words, our projections allow for complete coverage of the older population by basic-income programs and for complete coverage of the labour force by programs designed to replace some specified percentage of earnings. The fact that such coverage is not complete and that it differs greatly among occupational plans is, of course, one major reason why the existing retirement income system should be changed or expanded. The approach in this chapter enables us to focus attention on the scope for improving coverage and benefits either while remaining within given cost limits or by altering the way in which costs are divided between present workers (future pensioners) and future workers.

We emphasize again that these scenarios are not intended to describe any "most likely" outcome. Rather, they are designed to reveal which factors have the greatest influence on the system and should therefore be monitored regularly for policy planning purposes. They are designed also to provide a quantitative measure of the impact on the economy of some of the policy changes that have been suggested by various groups.

Gross national product was projected under the same demographic assumptions as benefits and at an annual rate of increase in real output per worker (and real wages) of 1.8 per cent. The real output (or productivity) assumption is the average annual increase over the past decade, but any such assumption must be treated with great caution, particularly when it is projected for many years ahead. In several of its reports the Council has pointed to the

CHART 3-7
POPULATION AGED 65 AND OVER AS A PROPORTION OF TOTAL POPULATION, SELECTED COUNTRIES IN 1975 AND CANADA FROM 1976 TO 2031



necessity of raising productivity growth above its recent levels, and further work on this subject is already under way. If the level of benefits is fixed in terms of the average real wage, however, their share of GNP should vary only if the number of people eligible for such payments changes relative to the number of workers. In Canada, at present, the accumulation of benefits to the point of retirement is in fact linked to real wages to a large extent, and this feature is reflected in our projections; the growth of benefits as a proportion of GNP slows very little as productivity increases.[5]

The Cost of Income Security for Older People

Even at the present target level of income replacement provided by the CPP and QPP, and with OAS payments continuing to bear the same relationship to the average industrial wage as in 1978 (providing a combined replacement ratio of about 39 per cent for an unmarried worker earning the average industrial wage), Canada's public expenditures on income support for the aged as a share of GNP will rise in the future because the number of eligible people will increase faster than that of people in the labour force. Under our medium demographic growth assumptions, this share would increase from about 3 per cent in 1976 to over 7 per cent in the year 2031, with the most rapid rise occurring in the second and third decades of the twenty-first century. After 2031 it would stabilize at a slightly lower level (Chart 3-8).

If population growth follows the low path, however, benefits to the elderly could represent as much as 10 per cent of GNP by 2031, given the present income-replacement ratio and age of eligibility (Chart 3-9). It is worth noting though that this figure is not too much out of line with that observed in some European countries at the beginning of the present decade — and GNP in those countries is much below what Canada should expect in the future (Table 3-1). If the income-replacement ratio were increased to 75 per cent through changes in the CPP and QPP programs, benefits would rise to about 12 per cent of GNP with medium population growth and to over 17 per cent with low population growth (Chart 3-10). If the income-replacement ratio were maintained at its present level but the age of eligibility were lowered to 60, the share of benefits could range from about 7 per cent of GNP in the high-growth projection to over 14 per cent in the low-growth projection (Chart 3-9). Finally, if the replacement ratio were increased and the eligible age lowered, the share would rise to much higher levels indeed (Chart 3-10).

Some of these changes will appear much less extreme if it is recalled that the present occupational pension system, when added to existing CPP and QPP benefits, produces, for some people at least,

CHART 3-8
EXPENDITURES ON PUBLIC RETIREMENT INCOME PROGRAMS[1] AS A PROPORTION OF GNP, CANADA, 1976 TO 2051

(Medium demographic growth projection)

CHART 3-9
EXPENDITURES ON PUBLIC RETIREMENT INCOME PROGRAMS[1] AS A PROPORTION OF GNP, UNDER VARIOUS DEMOGRAPHIC GROWTH ASSUMPTIONS AND BY AGE OF ELIGIBILITY FOR BENEFITS, CANADA, 2031

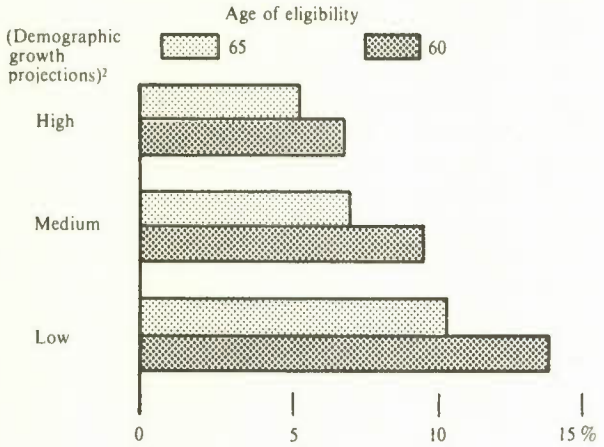
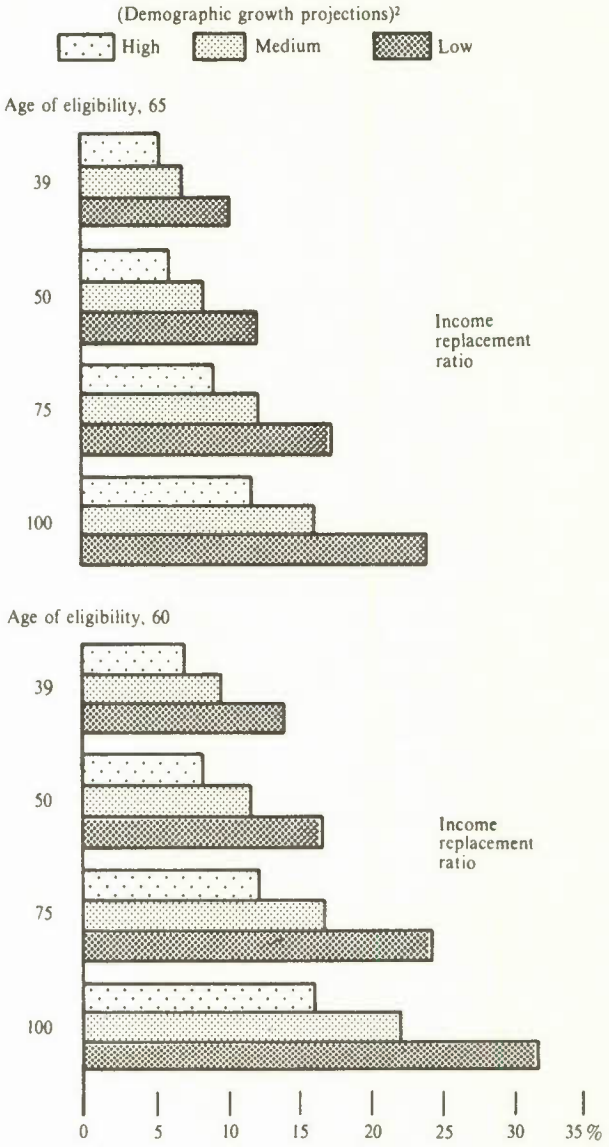


CHART 3-10
EXPENDITURES ON PUBLIC RETIREMENT INCOME PROGRAMS[1] AS A PROPORTION OF GNP, UNDER VARIOUS DEMOGRAPHIC GROWTH ASSUMPTIONS AND BY INCOME REPLACEMENT RATIO AND AGE OF ELIGIBILITY FOR BENEFITS, CANADA, 2031



income-replacement ratios substantially above those provided by the public schemes. On the other hand, it is well to remember also that the cost estimates above are based on projections of the labour force; thus they do not make allowance for any direct accumulation of benefits by one large group at least — full-time housewives.

Our projections do suggest that this problem will be less severe in the future, since they call for a substantial increase in the labour force participation rates of women.[6] Nevertheless, should existing retirement arrangements continue, women working in the home will be the largest group excluded from accumulating their own income-replacement benefits. To make this group eligible for the average retirement benefit received by women in the labour force would involve something like a 20 per cent increase in our projected income-replacement benefits by 1991 and 5 per cent by 2031. Such increases would be partly offset by a decline in GIS payments — a reflection of the growth of income-replacement plans — although by 2031 those payments would be so small in any event that the effect would be insignificant.

Total Dependency Costs

Some analysts have suggested that the total government spending on dependants could remain reasonably stable, since declining outlays on the young would offset increased expenditures on the older generations. Several areas of public expenditure other than income security for the elderly are also sensitive to the age composition of the population — notably health, education, and various social assistance programs.[7] On a per capita basis, health expenditures for the 65-and-over group, for example, are now roughly seven times as great as for the under-18 group. In 1971, persons in the former group accounted for only 8 per cent of the total population

TABLE 3-1

INTERNATIONAL COMPARISON OF AGE COMPOSITION AND PUBLIC OLD AGE BENEFITS, 1970-71[1]

	Persons aged 65 and over as a proportion of total population 1970	Old age, death, and survivor's benefits as a proportion of GDP 1971
	(Per cent)	
Netherlands	10.1	8.4
West Germany	13.3	8.0
France	12.8	6.8
Italy	10.6	6.6
Belgium	13.3	6.5
United Kingdom	12.8	4.7
United States	9.6	4.2
Sweden	13.6	3.4
Canada[2]	7.8	2.1

but for 35 per cent of patient-days in hospital.[8] Education expenditures are, of course, presently devoted almost entirely to the younger age groups. Expenditures per capita on social assistance (excluding retirement income) are slightly higher for the young than for the old.

Projections of expenditures in these areas are sensitive to assumptions about the level of service provided and the effect of increases in productivity or real wages. The Council has projected dependency costs (other than those of pensions) by assuming that 1976 levels of service would be maintained. For education, this implies that teacher/pupil ratios and the proportion of the 15-19 age group in post-secondary educational institutions will remain at their 1976 levels. Increases in these ratios would, of course, entail even higher expenditures. Our projections assume, too, that wages in the health and education areas will increase in line with real wages in the overall economy.

The projections indicate that if there were no productivity increase in the health and education fields themselves and if the level of social assistance payments increased in line with real wages, total public expenditures on both the old and the young would still increase substantially until about 2031 (Chart 3-11). Declining (under low demographic growth) or more or less stable (under medium or high demographic growth) expenditures on the younger age groups would partially offset rising expenditures on the older group until the beginning of the coming century. After the year 2010, pension costs and health expenditures on older people would rise more rapidly, particularly if demographic trends followed the patterns assumed in the low-growth scenario. Although expenditures on the young might decline in the critical 2011-31 period under this scenario, that reduction would not be sufficient to offset the sharply rising costs of the expenditures devoted to the aged.

The increase in pension expenditures would, however, be outweighed by declines in the other categories, at least under high and medium demographic growth, if productivity in the health and education fields increased as rapidly as in the economy generally and the level of social assistance payments were indexed to prices only, with service levels held constant. What is most likely, of course, is that there will be some increase in productivity in these areas and some improvement in the levels of services, so that the end results will fall somewhere between our two limits.

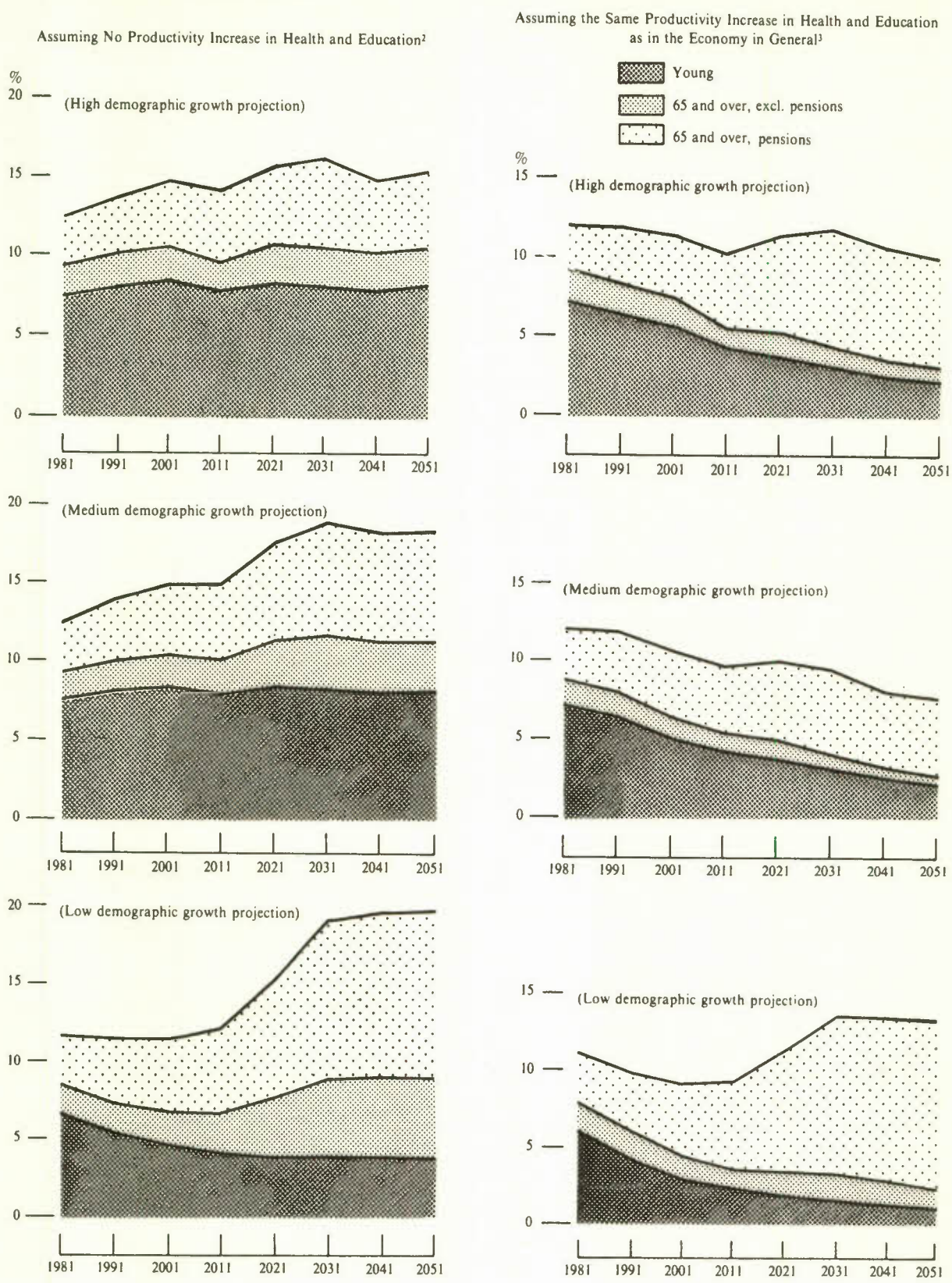
DEMOGRAPHIC CHANGES, TOTAL OUTPUT, AND OUTPUT PER PERSON

Our work thus suggests that it would be unwise to depend too much upon the decline in expenditures on younger age groups to compensate for the expected increase in support costs for older people. We have also noted that the share of total output required for retirement income programs is, under existing pension arrangements in Canada, largely independent of the growth in real output per worker. The more rapid that growth and the higher the level of GNP per capita in the future, however, the less difficult it will be to provide any given share to older people.

Even if there were no formal system of income support for older people, the changing age composition of the population would have some impact on economic growth. To understand why, one must look at the sources of growth: the quantity and quality of labour and capital inputs, and the efficiency with which labour and capital are combined in the production process (total factor productivity).

Even if the average work week or working life is not shorter in the future than it is today, the quantity of labour inputs will increase more and more slowly in the years ahead, particularly after the beginning of the coming century (Chart 3-12). Other things being equal, this factor, which has been taken into account in the projections discussed above, would slow the potential growth of the economy and the rise in real income per person.

CHART 3-11
PUBLIC EXPENDITURES ON MAJOR PROGRAMS[1] FOR THE YOUNGER AND OLDER AGE GROUPS AS A PROPORTION OF GNP, UNDER VARIOUS DEMOGRAPHIC GROWTH AND PRODUCTIVITY ASSUMPTIONS, CANADA, 1981 TO 2051

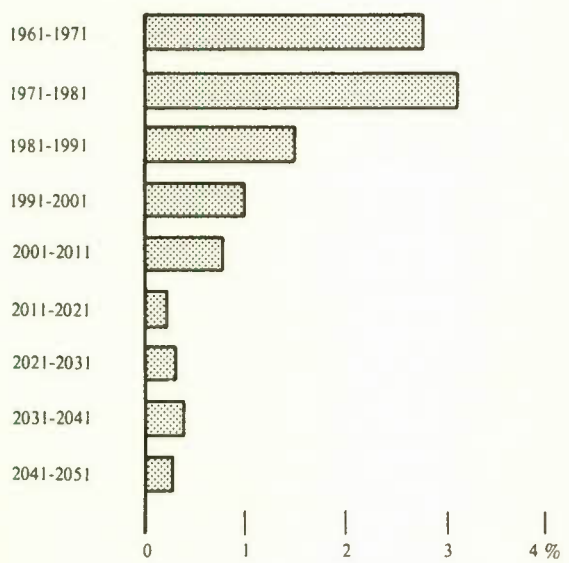


Other things will not be equal, however. The slower increase in the quantity of labour is likely to be offset at first by an improvement in its quality. The stock of education in the labour force will rise as older people with lower levels of education are replaced by younger people with many more years of schooling. This positive influence on growth is likely to stabilize early in the next century (Chart 3-13), but the increased average age of workers will mean that, quite apart from education attainment, the work force will be generally more experienced and skilled.

Slower growth in the labour force could also be associated with slower growth in capital inputs, not so much because of an adverse impact of age composition on saving, but because there will be fewer workers to equip with any given amount of machinery and equipment. On balance, we conclude that population aging in itself is likely to lead to some downward pressure on the potential growth of the economy in terms of real income per person, particularly after the year 2000.

CHART 3-12
AVERAGE ANNUAL INCREASE IN LABOUR FORCE, BY DECADE, CANADA, 1961 TO 2051

(Medium demographic growth projection)



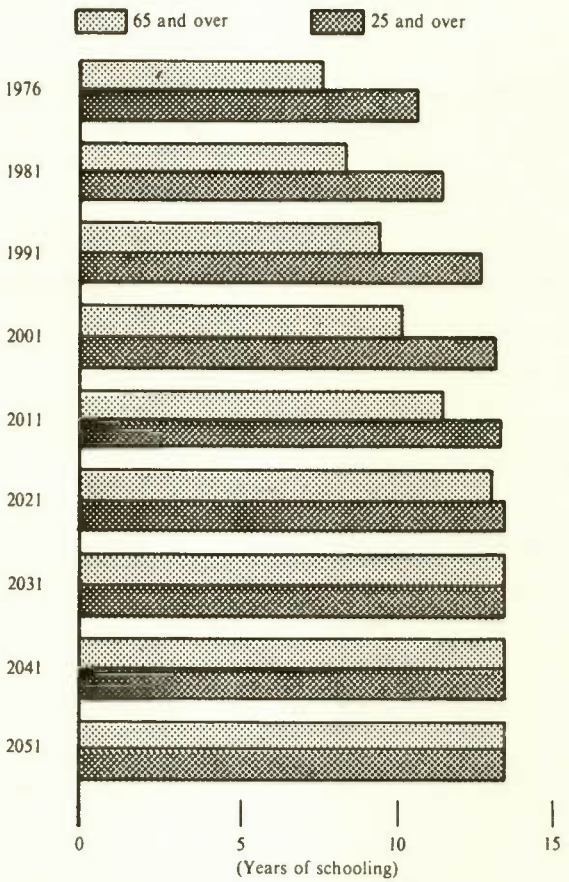
COMPENSATING DEMOGRAPHIC AND MANPOWER POLICIES

It seems, therefore, that Canada is about to face a period in which income security costs for the elderly as a share of gross national product will rise, while GNP may grow more slowly, simply as a result of the changing age structure of the population. This underlines the importance of examining the impact of the system itself on the growth of the economy.

Should a low-demographic-growth scenario evolve, there would be pressure to reduce the share

CHART 3-13
MEDIAN YEARS OF SCHOOLING, BY MAJOR AGE GROUP, CANADA, 1976 TO 2051

(Medium population growth projection)



of GNP devoted to programs of income security for the aged or to promote greater reliance on the efforts of individuals to meet their own needs. This could be done in various ways: by reducing the benefits granted under the public schemes, increasing the age of eligibility for benefits under those schemes, moving towards full funding of the public schemes, increasing the importance of private (fully funded) plans, or increasing the work force (or, more accurately, the supply of labour) relative to the number of those eligible for retirement benefits. The last of these alternatives would undoubtedly be considered the most desirable by many Canadians; indeed, it has sometimes been suggested that changes in this direction would resolve much of the problem, should it arise. Once again, unfortunately, our work indicates that such action is likely to be of limited value.

Policy action to stimulate growth of the work force in the critical period in the coming century would have to centre on immigration and/or increased labour force participation. Immigration policy is not likely to be dominated by labour force considerations; but, even if it were, a very large increase in net immigration — well beyond anything Canada has ever experienced, except perhaps in the early decades of this century — would be required to bring about even a small reduction in the GNP share of the retirement income programs. Increasing labour force participation would provide somewhat more scope for action, but even that would be of limited value. We noted earlier that the retirement income programs would reach just over 7 per cent of GNP by 2031, assuming moderate population growth and maintenance of the present age of eligibility and income-replacement ratio. To reduce this share by only 1 percentage point would necessitate an additional 2.8 million workers in the labour force and no extra retirees by 2031. To accomplish this would require any one of the following: 1/ an increase in net immigration in the decade prior to 2031 from 80,000 to 640,000, assuming, as is now the case, that only half of the immigrants would be of workforce age; 2/ an increase in the participation rate of those aged 65 and over from our projected rate of 4.7 per cent for that year to about 44 per cent (this would be much higher than the 1976 rate of 9.5 per cent for this group — indeed, higher than it has ever been for the group); 3/ an increase in the participation rate of those aged 55 and over from a projected rate of 21 per cent to 47 per cent (the rate for this group was 32 per cent in 1976); or 4/ an increase in the participation rate of women aged 20 to 64 from the projected 60 per cent to almost 87 per cent (the 1976 rate for this group was 53.2 per cent). Some less extreme changes in these factors might certainly be considered in combination, although this would not change our general conclusion.

CONCLUSION

Canada's older population is increasing, causing the costs of income security to rise. More important, the older generation is growing relative to those who are actively working. Thus demands on the economy, in the form of higher income security costs for older people, will be rising at a time when its productive capabilities, in terms of labour inputs at least, will be growing more slowly. Our projections indicate too, however, that there is considerable scope for improving benefits over present levels without huge increases in the required proportion of GNP. But the lower the rate of population growth, the less that scope and the more likely that Canadians will face hard choices in setting priorities for improvement.

The most critical period will be roughly between 2010 and 2030. Although that may seem a long way off, it is well to remember that many of the Canadians who will retire in that period are already in the work force. If Canada's system of income security for the aged is to be altered, whether for demographic or other reasons, changes will have to be announced well in advance so that people can take them into account when planning for their retirement.

The Council's work suggests that it would be unwise to pin too much hope on the possibility that decreasing costs in other areas will offset the increasing absolute and relative levels of income security costs for the elderly. The decline in the number of younger dependants will be of some assistance in the next two or three decades, though not beyond that period. In any event, since support costs are much greater for the old than for the young, total dependency costs are likely to continue to increase; they may even accelerate during the critical period mentioned above.

Given the existing system of income security for older people, it will be difficult to lower significantly the proportion of GNP devoted to these programs, either through an increase in real output per worker (if benefits are to be more or less fixed relative to

real wages) or through immigration policy. Increased labour force participation rates offer somewhat more scope, although even that is limited.

A higher rate of economic growth — as measured by growth in real income per capita — whether it results from increased participation rates or from increased real output per worker, will alleviate the burden of transferring any particular proportion of GNP to older people. Beyond that, there remains a range of options for dividing the cost between present workers (future pensioners) and the future work force.

4 Who Pays? Who Benefits?

The choice of a given option from a range of alternative programs designed to provide income security for the elderly depends in part upon knowing who will benefit from a particular program and who will pay for it. A retirement income system may transfer or redistribute wealth between different age groups and between individuals in the same age group. As a result, some may receive benefits in excess of their own contributions, while others may receive amounts that fall short of their contributions. Within limits, such transfers are likely to be publicly acceptable. If pushed too far, however, the system could be judged unfair and could break down. This redistribution of wealth may affect the economy by influencing the choices that people make between saving and consumption or between work and leisure. This feature raises the possibility of conflict with other goals such as economic growth—a conflict that might in turn jeopardize the objective of income support itself. It may be impossible to reconcile these goals completely; opinions will always differ as to their relative importance. Nevertheless, by searching out the most efficient combination of alternative programs — one that will achieve the desired level of income for older people with the least loss of total output — the scope for conflict can be reduced.

Of course, many government programs have redistributional features. Education and health expenditures, far more than pension plans, may redistribute income between generations. Ideally, the effects of a particular set of programs should not be examined in isolation. Thus it is important to keep in mind that retirement income programs may reinforce or offset the effects of programs in other policy areas. But that proviso should not prevent us from using the information that is available to examine the distributive effects of the plans that are the prime focus here.

REDISTRIBUTION OF WEALTH

How government programs redistribute income — or, perhaps more accurately, wealth — is easily illustrated.[1] Suppose that A pays $50 in tax towards a particular program but receives $100 in benefits while B, who has a higher income and can afford to pay more, pays $100 in tax but receives only $50 in benefits; as a result of the tax-transfer process, $50 is redistributed from B to A.

General Considerations

A retirement income system may redistribute wealth not only between age groups (intergenerational transfers) but also between individuals in the same age group (intragenerational transfers). In this case, the redistribution is slightly more difficult to measure because it involves an inflow of contributions (or taxes) into the system in one period and an outflow of benefits over a later period. To compare the values of the two flows, it is necessary to put them on a common basis by calculating, for a particular point in time, the present value of each flow (see Appendix D). If the present value of an individual's contributions is not equal to that of the benefits he or she will eventually receive, redistribution of wealth is said to occur.[2]

If the individuals belonging to a given age group — say, all persons born between 1925 and 1929 — stand to receive more in benefits than they pay into the scheme, they are considered to be the recipients of a net intergenerational transfer. If, in a particular age group, individuals with low incomes receive greater benefits net of contributions (again, calculated on a present-value basis), than people with high incomes, they are said to receive a net intragenerational transfer of wealth.

Net intergenerational transfers will normally arise largely in the context of pension plans that are less than fully funded, although they are also possible in fully funded plans. Under a fully funded plan, each age group pays for its own benefits out of its accumulated contributions. At the other extreme, under a pay-as-you-go plan, the contributions of the current work force are only sufficient to pay for the benefits of those already retired; in other words, such plans are based entirely on an intergenerational transfer. Whether or not a particular age group is a *net* beneficiary of wealth through such transfers, however, depends upon other factors. There is a net intergenerational transfer, for instance, when full benefits are extended to people retiring at the beginning, or during the early years, of a plan, even though they have contributed relatively little, or maybe nothing, to it. Indeed, this "blanketing-in" effect, as it is known, is one of the reasons that governments adopt pay-as-you-go plans.

Once a plan has reached maturity — that is, when the first of those who have paid contributions for the full prescribed period begin to retire — the type of redistribution described above ceases, provided the rate of interest at which funds in the economy can be invested is equal to the rate of growth of aggregate earnings.[3] If this condition does not obtain, there will be a further net intergenerational redistribution of wealth under any scheme that is less than fully funded.

The maintenance of pay-as-you-go schemes depends, in the last analysis, upon a series of interlocking redistributive promises: Generation B in effect promises to support Generation A, so long as they believe that Generation C will do the same for them, and so on. Even if per capita output were to remain constant, no problem would arise provided the ratio of workers to pensioners was constant or rising. To get the same benefits, each successive group would have to contribute the same amount if the ratio were constant, or less if it were rising. But if the ratio of workers to pensioners is declining — as it is in Canada at present — the contributions from the current work force must be increased to maintain even the same level of benefits for successive groups of retirees. Naturally, increasing the benefit level would involve still higher contribution rates. Eventually, the workers could end up paying very high rates and contributing more than they could expect to receive in benefits. At some point, they might reject this situation, and the whole scheme could then break down.

Net redistribution of wealth within generations reflects the source and structure of contributions and the structure of benefits. If married persons contribute the same amount as single individuals and if their families qualify for survivors' benefits, there will be a redistribution in favour of the married contributors, again on a present-value basis. Or, if a flat benefit financed by a tax proportional to income is paid to all who retire, it will result in a transfer of wealth from higher- to lower-income groups.

The Canadian Situation

Canada's retirement income system involves both intergenerational and intragenerational transfers of wealth.[4] Calculation of these effects is a complicated matter, however, and our present knowledge is confined largely to the public system.

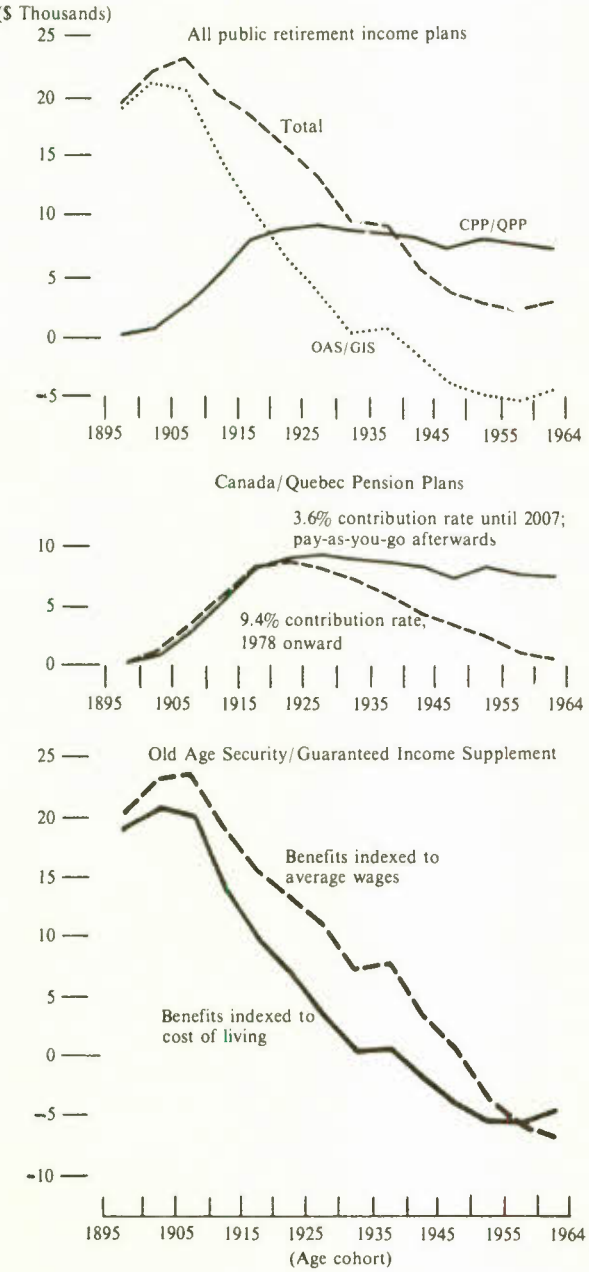
The Public System — For analysis of the redistributive impact of the public retirement income system, the Council was able to draw upon a model, developed first for the Ontario Economic Council and improved for the present study, that generates future life histories for a representative sample of Canadians.[5] Among other things, it takes into account their chances of being in the labour force, of being unemployed, of reaching a particular level of education, and of being married. Then it calculates how, under various assumptions about demographic trends and about funding methods for the CPP and QPP, wealth would be redistributed between age and earnings groups, between men and women, and between married and single people, taking into account their different patterns of contributions and benefits. The results are, of course, purely suggestive; they are designed only to show what would happen if the system remained as it is or if specific changes were made to it. In brief, they may indicate directions for policy change.

The standard calculation presented in this chapter is based on our medium-population-growth assumptions, an assumed real interest (or discount) rate of 2.5 per cent, and a public retirement income system modeled on the existing Canadian system, with one modification. With the present contribution rate of 3.6 per cent for the CPP and QPP, the reserve funds that have been accumulating since 1966 will start to decrease in the mid-1980s and will disappear altogether early in the next century. We assume, therefore, that the contribution rate will be raised from 2007 on, to put the plans on a pay-as-you-go basis. From time to time we change some of these assumptions and compare the results with those that emerge from the standard calculations.

The standard calculations show some significant redistribution of wealth among age groups. There is a net transfer of wealth to all age groups up to those born in the 1960-64 period, with the older groups — except for the very old — benefiting more than the young (Chart 4-1). In other words, some of the benefits now promised will be paid for in the future by today's very young age groups as well as by those yet unborn.

CHART 4-1
NET LIFETIME BENEFITS FROM PUBLIC RETIREMENT INCOME PROGRAMS, BY AGE COHORT,[1] CANADA, 1895-99 TO 1960-64[2]

(1977 dollars — Discount rate, 2.5%)



The older people benefit more from OAS and GIS programs; the young groups, from CPP and QPP. In fact, people who were born in 1940 or later contribute so much more to OAS and GIS than they are now promised in benefits from those programs that their net wealth is actually reduced on this account. Among those who entered the CPP or QPP programs in 1966 when they began, the best deal — that is, the largest net benefit — will go to the group born between 1925 and 1929.

If the funding of the CPP and QPP had been increased in 1978 — using a contribution rate of about 9 per cent, for example — the net transfer of wealth to those not retired by then would be reduced. By far the greatest reduction would occur in the younger age groups, since they would be contributing at a higher rate for a much longer period. Indeed, for those born between 1960 and 1964, who are just now entering the labour force, there would be almost no net redistribution of wealth.

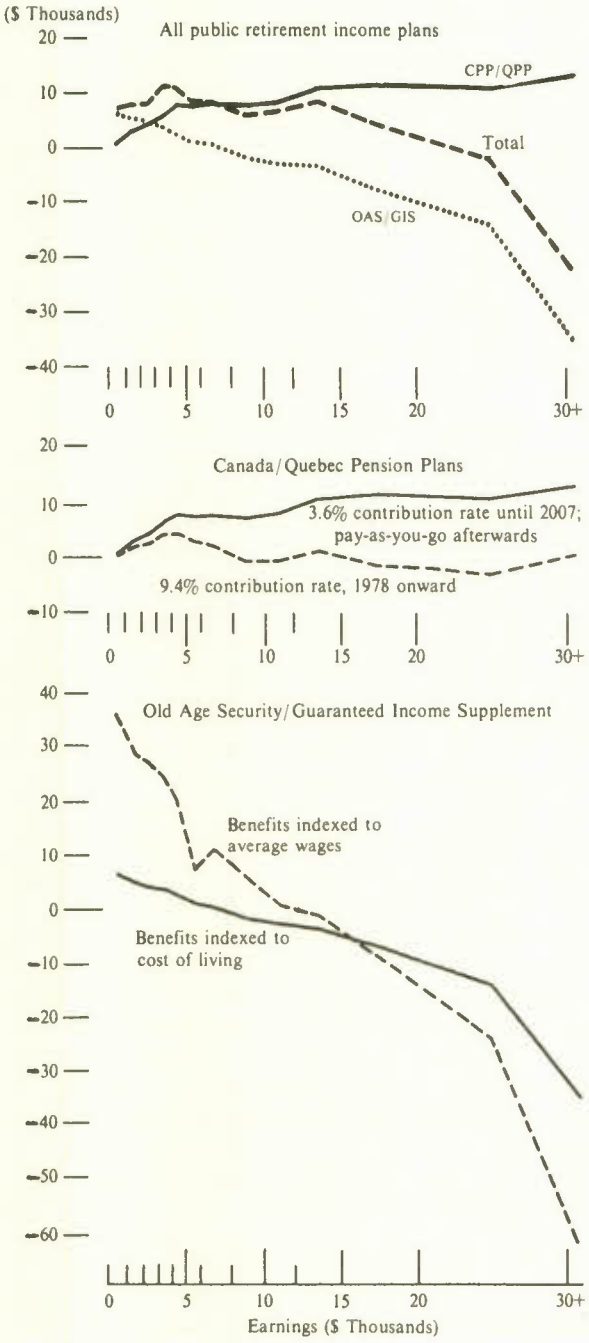
In addition, OAS and GIS benefits are presently indexed to the consumer price index, so that their real purchasing power remains constant. Over time, as gains in productivity cause real wages to rise, the relative position of the elderly who depend solely on these programs will deteriorate. This problem could be overcome by adjusting benefits in one way or another to wage increases. Such action would substantially increase the net transfer of wealth to older age groups and reduce the net transfers to younger groups.

Canada's major public retirement income plans also benefit some individuals within the same age group more than others. Not surprisingly, the OAS and GIS programs transfer net wealth towards those with lower lifetime earnings and away from those with higher lifetime earnings. At the present time, CPP and QPP are transferring net wealth from future generations to all present participants. Since these transfers are proportional to pensionable earnings, the higher-earnings group receives larger net benefits than the lower-earnings group. Nevertheless, because the influence of the OAS and GIS programs dominates, the system as a whole transfers net wealth to middle- and lower-earnings groups and away from the upper-earnings group.

If the CPP and QPP had adopted a contribution rate of 9 per cent in 1978, the situation would have been different. The plans would have ceased trans-

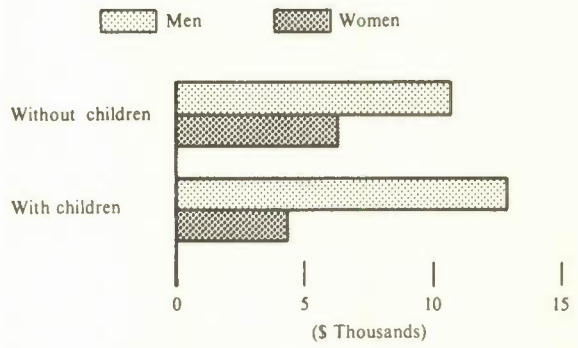
ferring net wealth from future generations for credits earned after 1978. Because the basic exemption benefits low earners proportionately more than high earners, these plans would then transfer net wealth from the higher-earnings groups to the lower-earnings groups (Chart 4-2). As the system matures, contribution rates will have to increase. This example indicates that, as they do, the plans will become more progressive. In other words, people with low earnings will experience a higher ratio of benefits to contributions (on a present-value basis) than individuals with high earnings. The redistribution of net wealth between earnings groups would also change if OAS and GIS benefits were indexed to wages. Lower-earnings groups would receive greater net transfers, and higher-earnings groups would receive less.

CHART 4-2
NET LIFETIME BENEFITS FROM PUBLIC RETIREMENT INCOME PROGRAMS, BY AVERAGE LIFETIME EARNINGS CLASS, CANADA 1960-64 AGE COHORT[1,2]
(1977 dollars — Discount rate, 2.5%)



The calculations also suggest that the CPP and QPP redistribute net wealth in other ways. Women stand to receive lower net benefits than men because their earnings are generally lower, especially during their child-bearing years. Where men and women have the same lifetime earnings, however, women receive greater benefits because, on average, they live longer. Men with children will be entitled to slightly higher benefits than others because they (or at least their families) are eligible for spouse and survivor benefits (Chart 4-3).

CHART 4-3
NET LIFETIME CPP/QPP BENEFITS PER PERSON, MEN AND WOMEN WITH AND WITHOUT CHILDREN, 1950-59 AGE COHORT [1,2]
(1977 dollars — Discount rate, 2.5%)

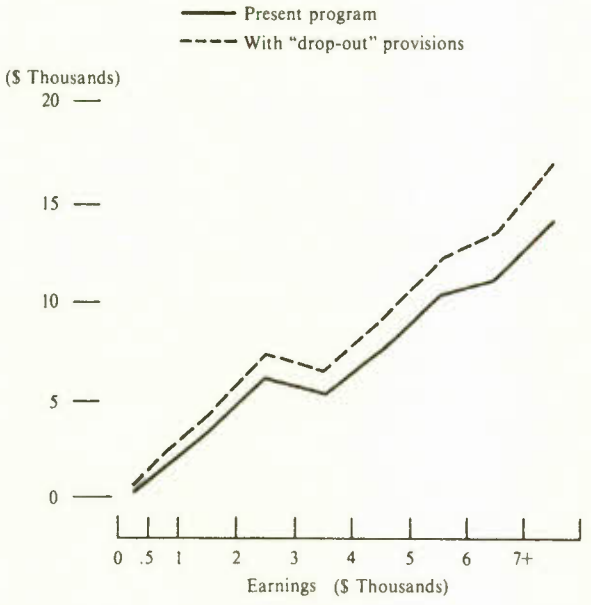


Another change to the CPP (one already incorporated in the QPP) that has been passed by the Parliament of Canada but has not yet been ratified by British Columbia and Ontario, is an income drop-out provision for parents. It provides that family allowance recipients may drop those years during which they had children under seven years of age — perhaps years of low or zero earnings — from the calculation of average lifetime earnings on which the amount of the final pension is based. This change would bring an increase of roughly 22 per cent in net benefits to the average woman with

children, with greater increases going to those with higher incomes (Chart 4-4). It would also require an increase in the contribution rate for all plan participants. That increase in turn would lower the net benefits received by men and women without children.

CHART 4-4
NET LIFETIME CPP/QPP BENEFITS FOR WOMEN WITH CHILDREN, BY AVERAGE LIFETIME EARNINGS CLASS, 1950-59 AGE COHORT[1,2]

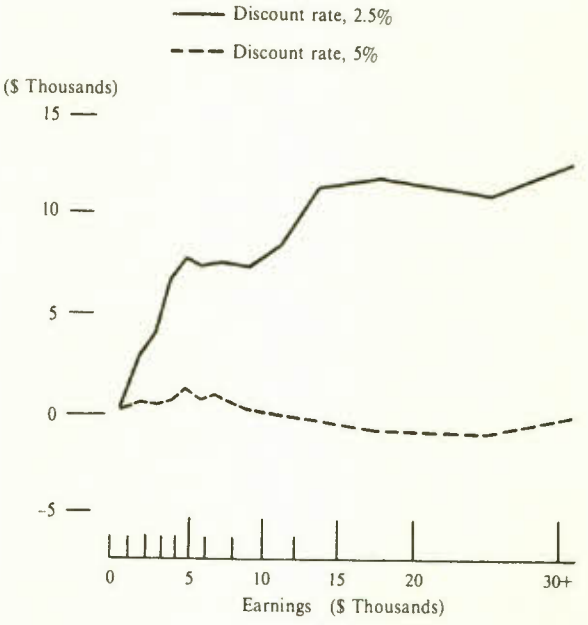
(1977 dollars — Discount rate, 2.5%)



All these illustrations are based on an assumed real rate of discount of 2.5 per cent — a figure in line with recent experience. It may well be, however, that individuals with lower earnings have a considerably greater preference for current, as opposed to future, consumption than this average rate implies. This interpretation is borne out by the fact that lower-income individuals are more likely than higher-income people to pay very high interest rates to finance their consumer loans. When CPP and QPP net benefits are calculated on the basis of a 5 per cent real rate of discount, the transfer of net wealth is lower for all earnings groups (Chart 4-5). What this implies is that poorer people in particular may, in fact, perceive the net transfer of wealth through CPP and QPP benefits to be much lower than our basic calculations suggest. They may well ask whether the forced saving achieved through these pension plans is worth it.

CHART 4-5
NET LIFETIME CPP/QPP BENEFITS, BASED ON ALTERNATIVE DISCOUNT RATES, BY AVERAGE LIFETIME EARNINGS CLASS, 1960-64 AGE COHORT[1,2]

(1977 dollars)



The Occupational Pension Plans — Occupational pension plans redistribute wealth to a much lesser extent than do public plans. Intergenerational transfers are quite possible in public-sector plans, however, because they are not necessarily fully funded. But since private-sector plans are required to aim for full funding, they are far less likely to result in such transfers. A transfer may nonetheless occur if the benefits are adjusted after an individual becomes eligible for retirement.

Private-sector occupational plans may transfer wealth between individuals of the same age groups. Plans with less than full and immediate vesting of the employer's contributions transfer wealth from mobile to less-mobile workers, and perhaps from younger to older workers as a group as well. This takes place because workers who leave an employer before their contributions are vested get back only their contributions, plus interest. This may result in only a small loss for some younger workers, but the loss could be substantial for older workers.[6] Since occupational pension plans, which are usually compulsory for the group concerned, maintain the same contribution rates for all plan members, some individuals receive more benefits than others. Women earning the same income as men for the same job receive extra benefits because of their

longer life expectancy. Individuals with families receive more benefits than single people because of survivor benefits.

Tax exemptions for contributions to, and investment returns from, pension plans, as well as the exemption granted to people aged 65 and over for the first $1,000 of pension income, may also transfer wealth towards occupational plan members. Non-members can, if they wish, obtain similar benefits through the purchase of RRSPs, but this approach will not provide all of the advantages deriving from participation in an occupational pension plan.

IMPLICATIONS FOR POLICY

The receipt of a net transfer of wealth by pension plan members means that the benefits received (net of taxes) are in excess of contributions to the plan, when both are calculated on a present-value basis. In other words, the members receive more in benefits from the plan than if they had invested elsewhere an amount equal to the contributions made to the plan by themselves or on their behalf by their employer. Either way, a member's gain is someone else's loss, and that fact may affect the operation of the system.

The OAS and GIS programs are expressly designed to ensure a basic minimum income for older people regardless of previous circumstances. These programs do redistribute wealth in favour of the older groups in the population and, at the same time, those with lower lifetime earnings.

This basic income could be assured at less cost if the universal program (OAS) were phased out and replaced by an expanded version of the GIS (an income-tested program) since benefits would then go only to those who need them most. Our estimates suggest that if the OAS program had been replaced by an expanded GIS scheme in 1979, the federal government might have reduced its expenditures by roughly $1 billion that year, while maintaining the same guaranteed minimum income level. Alternatively, that amount could have been used to increase the minimum.

There have been strong political objections to income- or means-tested programs in the past, however, and the present system represents a hard-fought compromise among diverse groups.[7] Indeed, the very fact that OAS payments are received by *all* older people is an important factor in the political support that the program continues to enjoy. On the other hand, it is possible that the objections to income- or means-testing may lessen in the future for several reasons.[8] First, the system is becoming much more impersonal and automatic. Income-tested programs are becoming more closely related to the tax system, and there is less hesitation to get something back from the tax man than to personally visit some, perhaps unsympathetic, welfare official. Moreover, the more that the actual change in population approaches the low-growth scenario, the greater will be the pressure to seek ways of reducing costs.

As for the CPP and QPP, the decision to transfer net wealth to all age groups participating in these plans so far is implicit in the less-than-full funding of the scheme. The amount of the transfers is, in effect, the result of compromise between those favouring a short period of transition to full benefits and those opting for a much longer interval. Such a transfer implies political acceptance of the idea that at the present time — and presumably for some time to come — the division of income between the older people and workers is not appropriate. This position can be defended on various grounds — for example, it may be seen as compensation to the older groups for their net transfers to the young for education; but, ultimately, it will be the subsequent generations who will decide whether it is appropriate and whether the "pension promise" will be honoured.

The net transfer of wealth to present participants implies that, at some time in the future, members of the then-current work force may have to contribute at rates higher than those required to fund their own pensions in full (Table 4-1). Under the low-growth projection, the contribution rate on eligible earnings would be twice as high by 2031 as under the high projection. By way of comparison, however, it is worth noting that the employer/employee contribution rate for U.S. social security programs is already above 10 per cent; it is expected to rise even further.

TABLE 4-1

CPP AND QPP PAY-AS-YOU-GO CONTRIBUTION RATES, UNDER VARIOUS DEMOGRAPHIC GROWTH ASSUMPTIONS, 1991 TO 2051[1]

	Demographic growth projection		
	High	Medium	Low
1991	4.4	4.5	4.7
2001	5.1	5.4	5.8
2011	5.6	6.4	7.4
2021	6.7	8.4	10.6
2031	7.3	10.0	14.2
2041	6.4	9.5	14.7
2051	6.8	9.7	15.2

The Canadian rate would rise above that shown in our calculations, of course, if benefits were increased from present levels — for example, to provide a higher income-replacement ratio (see also Chapter 3, especially Chart 3-9). Would future workers agree to pay these higher rates or would they choose, instead, to reduce the promised benefits? The question is anything but academic: among those whose benefits could be affected by the decisions made by the workers of 2031 are the young people who are now entering the labour force.

One consideration that could affect the outcome is the way in which the present system reallocates wealth among various individuals in the same age groups. Think for a moment of contributions to the CPP and QPP as a form of investment. At the present time, all age groups in the system are being offered a positive rate of return on that investment; however, when contribution rates are increased, as they must be if the system is to continue, that rate of return will decline. In addition, the potential rate of return is lower for some people than for others. Since the mature system will redistribute wealth away from higher-income groups, their rate of return will be lower than the average, perhaps lower than they could get by investing their accumulated contributions themselves. That feature could well lessen their support for the system.[9] Nor can we be sure that lower-income groups will be anymore in favour of the present system. Their rate of return will be higher than the average; but, for some at least, it will still not compensate for their loss of current consumption. Some individuals may have to pay very high rates of interest if forced to borrow for consumption purposes.

Few Canadians would argue with the principle that the working group must support those who, for one reason or another, cannot provide adequately for themselves. The question is: What is the fairest way to accomplish this? Because the present system of contributions amounts to a regressive payroll tax — a tax that bears more heavily on those least able to pay it — it may seem quite unfair to many.

There are two possible solutions: to finance the CPP and QPP from general revenues, or to shift the basic-income objective entirely to the public programs that are not related to earnings and to make CPP and QPP benefits proportional to earnings. (In the latter case, the income-replacement rates would be equal for all earnings levels.) The second approach has the advantage of clearly identifying CPP and QPP contributions as savings for the individual. Moreover, with benefits proportional to contributions, members could be permitted to opt out of the program if they could provide proof that they were building up retirement savings in some other way. This would permit increased freedom of choice; at the same time, removal of the redistributive element could mean somewhat lower contribution rates for all participants.

There seems to be a good argument, too, for a staged increase in the contribution rate, beginning perhaps in the mid-1980s when the present reserve funds begin to decline. This might be politically more acceptable than one very sharp increase at the point when the funds are ultimately exhausted. However, final decisions with regard to changing both the contribution rate and the structure of financing and benefits will also depend on what effect the system — or changes in it — would have on other goals. Financing through general revenues has different implications for stabilization policies than financing through a payroll tax. The timing of the increases in contribution rates would also affect these policies. In addition, the system has implications for growth, since the redistribution of wealth may affect saving and capital formation, as well as the choice between work and leisure. These features are examined in the chapters that follow.

5 The Savings Connection

Of all the links between the economy and the income security policies for older people, the "savings connection" has aroused the most controversy. If Canada's public retirement plans contribute to a lowering of total saving and capital formation and to slower economic growth, as some suggest, it may become more difficult in the future to meet the demands for pension benefits and the other needs of our society.

Even if total saving is not altered, its composition could be affected. Some fear that the growth of public retirement income plans that are less than fully funded could mean a decline in personal saving, an increased concentration of savings in the hands of governments, or greater dependence on savings from abroad, which could lead to increased foreign ownership of Canadian industry.

First, we must be quite clear on what we mean by saving. Unless there are unemployed resources in the economy or unless capital is imported from other countries, an increase in the stock of capital requires that some of Canada's current output of goods and services be saved — that is, not consumed. When individuals save, the resources that would have been devoted to the production of goods for consumption can be utilized instead for capital formation. The terms "capital formation" or "investment" are used here in the narrow sense of physical goods serving as inputs in the productive process. They exclude investment in "human capital" by way of expenditures on health, education, and training, even though that type of investment may also be very important for growth.

Frequently, of course, those who save are not those who invest in real capital. Instead, the savings are transmitted to their final users by way of the financial markets. When an individual purchases a new corporate security, the issuing enterprise can then use the proceeds to invest in real capital.

SOURCES OF SAVING

The savings accumulated by individuals and by small businesses operated by their owners (the personal and unincorporated business sector), by large private and government business enterprises (the corporate sector), and by governments themselves, together constitute "gross domestic saving." When Canada's surplus or deficit in current international transactions is taken into account, the result is gross saving. Such surpluses or deficits are matched by financial flows — including investment by foreigners in Canadian equity capital, bonds, and other securities, and investment by Canadians in foreign securities.

Over the past 25 years, gross domestic saving has represented just under 22 per cent of GNP (Table 5-1); in 1975-77, it averaged $40 billion. Because gross investment in Canada — which must be equal to total gross saving — has been slightly larger (averaging 23.5 per cent of GNP), Canada has imported new capital (foreign savings) to fill the gap. Indeed, in a very important sense, our use of foreign savings has been much greater than these figures would suggest. Strictly speaking, the savings of foreign-controlled businesses in Canada, which are very large, should also be treated as foreign, rather than domestic, savings.

In the Canadian system of National Accounts, contributions to the Canada and Quebec Pension Plans and to nontrusteed pension plans covering some government and government-enterprise employees (the consolidated-revenue plans) are treated as government revenues, and benefit payments from these plans are considered government current expenditures. The surplus of contributions and earnings over benefits has accounted for a sharply increased proportion of government saving since the mid-1960s. The surplus of contributions

TABLE 5-1

SAVING IN CANADA, BY MAJOR SOURCE, AS A PROPORTION OF GNP, THREE-YEAR AVERAGES, 1954-56 TO 1975-77

	1954-56	1957-59	1960-62	1963-65	1966-68	1969-71	1972-74	1975-77
				(Millions of dollars)				
A Gross National Product	28,835	35,045	40,311	50,541	66,941	86,650	125,441	189,017
				(Per cent)				
Gross domestic saving[1] as a proportion of GNP	21.5	20.4	19.6	22.3	23.2	21.8	23.4	21.4
Gross saving[2] as a proportion of GNP	24.2	24.5	22.1	23.8	24.4	22.1	24.0	23.9
B Composition of gross saving[3]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Personal saving	30.5	29.3	30.3	30.4	31.8	31.3	37.0	43.7
–Pensions[4]	–	–	7.3	7.7	6.5	7.9	8.3	10.3
–Other	–	–	23.0	22.7	25.3	23.4	28.7	33.4
Corporate saving	45.1	44.0	47.4	46.6	43.5	44.8	40.8	41.0
Government saving	13.4	9.9	10.7	16.4	20.3	22.4	19.3	5.1
–Pensions[5,6]	..	..	4.5	3.8	9.0	10.6	9.5	8.7
–Other[6]	..	..	6.2	12.6	11.3	11.8	9.8	–3.6
Foreign saving	10.8	15.2	10.5	5.4	4.3	–0.1	3.0	10.6
C Pension saving as a proportion of gross saving	..	..	11.8	11.6	15.4	18.5	17.8	19.1

and earnings over benefits of other pension plans (trusteed and insured plans) is treated as personal saving. Total pension saving now provides close to one-fifth of the gross savings. Total personal saving, which includes some pension saving, as well as other forms of saving, is larger still; from the late 1950s to the mid-1970s, it grew from 29 per cent to nearly 44 per cent of gross saving.

PENSION PLANS AND SAVING

To determine the effect of pension plans on saving, we must first study these two broad questions: Do these plans affect personal saving and, if so, how? If they cause a reduction in personal saving, is that decline likely to be offset by increased saving by other domestic sources such as governments or corporations?

Personal Saving

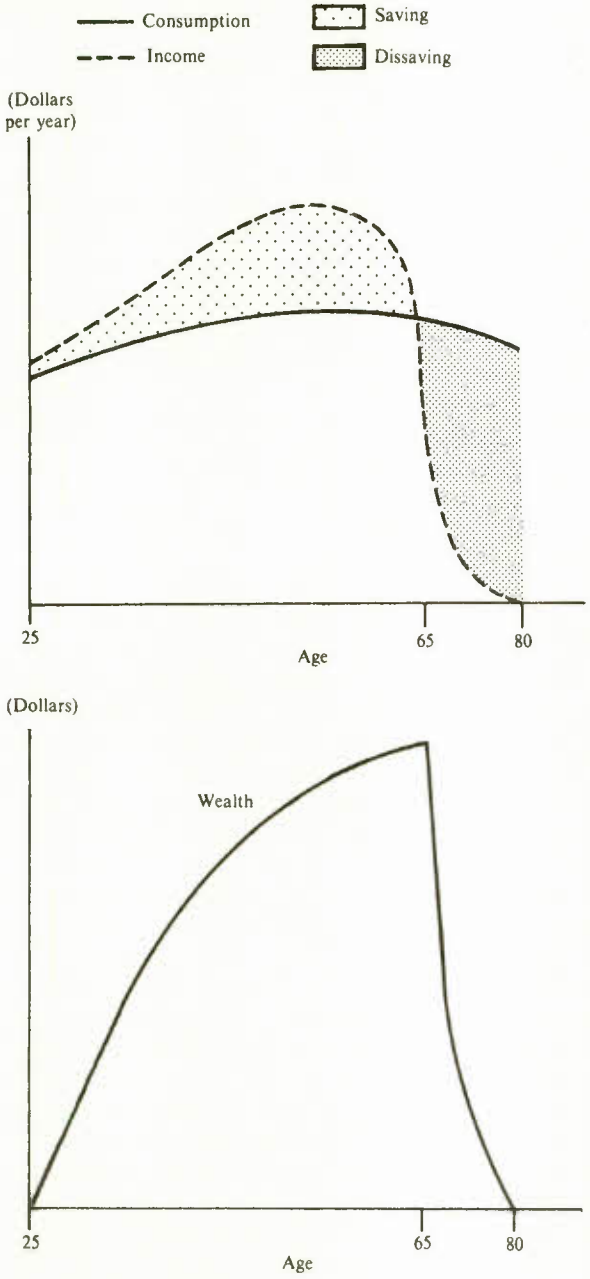
One of the principal motives for saving is to provide income for retirement. At the beginning of their working years, most people receive relatively low incomes and save very little. With age and experience, their earnings rise and so, too, does their saving. After they retire, they draw upon savings to support their consumption. As a result, savings smooth out consumption over a lifetime (Chart 5-1). Economists generally regard this behaviour as conforming to the life-cycle savings hypothesis. Individuals may also voluntarily transfer some of their assets to other generations — for example, to their children as bequests or to their own parents to enable them to live comfortably in their later years.

Pension plans, especially public plans, introduce some additional considerations. First, they might simply be regarded as a way of taxing the current work force to support the present group of older people. The elderly consume a higher proportion of their income than the work force in general. Thus the transfer causes a decline in total personal saving. In fact, however, the effect does not appear to be very large. Not only is the number of workers much larger, but many members of the work force — people with young familites or low incomes— would be unable to save much anyway in the absence of the compulsory plans.

If plan members take a longer view, however, the implications could be much more far-reaching. To illustrate, consider what effects the introduction of a fully funded or a pay-as-you-go (less than fully funded) universal pension plan could have on an individual's wealth and asset portfolio.

The introduction of a fully funded universal pension plan would not immediately affect personal

CHART 5-1
LIFE-CYCLE PATTERN OF INCOME, CONSUMPTION, SAVING, AND WEALTH



wealth, since individuals would expect to pay completely for their own pensions by the time of retirement. Over time, however, the pension plan may cause them to save more than otherwise, for two reasons. First, since public pension credits are illiquid — that is, they cannot be "cashed in" before retirement — these individuals might not fully reduce other forms of saving by the amount of pension saving. Second, the compulsory nature of the plan might force them to contribute more to pension saving than otherwise.

The introduction of a pay-as-you-go or partly funded universal pension plan could, in contrast, have an immediate effect on personal wealth. Most people in the work force at the time could expect to receive pension benefits in excess of what they could have bought with their contributions. In other words, their wealth would be increased by the plan (see Chapter 4). This increased wealth might encourage more consumption and less saving, and perhaps earlier retirement and greater bequests to heirs. Over time, as the plan matured and contribution rates rose, this effect would become less important, because new entrants into the labour force could expect approximately to pay for their own pensions. Since, initially, the pay-as-you-go rate would be less than the fully funded rate, forced saving would also be less initially under the former system.

The availability of pension benefits could induce people to retire earlier. With the possibility of a shorter working life and a longer retirement period, they might even save more during their working years. As a result, this induced-retirement effect could cause personal saving to rise. Similarly, people who decide to work more prior to retirement, perhaps to gain overtime pay, could also save more, and personal saving would rise because of this labour-supply effect.

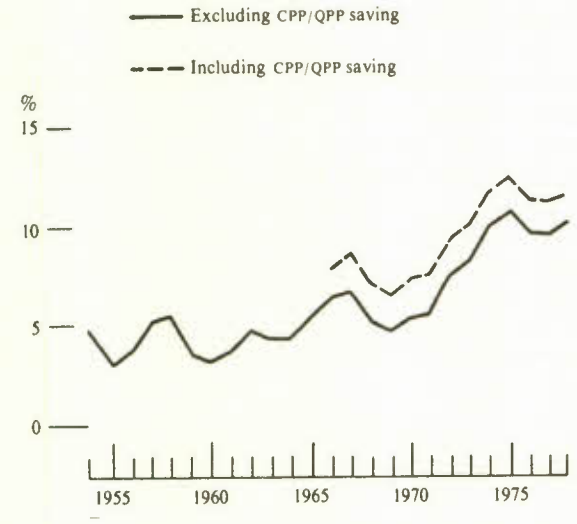
Instead of altering their present consumption (or saving) behaviour because of the anticipation of future public pension income, some might instead maintain the present level of saving in order to provide more for their children by way of their estate. Or, if they perceived their parents to be better off because they receive their own public pensions, the children's contribution to their parents' upkeep might be reduced — in effect, increasing their own disposable income — and they would save more from that higher income. These voluntary transfer effects could reduce, or even fully offset, the direct substitution of pension credits for other types of personal saving.

Economists have attempted to measure the importance of these effects on personal saving, but the results of their investigations have been somewhat contradictory. For a while, research in both Canada and the United States seemed to indicate that universal pensions had substantially reduced personal saving. Now more refined work in both countries suggests that either there has been no effect on saving or the effect has been very small.[1]

The real problem is that the data available for this type of analysis are very inadequate. In Canada they consist of only highly aggregative time series. The analysis would be greatly facilitated if data on the saving behaviour of individuals over time were available. In any event, great care should be taken not to apply U.S. results to Canada in wholesale fashion, since the public retirement income systems in the two countries differ substantially, as do many provisions in the income tax legislation that have a bearing on savings.

After the introduction of the Canada and Quebec Pension Plans in 1966, personal saving as a percentage of disposable income fell at first, but then it rose to earlier levels and beyond (Chart 5-2). The drop resulted largely from a decline in contributions to private pension funds, presumably reflecting the integration of these funds with the two public plans, and from the fact that in the National Accounts public pension saving is treated as government, rather than personal, saving. Saving through private pension plans began to increase again in the late 1960s, and other forms of personal saving have risen rapidly. This latter increase reflects in large part an inflation-induced rise in discretionary saving.[2]

CHART 5-2
PERSONAL SAVING AS A PROPORTION OF PERSONAL DISPOSABLE INCOME, CANADA, 1954-78



Personal saving may be affected by a number of factors other than pension benefits, and their influence could be offsetting. The difficulty lies in attempting to isolate the effects of particular factors. Yet, for policy purposes, that is what is needed. Several studies by the federal government have been unable to determine whether contributions to the CPP and QPP have had any significant influence on personal saving. They did indicate, however, that from the mid-1960s to the early or mid-1970s, personal contractual saving — through insurance and private pension plans, for example — was reduced by about 40 cents for each dollar of contributions to the CPP and QPP. Much of this could be explained by the integration of private with public pension plans in the early years of the public system.

The Ontario Treasury Department has carried out considerably more detailed analysis relating personal saving to various measures of the benefit structure of Canada's public pension system.[3] The results for 1976 range from an estimated 14 per cent reduction in personal saving (using coverage and total benefits paid under OAS, GIS, CPP and QPP — an indirect measure of pension plan wealth) to a decline of only 1.8 per cent (based on maximum, rather than actual, benefits).

Another study conducted at the University of British Columbia on the basis of the methodology used in the United States relates direct, rather than indirect, measures of OAS, CPP, and QPP wealth to personal saving.[4] It finds no statistically significant effects. The authors suggest, however, that the effect of substituting pension saving for other forms of personal saving has probably been offset by the retirement effect, the presence of tax incentives for saving (such as RRSPs), increased personal saving rates attributable to higher levels of personal income, and perhaps private intergenerational transfers. They also suggest that the results may reflect the fact that the CPP and QPP are not yet mature and that households have not fully adjusted their saving behaviour to allow for the benefits promised by these plans.

The results of the Council's own work also confirm the suggestion that public retirement income plans have had relatively little effect on total personal saving, at least in part because the various influences mentioned earlier offset one another.[5] Individuals make decisions not only about the amount of their saving but also about how it is to be allocated among a variety of real assets — a house, for example — and financial assets. The Council's study examines the effect of private and public retirement plans (including OAS) on both decisions, as well as on the amount of labour supplied by individuals — a factor that in turn has implications for personal saving. By examining a wider range of factors that might affect saving — including demographic changes, inflation, unemployment, portfolio risk, interest rates, and the holdings of other forms of wealth by households — the study attempts to isolate more precisely the effects of retirement

income plans. Like the University of British Columbia study, it relates direct measures of public pension-plan wealth to personal saving.

The increase in wealth from the introduction of the CPP and QPP appears to have had no significant impact on personal saving, although there is some suggestion that the promise of OAS benefits reduced such saving slightly during the 1953-75 period.[6] Moreover, the availability of public and private pensions together resulted in earlier retirement for a number of individuals, causing an additional reduction in personal saving. The overall reduction in personal saving that has resulted from these factors is within the range estimated by the Ontario Treasury and the federal Treasury Board studies.

The Council study also points to some offsetting impacts. Occupational pension plans seem to have increased personal saving per capita — a result in accord with recent results for the United States.[7] In addition, the aging of the work force has increased the number of net savers in the economy, causing real personal saving per capita to rise. Finally, pensions and earlier retirement together appear to have resulted in some increase in man-hours worked prior to retirement; the consequent increase in labour income would also cause personal savings to rise.

In total, then, the effect of public and private programs together has been a small decline in the level of real personal saving per capita. If personal saving is expressed as a percentage of personal disposable income, this amounted in 1975 to a reduction of about half a percentage point ($600 million).

The results also seem to suggest that there is no great danger of a downward trend in personal saving for some time in the future. The effects of two of the factors that appear to reduce personal saving — the promise of OAS benefits and the impact of earlier retirement — are expected to decline or stabilize in the future. The further aging of the work force and any further growth in occupational pensions should, if anything, lead to increased personal savings for at least several decades.

The Impact on Total Saving

Even if personal saving were reduced by the public pension schemes, total domestic saving would not necessarily decline. Its behaviour and that of rates of return on Canadian investments would depend upon how the schemes were funded and how governments used the funds in partly or fully funded schemes. What would happen to gross saving would, in turn, depend upon how nonresidents reacted to changes in Canadian rates of return.

Domestic Saving — A pay-as-you-go plan is just a promise to pay present contributors when they reach a specific age. It does not include the build-up of a fund, because contributions are simply consumed by present beneficiaries. Under these circumstances, should personal saving suffer a decline because of the introduction of public pension plans, total domestic saving would also be reduced, and interest rates in Canada would rise.

The Canada and Quebec Pension Plans have, however, been partly funded since their inception in 1966.[8] Contributions have exceeded current benefits, and a fund upon which the provinces can draw for their own purposes has accumulated. In Canada's national accounting system, that fund is a part of the government sector; thus the impact of the public plans on total domestic saving will vary, depending on how this fund is used by government.

Various possibilities are presented in Table 5-2.[9] Under Options 1.1, 1.2A, and 1.2B, for example, we assume that public pension contributions are treated as perfect substitutes for personal saving, so that the latter will decline by the full amount of those contributions. If the surplus of contributions available to government has no effect on its spending, either current or capital — if it is used to retire debt, for example — there would be no change in total domestic saving or in the general level of Canadian interest rates.

If, instead, government uses the surplus to increase its spending on current goods and services (Option 1.2A), government consumption will rise, government saving will not change, total saving will fall, the level of domestic interest rates will rise, and private investment will fall. Again, if the funds are used for investment in such things as hospitals, schools, or roads (Option 1.2B), personal saving will decline, but now government saving will rise, and total saving will remain unchanged. With government investment up, however, the level of domestic interest rates will still increase, and private investment will decline, unless there is some slack in the economy.

In both of the latter cases, private investment will be "crowded out" — in the former, by increased government consumption; in the latter, by increased government investment. In fact, these options describe two of the most common worries about public pension schemes: that the funds generated

TABLE 5-2

THE IMPLICATIONS OF ALTERNATIVE ASSUMPTIONS FOR THE LEVEL OF AGGREGATE SAVING, UNDER A PARTLY OR FULLY FUNDED GOVERNMENT PENSION PLAN, ASSUMING NO INTERNATIONAL CAPITAL FLOWS[1]

		Government-sector options		
		Option 1	Option 2	
			Government spending increases by amount of contributions	
			A	B
		No effect on government spending	Current goods and services	Government capital formation
	Personal Sector Options			
Option 1:	Public pension contributions of $100 million treated as perfect substitute for personal saving	Personal saving −100 Government saving +100 Total domestic saving – no change Domestic interest level – no change Private investment – no change in level; possible changes in composition.	Personal saving −100 Government saving – no change Total domestic saving −100 Domestic interest level ↑ Private investment ↓ Government consumption ↑	Personal saving −100 Government saving +100 Total domestic saving – no change Domestic interest level ↑ Private investment ↓ Government investment ↑
Option 2:	Public pension contributions of $100 million not treated as a substitute for personal saving	Personal saving – no change Government saving +100 Total domestic saving +100 Domestic interest rate level ↓ Private investment ↑ Government investment – no change Private consumption ↓	Personal saving – no change. Government saving – no change Total domestic saving – no change. Domestic interest rate level – no change. Private investment – no change Government investment – no change. Government consumption ↓ Private consumption ↑	Personal saving – no change Government saving +100 Total domestic saving +100 Domestic interest level – no change Private investment – no change Government investment ↓ Private consumption ↑

will be either "wasted" on government consumption (although that may include investment in human capital through expenditures on health or education) or at least diverted into public investment — and thus perhaps into less productive uses than in the private sector.

Foreign Saving — Given the open nature of Canada's economy, the conclusions in the scenarios above — where total domestic saving declines and/or Canadian rates of return rise — would likely be modified to some extent, since an increase in the level of domestic interest rates would tend to attract foreign funds. The sensitivity of international capital flows to interest rates would determine in what way the composition of aggregate investment would change. With higher domestic interest rates, foreign funds would flow into Canada, and both the rise in domestic interest rates and the decline in private investment would be less than otherwise. If capital were perfectly mobile, there would be no decline in private investment and no increase in the domestic interest rate. There would, however, be an increase in the ownership of Canadian assets — and possibly in the control of Canadian industry — by foreigners.

The Evidence — So much for the possibilities. Is there anything to indicate which response is most likely? There is some evidence that government spending has increased as a result of the pension plans. Work done for the Council indicates that the less wealthy provinces, particularly in the Atlantic region, have expanded their outlays as a result of the availability of funds from the Canada Pension Plan (available data do not permit a distinction between current and capital expenditures at the provincial level).[10] This source of funds has enabled

them to have higher per capita borrowings than other provinces and, indeed, to increase their overall debt more than would have been possible had they attempted to borrow all of the funds from private lenders. We could find no evidence that government expenditures have increased in the wealthier provinces or that taxation revenues have decreased as a result of the flow of pension funds, except in one small respect.[11] The funds of the CPP are borrowed by the provinces at rates somewhat below market rates. This, in effect, constitutes a subsidy, estimated to have been about $150 million in 1977-78. If the provinces had had to pay this additional interest, they would have had to either increase revenues or cut expenditures correspondingly in order to maintain savings.

As far as foreign capital flows are concerned, the evidence, though somewhat dated, suggests that portfolio investment and trade in outstanding securities — which, together, can be very large — are very sensitive to the interest rate differentials between Canada and its major trading partners, particularly the United States.[12] This would indicate that, over a long period of time, capital is very nearly perfectly mobile on the international markets. On the other hand, direct investment, which involves control by foreigners over physical assets in Canada, was affected more by other factors, such as profit prospects, that are often specific to each industry.

SAVINGS: NEEDS AND SHORTAGES

The best available evidence does not support the contention that Canada's existing public retirement income system has caused a major reduction in personal saving or in total domestic saving, or that it is necessary, on these grounds at least, to shift the Canada and Quebec Pension Plans towards a more fully funded status. Admittedly, however, the evidence is somewhat conflicting, and it is based on inadequate data. In Canada's case it is also based on analysis of income-replacement plans that face substantial increases in contribution rates as they mature.

For these reasons alone, it would seem only prudent to keep the impact of the plans on saving under continual surveillance and to improve the quality of the data required for analysis. It should be pointed out, however, that worry about this problem goes far beyond consideration of data limitations and statistical analysis. It is tied in with a broader concern about the possibility that, in the years ahead, Canada's savings could fall well short of its needs.

This concern is not new, but its focus has changed over the years. In the last four or five decades, the main preoccupation has often been about "oversaving" — saving to the extent that depression or economic stagnation could occur. Indeed, as recently as the 1960s, fear was expressed in the United States that pension funds were generating too much saving and that depression might occur unless strong compensatory actions were taken by government. Today the concern in the United States is that their social security system, as well as the tax treatment of savings, has unduly depressed the personal saving rate. Even in Canada, which has at present a much higher personal saving rate as the result of higher interest rates and tax exemptions on certain forms of saving, many proposals for modifying the retirement income system are based on the premise that we are facing shortages of savings or capital.

The "shortage" suggestions are frequently linked with projections of investment requirements. Canada will face very large investment requirements in the coming decade, especially for energy development and for the modernization and rationalization of its industry. Some feel, too, that the slower growth in the labour force will, in the longer run, have to be compensated by increased capital. In this respect, it must be pointed out, however, that investment in new capital may represent capital-widening (supplying an increasing number of workers with the same amount of capital per worker) or capital-deepening (increasing capital per worker). With slower growth in the labour force, the need for capital-widening will be less; in fact, capital per worker could be increased even if the saving rate were lower than at present.

Regardless of the level of projected saving needs, however, there is a flaw in the "savings shortage" argument. It is quite possible that the expected supply of savings may be exceeded by the expected demand for investment funds. This means, in effect, that the supply will be less than the demand at a particular price (rate of interest) for savings. If the market for investment funds is free, that price will rise, bringing supply and demand into balance. If this does not happen, it must be concluded that there is some imperfection in the market — a possibility that cannot be ruled out. In that case, the answer to a prospective capital shortage may lie in removing the imperfections. For example, there is said to be a shortage of "venture capital" in Canada — funds for new, perhaps high-risk, operations. It would be more accurate, however, to say that at the current high prices for such funds, investors simply cannot undertake all the projects they have in mind. By improving information about

such projects and pooling risks, it might be possible to bring down the price of such funds and to get a better allocation of total savings.

A shortage of savings may, however, be defined in relation to some goal that lies outside the operation of a reasonably free capital market. First, if domestic savings are insufficient to meet the demand for capital at going interest rates, foreign funds may flow in to fill the gap. This would result in increased foreign ownership and perhaps control of Canadian assets. In effect, the shortage is defined in terms of the undesirability of a particular source of savings. There is some evidence that in recent years private borrowers have resorted more than previously to foreign capital markets.[13] As for the medium-term future, the only evidence available at present is in the form of simulations to the year 2000, obtained with the CANDIDE model.[14] When the domestic saving rate is held at roughly the present level and allowance is made for energy requirements, the simulations show that dependence on the use of foreign savings will decline slightly after the mid-1980s. Since Canada is already heavily in debt to foreigners, however, and because that debt also contributes to pressure on the country's balance of international payments, few Canadians would look with favour upon policies that might reduce domestic saving and increase that debt. Whether the retirement income system is the appropriate vehicle for reducing that debt is a question to which we shall return shortly.

There is another position on savings or capital shortages that seems, on more thorough examination, to be less convincing. Some feel that the rate of capital accumulation is too low to support the higher rate of economic growth that, in their view, is appropriate. Others think that the returns on additional saving would be very high. Actually there appears to have been a slight downward trend in the real rate of return, in Canadian industries, in recent years.[15] In either case, however, the suggestion is that present consumption be sacrificed in favour of future benefits. Ultimately, resolution of such arguments will depend upon political and social choices, not upon economic calculations. Yet, in making such choices, great care should be taken not to overemphasize the role of saving and capital formation or to underestimate the influence of other factors in the process of economic growth.

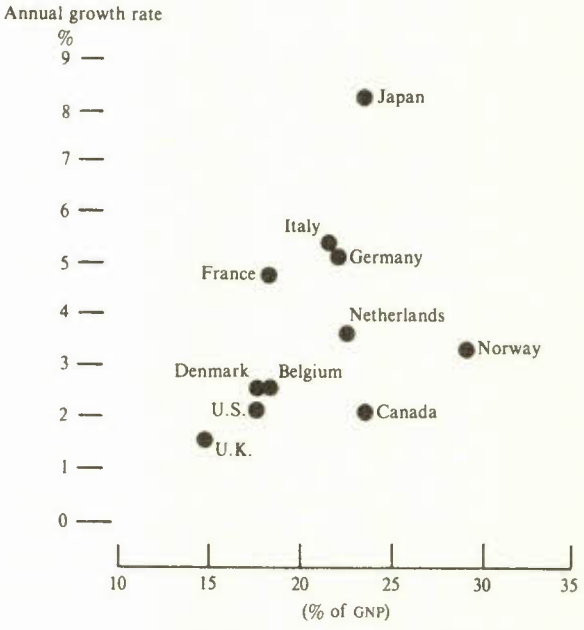
Saving, Capital Formation, and Economic Growth

Economic growth, as noted earlier, derives from increases in the quantity and quality of labour and capital inputs, as well as in their productivity — the efficiency with which these factors of production are combined. Although saving provides the basis for capital inputs, the relationship between saving, capital formation, and growth is rather tenuous.[16]

The fact that savings are available does not guarantee that investment will take place. The reasons behind the two types of decisions — to save and to invest — are often likely to be quite different. Indeed, if savers decided to put aside a great deal of money and to restrain their consumption, they might reduce the demand for goods to such an extent that businessmen would choose not to invest. National income would then decline and, with lower incomes, people would end up saving less than they had planned. What might appear like a shortage of savings would in reality reflect a lack of sufficiently profitable investment opportunities. In brief, saving is a necessary but insufficient condition for investment.

What is the relationship between capital formation and growth? Actually it varies widely among countries, and Canada is among those with high investment and low growth in output per worker (Chart 5-3). In fact, to produce a given volume of output in manufacturing, this country uses more capital and more labour than does its major trading partner, the United States. The amount of equip-

CHART 5-3
GROWTH OF REAL OUTPUT PER WORKER AND PROPORTION OF GNP INVESTED, SELECTED COUNTRIES, 1950-62



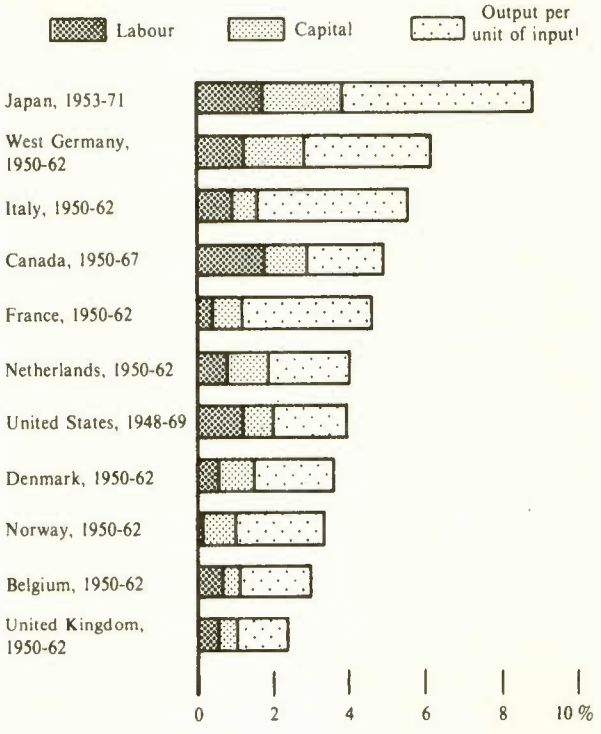
ment per person employed is roughly comparable to the U.S. figure, but Canadian investments in buildings are higher, reflecting in part the more severe Canadian climate. While the gap in output per worker between Canada and the United States has narrowed over the past 20 years, it still persists. This is due much more to factors such as Canada's smaller market area and shorter production runs, and to a tendency for innovations to be incorporated more slowly in Canada than in the United States, than to a lack of capital per worker.[17]

The fact that capital formation has not been the dominant source of economic growth in the past, here or abroad, is suggested very strongly in an international comparison developed by Denison.[18] Economies of scale, advances in knowledge, improved resource allocation, and increased employment accounted for over 80 per cent of Canada's growth between 1950 and 1967; increases in business capital formation, although they were very large, contributed to less than 20 per cent (Chart 5-4). This implies that exceptionally large increases in capital formation would be required to significantly influence the rate of economic growth. The contribution of capital formation to economic growth was even less in other countries. During the periods covered by the chart, it accounted for only 16 per cent of the economy's growth in West Germany, 12 per cent in France and Japan, and 9 per cent in the United States.

In effect, Denison attributes differences in GNP growth rates between Canada and other countries only in small part to capital formation. Of the total difference of 3.86 percentage points between Canada and Japan, for example, only about one-fourth was attributable to that factor. For Canada and West Germany, the corresponding proportion was one-fifth. The differences in overall growth rates are explained far more cogently by differences in output per unit of input, which reflects the efficiency with which capital and labour are used in the production process.

Denison's work has been criticized on the grounds that his estimates of capital inputs do not allow sufficiently for differing quality aspects, including the length of service life. To the extent that this criticism is valid, his method underestimates the contribution of capital formation to growth and overestimates the contribution of factor productivity.[19] It remains true, however, that the process of economic growth is much more complex than most people realize. Capital is only one of the inputs into production. Simply expanding savings and the quantity of capital, without regard for the quality of that capital or the efficiency with which it is used, is not likely to contribute much to an increase in productivity and growth.

CHART 5-4
AVERAGE ANNUAL GROWTH IN REAL NATIONAL INCOME, BY MAJOR SOURCE, SELECTED COUNTRIES AND TIME PERIODS



Public Pension Plans and Increased Saving

Canadians have grounds for concern about the level of domestic saving, not so much because any shortfall with respect to investment requirements will stunt economic growth, but rather because it will tend to be offset by imports of capital. They should, of course, be equally concerned about the efficient use of the domestic savings that are generated. Another question remains to be answered, however. If a deliberate decision is taken to stimulate domestic saving, should it be implemented through increased funding of public pension plans?

To "fully fund" Canada's present public pension plans in the sense used for private plans would be unrealistic. It would imply setting contribution rates high enough to pay not only for all benefits promised from now on, but to build up a fund — over a few years — sufficient to pay also for all present liabilities. Such action would place an enormous burden on the present work force and create great problems for economic stabilization.

We are not talking here about extinguishing the present deficit but rather about the build-up of a fund at least large enough to finance benefits over the critical years of the coming century. Even in this limited sense, funding could be a very effective way to increase saving, provided that governments did not use the proceeds to increase their total borrowing, but it would still involve serious disadvantages. It would, of course, mean increased compulsion and less freedom of choice. Moreover, the required increase in the contribution rate would fall more heavily on those with lower earnings because it is a payroll tax. To ask this group for increased contributions to improve their pension benefits is one thing; to ask them to bear the brunt of programs designed to reduce foreign ownership of Canadian industry or to accelerate economic growth — a doubtful result in any event — is quite another. In brief, any decision to shift the Canada and Quebec Pension Plans towards a more highly funded basis should rest on other grounds. If an increase in savings is considered desirable for other reasons, it should be pursued by means that bear more equitably on the population, such as fiscal policy.

The greater the increase in the size of the reserve funds for the CPP and the QPP, the greater also the possibility of conflict with stabilization objectives. Care would have to be taken with the timing of changes in contribution rates. With less than full employment, greater funding would lead to increased government surpluses. Unless these were offset by compensatory fiscal or monetary policies — such as reductions in taxes or in interest rates — these measures could be self-defeating. They could lead to lower national income, less saving, and reduced capital formation. In addition, over the longer term, greater concentration of government bonds in the enlarged funds could make the pursuit of monetary policy more difficult.

CONCLUSION

The possibility that Canada's public retirement income programs could jeopardize the country's future economic prospects through an adverse impact on saving has been much discussed recently. In particular, it has provided the basis for the suggestions that the Canada and Quebec Pension Plans should be fully funded or, alternatively, that the present mix of public and private plans should be altered in favour of the latter.

Our findings indicate, however, that the impact of these plans on saving does not, in itself, provide a strong basis for policy change. The empirical evidence on the impact of public plans on saving tends to be somewhat contradictory, but the more refined studies generally tend to suggest that the plans have had little or no adverse impact. One cannot rule out the possibility that increased contribution rates, let alone increases in CPP and QPP benefits without matching changes in contributions, could put more downward pressure on personal saving, but, at least for some years to come, there will be pressure in the other direction also.

There are reasons, of course, why Canadians cannot look with equanimity on policies that might reduce domestic saving or why they might wish to increase that saving. These are often expressed in terms of a shortage of savings. It turns out that the idea of a shortage is based largely on value judgments about Canada's dependence on foreign saving or about the need to accelerate the country's economic growth.

For many years this country has, on balance, supplemented its own savings by drawing on those of other countries to finance an important part of its domestic investment. Such investment has brought many benefits, but it has also been reflected in deficits on the current account of the balance of international payments and in the increasing levels of foreign ownership and net international indebtedness. If these features are to be reversed, more of our domestic investment will have to be financed from our own savings. This will be particularly important in the coming decade or so, when there will be major requirements for capital formation. Over the long run, however, slower growth in population may also bring with it a reduction in some needs for capital.

Greater funding of public retirement income plans would certainly be an effective way to increase saving because it involves compulsion. It could, however, involve some stabilization problems and it would not necessarily be an efficient way to increase growth. The relationship between saving, capital formation, and economic growth is rather tenuous. Other approaches to stimulating growth could well have a greater pay-off without the necessity of substantial reductions in consumption. Nor would it seem fair to put the major burden of reducing Canada's international indebtedness or accelerating its economic growth on a payroll tax. Should greater savings be required for these objectives, they could be achieved by methods that bear more evenly on the population as a whole. In brief, the choice of the funding method for public pension plans should not be constrained by fear of the consequences for the growth and level of GNP, and it is doubtful whether it should be the primary method of reducing our foreign debt, important as that goal may be.

6 Where Do All the Savings Go?

However the retirement income system affects the levels of domestic and total saving, it is clear that a growing proportion of that saving has been channeled through pension funds since the early 1960s. Pension funds are already among the country's largest long-term investors, and they are destined to become even larger. The way in which they invest — that is, how they allocate the savings entrusted to them — is another important facet of the interface between the economy and income security policies for older people.

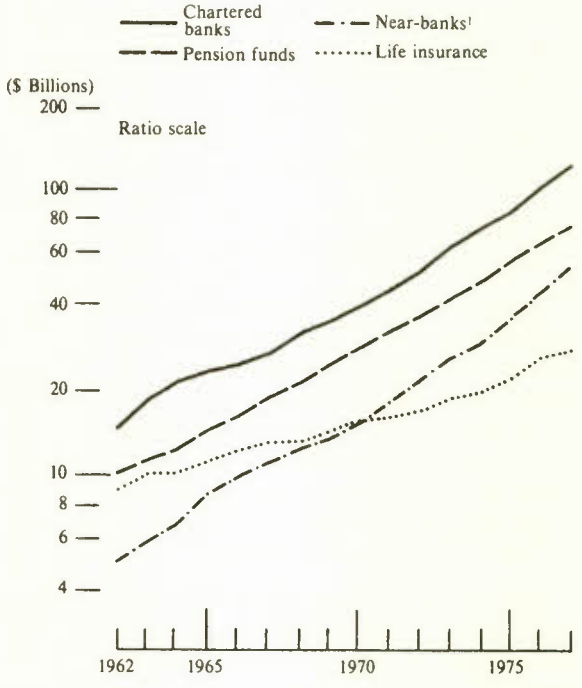
It is a facet, too, that has raised serious, sometimes conflicting, concerns in its own right. Economic growth and, in turn, the income security objectives could be jeopardized directly if pension saving is not allocated to its most productive uses, or indirectly if the operation of pension funds reduces the efficiency of the capital market. There is concern that pension savings will become more concentrated in the hands of a small number of institutional investors or government agencies, with implications both for capital market efficiency and the control of Canadian industry. Also, fears have been raised that pension fund investments are being diverted from the business to the government sector, thus forcing Canadian firms to look more to foreign sources of funds and increasing the risk of greater foreign ownership and control.

THE ALLOCATION OF PENSION FUND SAVING

Pension fund saving increased from less than 12 per cent of gross saving in the early 1960s to nearly 20 per cent in the mid-1970s (Table 5-1). Reflecting this flow, the assets of pension funds rose from the equivalent of one-fifth of GNP in the early 1960s to roughly one-third by 1977 (Chart 2-2). Of course, other forms of institutionalized saving also grew rapidly over this period. In fact, the growth of deposit-taking institutions, particularly near-banks such as trust and mortgage loan companies, credit unions, and caisses populaires, was even more rapid than that of pension funds, partly as a result of revisions to the Bank Act in 1967 (Chart 6-1). Some of the growth of near-banks, especially trust companies, may also have been due to their taking an increasing share of the expansion of RRSPs.

How pension savings and the total assets of pension funds will grow in the future will depend on a variety of factors, including population growth, pension plan coverage and benefit levels, and the extent of funding in the system. With the aging of the

CHART 6-1
BOOK VALUE OF TOTAL ASSETS, BY MAJOR FINANCIAL INTERMEDIARY CLASS, CANADA, 1962-77



population that is foreseen and the pressure to improve benefits, however, it seems very likely that pension funds will not only grow rather rapidly in the future but that they will grow more rapidly than other long-term saving institutions.

Assuming that the present system, including its public/private mix, continues, but with some increase in coverage of private-sector employees, our projections suggest that by the year 2031, trusteed pension plans alone could hold assets equal to two-thirds of GNP (Chart 6-2). By that time, consolidated revenue and insured plans could well hold assets amounting to the equivalent of one-fifth of GNP. Thus, even if the CPP and QPP were on a pay-as-you-go basis (without invested assets) during the critical period in the coming century, the total assets of pension funds could be equal to more than four-fifths of GNP. If the system were expanded in the future, this ratio could turn out to be much larger still. The proportion would be somewhat smaller in terms of capital stock, of course, assuming that the present ratio of capital to output were maintained, although that assumption is unlikely to be borne out in fact.

The prospect of such large flows of saving being channeled through pension funds raises several questions. Assuming that the present mix, particularly the public/private mix of pension funds, were to remain, would Canada's total savings be allocated somewhat differently in the future if a larger proportion were to flow through pension funds than through other savings institutions? How would changes in the mix of pension funds or in factors affecting their investment patterns alter the flow?

Definitive answers to these questions would require a very large economic model incorporating the investment portfolios of the major financial intermediaries in the economy and the factors causing changes in them. Although such a model is unavailable, it is possible to gain some idea of what might happen by examining the recent investment patterns of pension funds and other savings institutions.

The flow of funds in recent years provides some clue. If the share of pensions in gross saving is split by major uses, we find that since 1966 some 60 per cent has gone into the government sector (Chart 6-3). Indeed, in very recent years, pension saving has been the equivalent of about three-quarters of government-sector capital formation. A large proportion of that flow was channeled through the various government consolidated-revenue pension plans and the newly established CPP (Chart 6-4). By contrast, except for the 1975-77 period, three-quarters or more of trusteed and insured pension plan funds went into the private sector of the economy (Chart 6-5). Indeed, between 1961 and 1977 those plans accounted for 30 per cent of the total increase in corporate bonds held by Canadian financial institutions and for 45 per cent of the increase in stocks. For more detailed analysis of investment patterns, however, we shall have to look at changes in total assets rather than at flows of funds.

CHART 6-2
ESTIMATED BOOK VALUE OF ASSETS OF TRUSTEED PENSION PLANS AS A PROPORTION OF GNP, UNDER VARIOUS DEMOGRAPHIC GROWTH ASSUMPTIONS, CANADA, 1981 TO 2051[1]

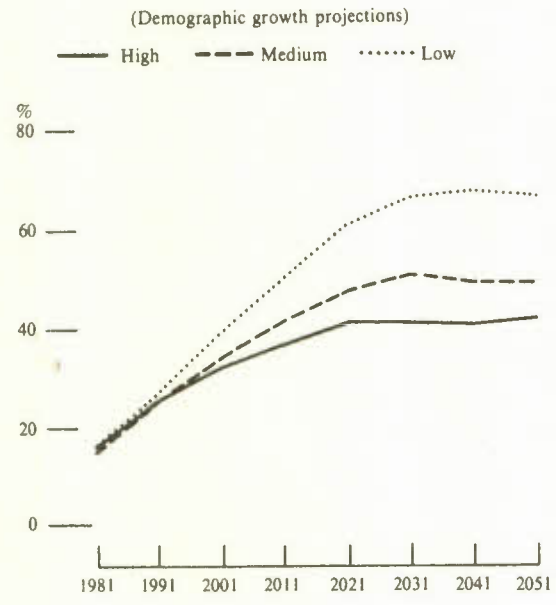


CHART 6-3
FLOW OF PENSION SAVING INTO THE PUBLIC AND PRIVATE SECTORS AS A PROPORTION OF GROSS SAVING, CANADA, 1963-77

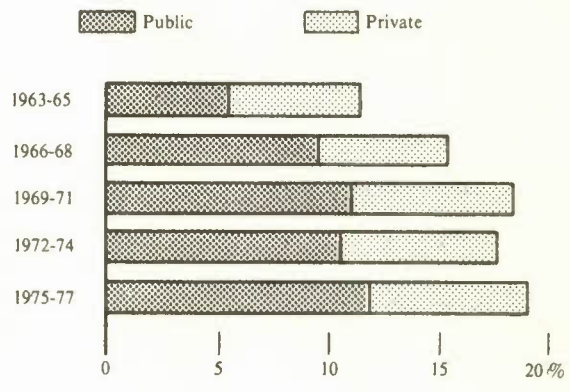


CHART 6-4
FLOW OF PENSION SAVING INTO THE PUBLIC SECTOR AS A PROPORTION OF GROSS SAVING, BY TYPE OF PENSION PLAN, CANADA, 1963-77

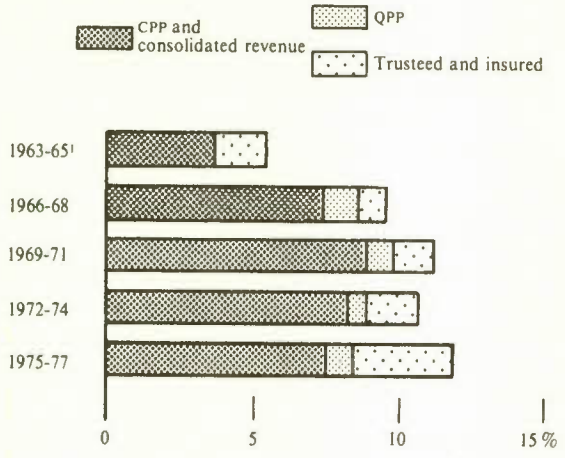
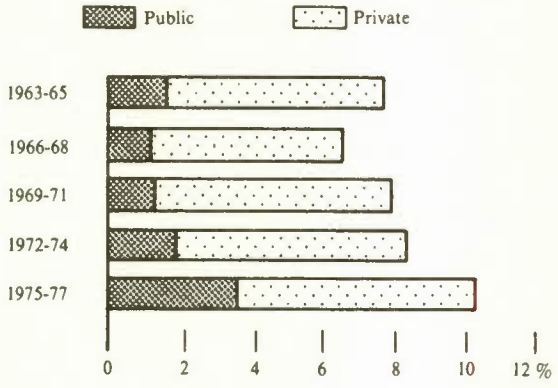


CHART 6-5
FLOW OF TRUSTEED AND INSURED PENSION SAVING INTO THE PUBLIC AND PRIVATE SECTORS AS A PROPORTION OF GROSS SAVING, CANADA, 1963-77



The Regulation of Pension Fund Investment

For policy purposes, of course, we need to know not only the investment pattern of pension funds but also the factors that affect that pattern (Table 6-1). The funds accumulated in the CPP must be invested in provincial bonds, but the provinces are free to use the proceeds as they see fit. In fact, both these funds and those accruing from the government consolidated-revenue plans are used for the general purposes of the government concerned. In contrast, QPP funds are, like private funds, invested through the capital market.

In most provinces, investments by trusteed pension plans — the majority of occupational plans — are governed by legislation that is modeled in large part on the Ontario Pension Benefits Act. The Canada Pension Benefits Standards Act, which is similar, applies to the Territories and to those industries that fall under federal jurisdiction. Investment restrictions bearing on both the quality and the quantity of eligible securities are much the same as those that apply to insurance companies under federal and provincial legislation. For example, preferred or common shares are eligible for purchase by a pension fund only if they have paid a dividend during each of the preceding five years or have had earnings available for the payment of such dividends. In either case, such earnings or dividends must not be lower than a specified rate. In the case of common shares, the specified rate must be at least 4 per cent of the average value at which the shares were carried in the capital-stock account of the issuing corporation. Moreover, a pension fund may not invest in more than 30 per cent of the common shares of any one corporation, and no more than 10 per cent of the book value of its assets may be loaned to, or invested in the securities of, any one corporation, partnership, or person.

The major difference between pension and insurance legislation is that there is no limitation on the *total* amount that a pension fund may invest in eligible common shares or in real estate or leaseholds for the production of income. Some types of investment are specifically disallowed on conflict-of-interest grounds. The federal pension benefits legislation and that of some of the provinces also contain a "basket" clause that allows up to 7 per cent of a fund to be invested in assets that, while not specifically disallowed, do not meet the quality tests.

Although it is difficult to determine the extent to which the general legislation governing the trusteed plans and the Caisse de dépôt reduces the potential earning power of their portfolios, it would appear that their investments are much the same as those any prudent portfolio manager would consider sound under normal circumstances. Except for the fact that pension fund managers have to deal with legislation and regulation from a variety of sources — a problem that might be alleviated by greater standardization of existing legislation — general pension legislation does not seem to be a serious constraint.[1]

The federal Income Tax Act also contains provisions that relate to pension fund investment. Pension plans are not normally taxed on the income from their investments, nor are they eligible for the tax

TABLE 6-1
THE REGULATORS OF PENSION INVESTMENT

	Type of pension plan				
	Universal		Occupational		Personal
	CPP	QPP	Consolidated revenue plans	Trusteed and insured plans	RRSP
Membership	All employed workers outside Quebec, plus Armed Forces and RCMP in Quebec, with income above minimum.	All employed workers in Quebec with income above minimum.	Some government employees only.	Some government and some private-sector employees.	Available to all employment income earners with occupational plan contributions below maximum.
Regulators of investment					
Legislation	CPP Act: Surplus funds loaned to provinces in proportion to contributions collected. Interest rate equal to average rate on Government of Canada bonds of similar maturity.	QPP Act: Surplus funds deposited with Caisse de dépôt et placement du Québec; investment restricted to assets eligible under Canadian and British Insurance Companies' Act and Quebec Life Insurance Act.	Usually specific act of sponsoring government; all surplus funds deposited with, and become liability of, sponsoring government.	Federal and Provincial Employee Benefit Standards Acts and Provincial Trustee Acts: Investments restricted to assets specified in various acts. Restrictions similar to restrictions of Canadian and British Insurance Companies' Act.	Income Tax Act and Provincial Trustee Acts: Limit on foreign assets.
Taxation of fund income	No effect.	May bias investment away from equities.	No effect.	May bias investment away from equities.	May bias investment away from equities.
Characteristics of plan and sponsor	No effect.	Large size of fund may make adjustment of portfolio difficult and may bias investment in favour of Government bonds.	No effect.	Liquidity needs and willingness of sponsor to bear risk will affect investment.	Not applicable.
Market conditions	No effect.	Supply of assets, prospective return, and risk will affect investment.	No effect.	Supply of assets, prospective return, and risk will affect investment.	Supply of assets, prospective return, and risk will affect investment.

credit that is available to individuals receiving dividends from Canadian corporations. Thus, while the rate of return on both bonds and stocks is higher for pension funds than for most individuals, it is relatively higher on bonds. In that sense, stocks may be less attractive to pension funds than to individuals.

Canadian pension funds are also discouraged from investing in foreign securities by both domestic and U.S. legislation. Under Canada's Income Tax Act, pension funds enjoy a tax-exempt status only if no more than 10 per cent of their holdings at the end of any month are in the form of foreign assets. When this limit is exceeded, a tax equivalent to 1 per cent of the excess is applicable for that month. This means that, in practice, the foreign assets of a Canadian pension fund are effectively limited to 10 per cent of its total holdings. Moreover, at present, Canadian pension fund investments in the United States are subject to a withholding tax in that country, while U.S. pension funds investing in Canadian securities are not subject to a withholding tax in this country.

Contributions to registered retirement savings plans (RRSPs) are deductible for tax purposes up to

a specified maximum, and any income earned by the plans themselves is tax-exempt. Of course, any amount received from an RRSP is considered as regular income and taxed at the full marginal rate. There are no special tax concessions for realized capital gains, nor is there any dividend tax credit. Thus relative to individuals investing outside these plans, RRSPs have the same bias towards fixed-income securities as trusteed pension funds.

By and large, it seems that market conditions and self-regulation — particularly conditions laid down by plan sponsors — have more impact on the pattern of investment by trusteed plans than legislation or government regulation. Pension fund managers need to match the maturity structure of their asset portfolio with that of future liabilities. Future liabilities and cash flows will be determined by many factors: the characteristics of the plan itself, such as the benefit formula, the contribution rates, and the actuarial valuation method; the kind of business that the sponsoring firm is engaged in and its prospects for expansion; and, finally, the age profile and expected turnover rate of its work force.

Given the overall characteristics of the plan, market considerations of risk, return, and liquidity will be important investment criteria. For example, pension fund managers feel that, at a time when stock market performance is poor overall, the "prudent man" rule would generally advise against purchasing anything less than high-quality stocks. Also, only the better-quality stocks trade regularly and in sufficient quantity to provide the good supply and turnover potential necessary to make them attractive to institutional investors.

A further important consideration is the size of a given fund in relation to the financial market as a whole. Large funds tend to have difficulty in readily adjusting their portfolios to changing market conditions, since their purchase or sales may substantially affect the price of a particular security. The significance of this problem is underlined by the fact that some 49 funds held about two-thirds (almost $18 billion in 1977) of all trusteed pension fund assets. Existing constraints on investment in foreign securities exacerbate the situation by limiting access to international financial markets, and they will become more severe in the future as the share of pension plans in Canada's total financial assets increases.

Such considerations obviously call for a good deal of personal judgment on the part of fund managers. But that judgment may also be tempered by the sponsor's requirements. Despite the fund manager's fiduciary responsibility to future pensioners, his accountability is usually solely to the plan sponsor, reflecting the fact that it is the sponsor who must make up any experience deficiencies. (In this respect, it should be noted, however, that in Canada an employer can terminate a plan at any time and, in contrast with the situation in the United States, he is not legally liable for any unfunded liability that then exists.) And although any surplus may be used to reduce employer contributions, they are often seen by plan membership as an opportunity to increase benefits. This feature can bias investment against high-risk assets that could either engender significant deficits or provide the kind of high returns that motivate employees to ask for higher benefits. In addition, some sponsors may give explicit instructions to fund managers to avoid certain types of investments — for example, on social or moral grounds.

The Pattern of Investment

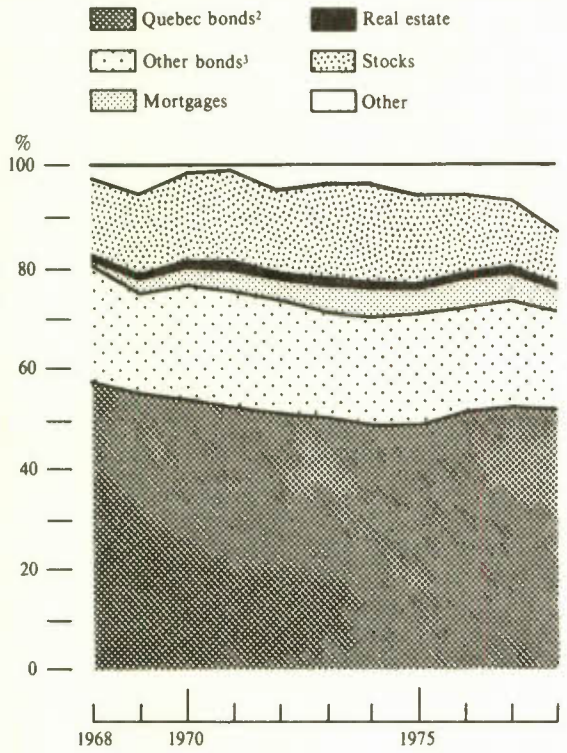
In 1977, trusteed and insured pension plans held 51.6 per cent of the total assets of Canadian pension funds. Together, the Canada Pension Plan and the various government consolidated-revenue pension plans accounted for 42.1 per cent of the total, and the Quebec Pension Plan for a further 6.3 per cent. The CPP funds are, of course, invested almost entirely in provincial bonds, while consolidated-revenue plans are backed by the contingent liabilities of their respective governments.

By contrast, the surplus funds of the QPP are recycled in the private market through the Caisse de dépôt et placement du Québec. In 1977, QPP assets accounted for about 95 per cent of the Caisse's general fund assets. The Caisse also invests on behalf of several other pension plans — for example, the Quebec construction union plan — which are segregated from its general fund.

More than half of the Caisse's general fund has been invested in Quebec government bonds and three-quarters in bonds of all types (Chart 6-6). Roughly 10 per cent of total general-fund assets have been invested in corporate stock, and almost all of them were of corporations listed on the stock exchange. The expense and difficulty of investing in new or small firms (most of which are not listed on the exchange) have prevented the Caisse from making any large amounts of funds available to them. It should be noted, however, that the rate of return on the Caisse's investments has generally exceeded that of the CPP — by about one-half of 1 per cent in the 1970-77 period — although this is

due in part to the fact that Province of Quebec bonds generally have a higher rate of interest than federal bonds, which provide the basis for the rates of return on CPP funds.

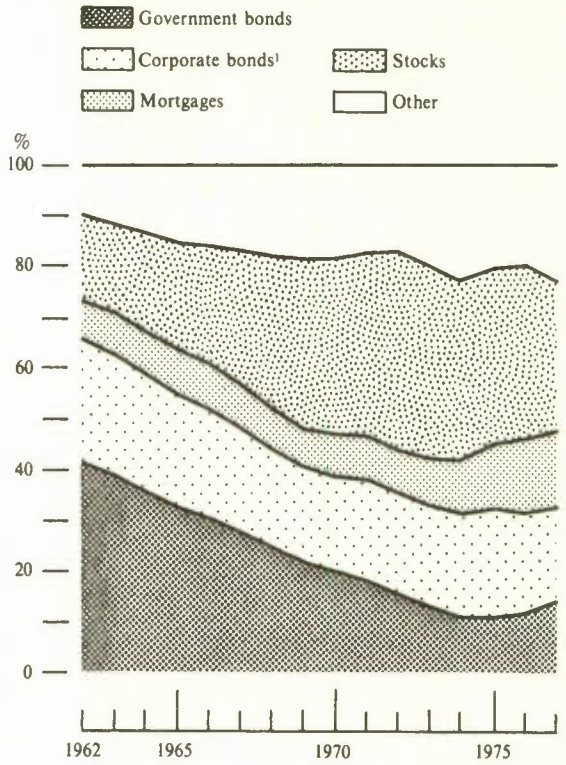
CHART 6-6
DISTRIBUTION OF THE BOOK VALUE OF ASSETS OF THE GENERAL FUND OF THE CAISSE DE DÉPÔT ET PLACEMENT DU QUÉBEC, BY MAJOR ASSET CATEGORY, 1968-78[1]



The proportion of the total assets of private-sector trusteed pension plans (which account for 50.5 per cent of the assets of all trusteed plans) held in stocks rose steadily from the early 1960s to the mid-1970s, although it declined from 1975 to 1977 (Chart 6-7). The proportion held in bonds, especially government bonds, was almost halved from 1962 to 1977. Nevertheless, in 1977 some 50 per cent of the total remained in fixed-interest securities (bonds and mortgages) and about 30 per cent in stocks. Foreign securities (mainly stocks and bonds) have remained well below 10 per cent of total holdings.

Although we have not investigated individual portfolios, there are also strong indications that trusteed pension plans tend to concentrate their equity investments in low-risk securities — particularly blue-chip issues — to a greater extent than do individuals. This would be in line with the "prudent man" approach. The various quality tests that stocks must satisfy in accordance with federal and provincial legislation would also militate against consideration of "lower-quality" stocks.

CHART 6-7
DISTRIBUTION OF THE BOOK VALUE OF ASSETS OF PRIVATE-SECTOR TRUSTEED PENSION PLANS, BY MAJOR ASSET CATEGORY, CANADA, 1962-77



The behaviour of public-sector trusteed plans differs considerably, however, from that of private-sector plans. Although public-sector trusteed plans as a whole also reduced the proportion of bonds in their total holdings between 1962 and 1977, the share remaining in bonds in 1977 was still about twice that of private-sector plans. In contrast, the share of stocks in their portfolios, although larger than in earlier years, was still only half that of private-sector plans. These differences largely reflect the operations of trusteed pension plans of provincial and municipal governments and their agencies (Chart 6-8). In this connection, it might be noted, however, that the Province of Ontario has undertaken an experimental program to direct more government trusteed pension plan funds — notably those of the Ontario Municipal Employees' Retirement System (OMERS) — into private-sector securities. The asset pattern of the trusteed plans of federal Crown corporations has been more like that of private-sector plans, except that there is a larger share in mortgages (Chart 6-9).

CHART 6-8
DISTRIBUTION OF THE BOOK VALUE OF ASSETS OF THE TRUSTEED PENSION PLANS OF PROVINCIAL AND MUNICIPAL[1] GOVERNMENTS AND THEIR CROWN CORPORATIONS, BY MAJOR ASSET CATEGORY, CANADA, 1962-77

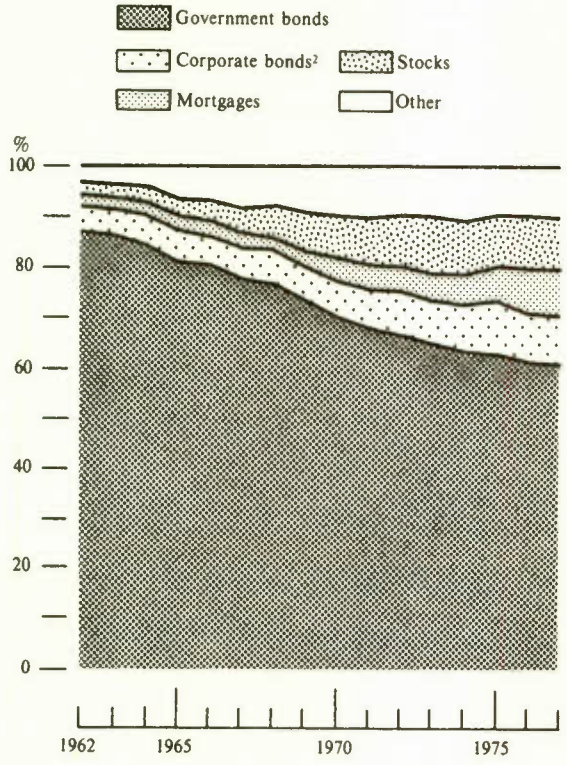
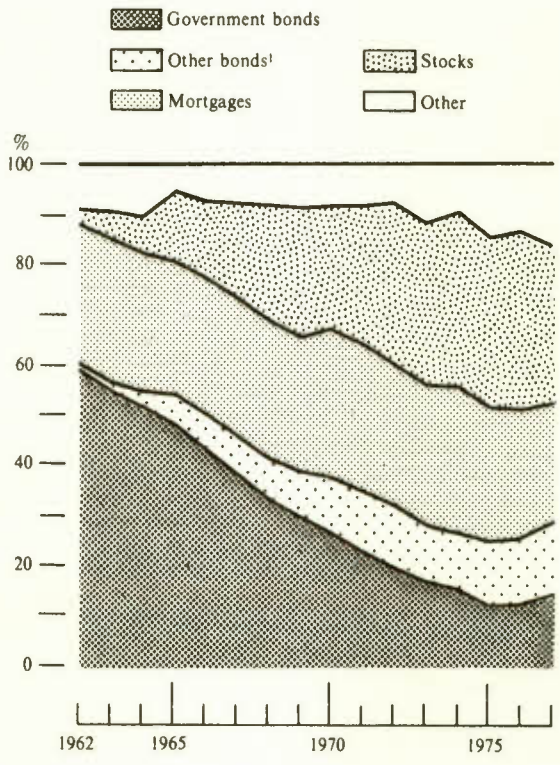


CHART 6-9
DISTRIBUTION OF THE BOOK VALUE OF ASSETS OF THE TRUSTEED PENSION PLANS OF FEDERAL CROWN CORPORATIONS, BY MAJOR ASSET CATEGORY, CANADA, 1962-77



More than four-fifths of the RRSPs are administered by trust companies and insurance companies, but no breakdown of investments is available for them. Assuming that RRSP funds are invested in the same way as the general assets of agencies responsible for their administration, they would tend to hold a high proportion of mortgages, either directly or by way of guaranteed funds. Perhaps one-fifth of their total would be in equities, although the equity share has declined relative to mortgages and guaranteed funds in the 1970s. This decline may reflect the fact that individuals may be able to get better tax treatment on the equity portion of their investments — through the dividend credit as well as the lower tax rate on capital gains — by keeping it outside of RRSPs. In any event, like private trusteed and insured pension funds, a high proportion of RRSP funds are invested in the private sector.

Their particular mix of investments will, of course, directly affect the rate of return on the assets of trusteed plans. For the 1963-77 period as a whole, the combined rate of return for private- and public-sector trusteed plans was greater than an

CHART 6-10
BOOK VALUE OF ASSETS OF MAJOR LONG-TERM FINANCIAL INTERMEDIARIES, CANADA, 1977

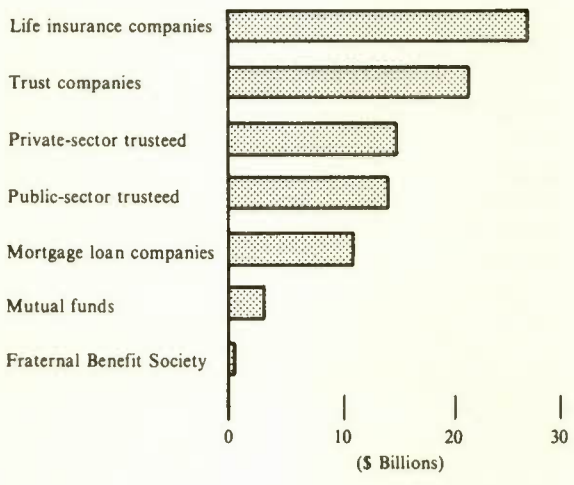


TABLE 6-2

AVERAGE ANNUAL RATE OF RETURN ON TRUSTEED PENSION PLANS AND SELECTED ASSETS, FIVE-YEAR TIME PERIODS, CANADA, 1963-77

	Trusteed pension plans			Bonds				Government of Canada 90-day Treasury bills	90-day financial paper	30-day financial paper	Toronto Stock Exchange "300"
	Public	Private	Total	Provincial	Municipal	Utilities	Industrial				
1963-67	. .	. .	5.43	2.08	2.08	1.61	1.49	4.18	5.12	4.82	11.02
1968-72	7.63	8.69	8.23	7.25	7.58	7.32	7.69	5.49	6.47	6.31	9.89
1973-77	7.53	4.88	6.07	6.92	7.36	7.63	7.33	7.47	8.81	8.61	1.20
Mean, 1963-77	. .	. .	6.57	5.39	5.64	5.48	5.46	5.70	6.79	6.57	7.28

investor might have earned on a portfolio consisting entirely of long-term bonds (Table 6-2). In the same period, however, the trusteed plans were outperformed by the Toronto Stock Exchange index of 300 common stocks and by 90-day finance paper. For the 1973-77 period, on the other hand, a portfolio based entirely on any of the major bond categories would have outperformed the trusteed plans, but one matching the composition of the TSE index would not. Clearly, the funds' poor performance in recent years reflects the dismal behaviour of common stocks. It should be emphasized, too, that nothing can be inferred about management practices on the basis of these highly aggregative figures.

The combined effect of all of the factors bearing on pension fund investment has therefore been to direct large amounts of funds into fixed-interest

CHART 6-11
DISTRIBUTION OF THE BOOK VALUE OF ASSETS OF LIFE INSURANCE COMPANIES, BY MAJOR ASSET CATEGORY, CANADA, 1962-77

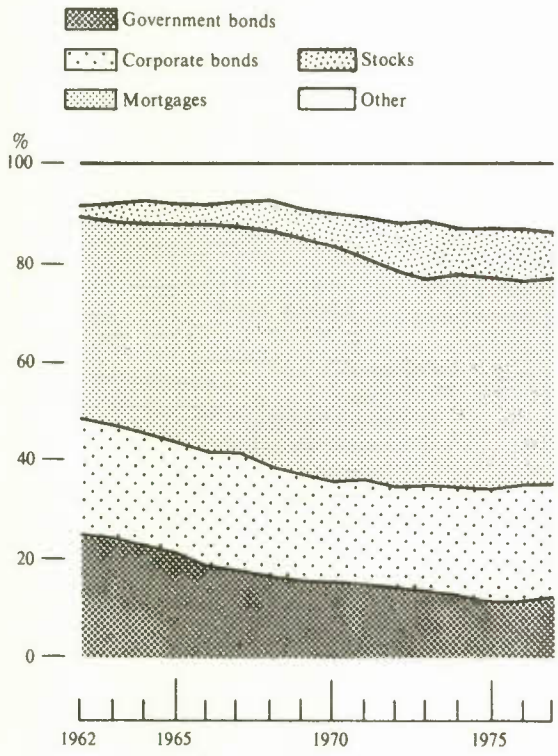
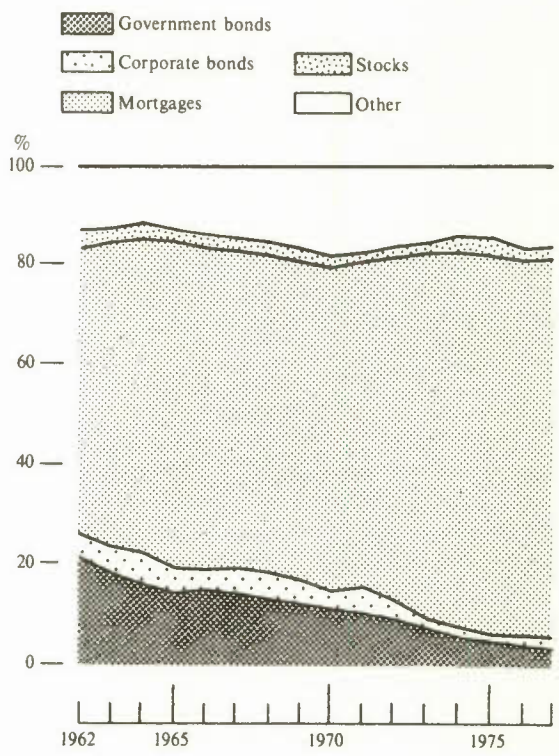


CHART 6-12
DISTRIBUTION OF THE BOOK VALUE OF ASSETS OF TRUST AND MORTGAGE LOAN COMPANIES, BY MAJOR ASSET CATEGORY, CANADA, 1962-77



securities, especially those of governments. Both trusteed pension funds — particularly private-sector funds — and RRSPs have nonetheless been important sources of funds, including equity funds, for the private sector. In recent years, however, there have been major shifts in the portfolios of trusteed funds — a fact that suggests that present legislation allows a good deal of flexibility. Where differences in investment patterns do occur, as between provincial and municipal government trusteed funds and private-sector funds, they can be largely explained by constraints imposed by the sponsors rather than by general pension legislation.

As of the end of 1977, trusteed pension plans — in the public and private sectors combined — held assets roughly equal to those of life insurance companies and to about 90 per cent of those of mortgage loan and trust companies (Chart 6-10). In contrast with these other major long-term financial intermediaries, private-sector trusteed funds, in particular, have tended to hold a much larger proportion of their total assets in stocks and a much smaller proportion in mortgages (Charts 6-7, 6-11, 6-12). It should be noted that the relevant legislation limits the holdings of stocks by insurance companies more strictly than those by pension funds.

THE ECONOMIC IMPLICATIONS OF PENSION FUND INVESTMENT PATTERNS

The substantial differences in the investment patterns of various types of pension funds, as well as between pension funds and other financial intermediaries, suggest that changes in the proportion of total saving flowing through the pension system — or changes in the mix of the system itself — will have significant implications for financial markets. It is impossible for us to assess what the ultimate allocation of savings among various sectors or financial instruments would be, since, as the flows of saving change, the prices of financial assets — i.e. the interest rates — would also change; given our present knowledge of investment strategies, however, certain general directions of change can be suggested.

The Allocation of Savings

Large quantities of pension savings are now directed towards government, either directly as the result of legislation — through the Canada Pension Plan and various consolidated-revenue plans — or indirectly because of the restrictions imposed on the access of pension funds to certain assets, thereby making government securities more attractive. Given existing investment constraints for the various types of pension funds, increasing the share of savings channeled through those funds would tend to expand the resources available to governments, especially at the provincial level, relative to the private sector, particularly to corporations and borrowers of mortgage funds. Reduced demand by the provinces in capital markets would probably result in smaller inflows of foreign capital for government securities, but any shortage of domestic savings would be reflected in larger inflows of foreign capital for corporate securities.

These effects would be reinforced if the Canada Pension Plan were expanded relative to private-sector plans. They would, on the other hand, be reduced if private trusteed pension plans were expanded relative to the public plans. They would also be reduced if CPP funds were invested more like QPP funds — even more so if the CPP investment pattern were more like that of private trusteed funds. In the two latter cases, more pension savings would be available for corporate financing, particularly in the form of equity capital, though at the expense of mortgage and provincial financing requirements, and less foreign money would likely flow into Canadian business. Expansion of RRSPs relative to other private-sector pension funds would imply a lesser impact on mortgage financing.

Just how such shifts would ultimately be reflected in real resource use is even more difficult to assess. Increased funding of the CPP and QPP beyond present levels would improve the financial position of the provinces, but it would, at the same time, reduce federal tax revenues. There is at least some evidence to suggest that this captured source of funds would lead to increased government expenditures, more likely on the part of the less affluent provinces. It is difficult, if not impossible, to prove that this would result in saving allocations that would be less productive than private alternatives. As long as governments do not have to bid competitively for these savings, however, the suspicion — and indeed the danger — remains that misallocation may occur.

It should be pointed out that withdrawing the availability of CPP funds could cause difficulties for some provinces, at least in the short run. Their borrowing from the CPP has tended to increase the total debt of the poorer provinces. Without access to these funds, the Atlantic provinces, in particular, would have to either reduce expenditures, increase taxes, or borrow at higher rates of interest from other sources.

In addition, since institutional pension funds tend to avoid investing in high-risk ventures or in firms without a sufficiently long record of dividends, new firms and firms in high-risk activities find it more difficult to raise capital now than they would if the funds were invested by individuals. It has been suggested that, because of this situation, such enterprises have frequently been forced to obtain foreign capital, resulting in a high level of foreign ownership among potentially expanding firms. This problem could be alleviated by creating "venture investment companies" that would act as intermediaries — by "pooling" venture capital risk — between institutional investors, particularly pension funds, and new or more risky investments.[2] The re-insurance scheme announced by the federal government in March 1979 is also designed specifically to meet this problem, and the Council welcomes its establishment.

The question of the bias against the purchase of foreign securities by pension funds may be more contentious than the issue of investment in high-risk ventures. From the viewpoint of the income security goal, pension funds should be able to invest in assets that offer the highest return — regardless of their origin — after allowance for risk. If rates of return were generally higher in Canada, this approach would also be consistent with raising the rate of growth in GNP per capita. Some argue, however, that Canadian pension savings should be used only in Canada, to increase capital formation in this country. In effect, they are emphasizing the importance of another goal, perhaps at the expense of the income security objective. There may be nothing wrong with this, but when it is done, the purpose of the policy should be set out explicitly, and the level and distribution of the costs and benefits of this option should be examined.

In Chapter 5 we questioned the fairness of achieving this alternative objective through a method that bears most heavily on lower-income groups. Equally important, the real purpose of investment is not to attain a larger capital stock but higher real income. If pension savings were invested only in Canada, without regard to the rate of return, the ultimate result could be a much larger capital stock but little increase in income. Moreover, with Canadian pension fund assets expected to increase more rapidly than GNP in the years to come, it may become even more difficult for large funds to acquire Canadian securities without greatly affecting their prices. Freer access to good-quality foreign securities might enable them to increase their rates of return for any given level of risk.

The Efficiency of Capital Markets

Efficient capital markets will allocate savings to their most productive uses — to produce the kinds of goods and services that consumers want most — in the least costly way. The conditions that lead to greater efficiency are those that promote competition — namely, the largest number of participants in the market and transactions effected through the market — and full use of all available information.

Because the Canada Pension Plan and government consolidated-revenue plans bypass the financial market, they cause a reduction in the number of participants and transactions in the market. If these plans, especially the CPP, were expanded relative to the smaller but more numerous occupational pension plans and to the RRSPs, efficiency could be further reduced. Indeed, from the efficiency point of view, all the funds flowing into government hands should be invested through freely operating financial markets — as is already the case with the Quebec Pension Plan — so that all government borrowing would be subjected to the market test.

Large government funds are, of course, not the only potential source of inefficiency in financial markets. Large private funds — pension or otherwise — can also reduce efficiency if they exert monopoly power and influence prices. As we have noted, even the assets of the trusteed pension funds in Canada are rather highly concentrated in a relatively small number of funds. Moreover, the tendency for individuals to deposit large amounts of savings, including RRSP savings, in banks, trust companies, and other financial institutions — in addition to pension funds — instead of investing directly, also reduces the number of market participants and may, on this account at least, reduce efficiency.

There is danger, however, that this view may be oversimplified. Since larger pension funds, for example, may have access to better investment information, some concentration of pension savings may even help to increase market efficiency. Whether such information could be made more readily available in other ways, however, is a question worth asking.

There is also the question of concentration of industry control in the hands of pension funds. Serious questions have been raised in Britain, for example, about the need for more regulation of what has been termed "the private corporate state" — the private savings institutions, including

pension funds, that have come to command enormous power within the economy.[3] Questions have also been raised in the United States about "pension fund socialism."[4] Such emotive labels may overstate the case, and, in any event, pension benefits legislation in Canada has for some time been more comprehensive than in the United States or Britain. At the very least, however, a case can be made for improving the information publicly available on pension fund investments, for the benefit of both plan participants and other investors.

In the absence of additional safeguards, the problem of concentration and control could be exacerbated by action to direct a larger portion of the pension savings now in the hands of governments back into the financial market. Government pension funds are so large that they could influence prices in the market and thereby create another type of inefficiency, especially if they are invested in firms or industries for reasons other than return and risk considerations. Moreover, large amounts of private bonds and stocks would be held by government-controlled funds. This would give governments increased influence over private corporations — influence that would not normally be subject to parliamentary scrutiny. In brief, it would be necessary to insulate the market from excessive government influence.

This problem could be avoided — although others could be raised — by continuing to restrict public-fund investment to government bond issues, as the CPP does at present. As long as this access to captured funds did not affect total government borrowing, there would be no reduction in the funds available for private investment.

The Swedish approach to this problem has been to decentralize the main public pension fund initially into three subfunds. Prohibited from investing in stocks, they were at first permitted to invest only in such securities as bonds, debentures, and promissory note loans issued by, or through, financial institutions. In 1974, a fourth fund was set up explicitly to permit direct investment in shares, but this accounts for less than 1 per cent of the total funds. Even so, there is concern among many in Sweden that this fourth fund will be used by the government to nationalize Swedish industry indirectly.

A similar strategy has been suggested for CPP funds and has already been adopted by the QPP to some extent.[5] The funds would be deposited with a financial institution "whose operations are at arm's length from the government concerned" or, for a large province like Ontario, with a minimum of four such institutions, each related to different sectors of the economy — manufacturing, resource, service, and financial — and each dominated by representatives of its sector rather than by government. Such an arrangement would reduce the problem of political control and, perhaps, the potential for capital market distortion. Sectoral representatives would, however, likely bias such funds towards investment in the sector they represent. This would be undesirable, since financial resources would not necessarily flow to their most productive uses.

Another strategy might get around the latter problem too. The Toronto Stock Exchange, while expressing serious reservations about fully funded public pension plans, has suggested that what funds are accumulated "should be managed on a competitive basis under contracts with investment managers in the private sector."[6] Recognizing too, however, that there has been a trend towards concentration of power in the hands of private-sector institutional investors, the Exchange has recommended a move towards greater involvement of individuals in managing their pension savings.

CONCLUSION

The proportion of Canada's saving that is channeled through pension funds is already substantial, and it is likely to grow much larger. Given existing investment practices and constraints, a large amount of that saving will be allocated to the government sector, in large part bypassing financial markets entirely. Quebec Pension Plan savings — and, even more so, those in private trusteed and insured funds and RRSPs — do flow in substantial amounts to the private sector. In fact, the private-sector trusteed funds are among the more important sources of finance for the corporate sector, although they tend to invest in less-risky securities to a greater degree than, for example, individuals.

It is difficult to prove that the large flow of pension saving into government funds has resulted in an actual misallocation of resources, particularly when it is recalled that governments are important investors in human, as well as physical, resources. Nevertheless, there are very good reasons for channeling a much higher proportion of the growing flow of pension saving through the financial market, where it will be seen to be subject to the test of the market. In other words, governments will be seen to compete on the same basis as other users of savings. It should be recognized, however, that such recycling of "captive" savings back through the market may require additional action to ensure that large government pension funds, like large private funds,

do not exercise undue influence on the market or undue control over particular industries.

More recycling of government pension fund savings or expansion of private-sector plans would likely increase domestic resources available for corporate finance, and it could help to reduce the level of foreign ownership and control of Canadian industry. Although this might well be, to some extent at least, at the expense of funds available for mortgage financing, the likelihood is that, as the population ages, the demand for mortgage funds will in any event decrease relative to other requirements.

Our work suggests that changes in pension benefits legislation, as it affects investment, may have much less influence on future investment patterns than anything that is done directly to the various government or government-backed pension plans. We do, however, foresee the need for some easing of the impact of income tax legislation on the investment of pension funds in foreign securities and, as well perhaps, some expansion of the "basket" clause. We would hope also that providing more information to plan participants about pension fund investments would preclude the need for more detailed investment regulation.

7 The Work Choice

How retirement income plans affect savings is not among the daily preoccupations of most people. The majority of us are far more concerned with such questions as: Can I get work if I want it? Do I have to wait until I am old to get enough time off work to do some of the things I like to do? Do I have any choice about when I retire? What happens if my health gives out? Will I be forced to retire at a certain age even if I am still able and willing to work? What happens to my pension benefits if I change jobs?

The retirement income system contains a number of features that affect the choice between working and not working and even the choice of jobs. In particular, it has reinforced the long-standing trend towards earlier retirement. Whether that trend should continue to be encouraged is now being questioned for economic as well as other reasons. On the other hand, it is argued that workers should have greater freedom to retire when they wish. But extending that freedom of choice in either direction involves costs as well as benefits — for the individual worker, for the firm, and for the economy as a whole. The costs and benefits of alternative ways of expanding freedom of work choice must be evaluated in the light of the changing needs of our society.

THE MIX OF INCENTIVES

Even in the absence of an income security system, the choice between work and leisure can be affected by a variety of factors, such as higher incomes, overtime pay, and job satisfaction. "Leisure" may also be forced on people because of health considerations or lack of employment opportunities. The presence of retirement income plans adds other considerations.

Retirement benefits may increase the wealth available to individuals as they approach a certain age, thereby inducing them to diminish, or even stop, their participation in the labour force, as well as to change their savings behaviour (see Chapter 5). If retirement benefits are also work- or income-conditioned — that is, payable only if the individual does not work (or perhaps does not work in a particular job) or does not earn more than some given amount — work may become less attractive than leisure. The very existence of retirement benefits linked to a specific age may condition people to think of retiring at that age. Some observers have also suggested that in expectation of potentially higher benefits, people will want to work even more than they would otherwise, perhaps by working overtime or holding a second job. Finally, the mobility of labour may be reduced if higher benefits depend on long service with one employer.

In this context, the distinction between age of entitlement and age of retirement is particularly important. The term "retirement" in this report is used in the sense of withdrawal, either complete or partial, from the labour force. Thus a "retired" person may work part-time. On the other hand, withdrawal from the labour force is not necessarily a condition of entitlement to pension benefits.

At given benefit levels, raising or lowering the age of entitlement has a direct and immediate impact on the cost of benefits (see Chapter 3). Withdrawal from labour force participation, on the other hand, involves another type of cost — costs for the economy in terms of output forgone, leading to a reduction in the revenue base from which benefits are paid. The catch is, of course, that changing the age of entitlement may also affect the choice of retirement age.

The choice between work and leisure, and the choice of a job, can be affected by the availability of benefits — and particularly, perhaps, by the presence of less than fully funded benefits; the income-

testing of GIS and provincial top-up programs; and the vesting, locking-in, portability, and mandatory retirement provisions of occupational plans.[1] In this connection it is worth noting that Canada's public retirement income system contains less potential for distortion of the work/leisure choice than the U.S. social security system. Under the latter, the total benefit available to an individual is subject to an earnings test that, in effect, imposes a 50 per cent tax on earnings over a specified amount. In addition, the system has early retirement provisions. In contrast, Canada and Quebec Pension Plan benefits are not earnings-tested, and they have no provision for early retirement other than for disability.

The features of our retirement income system that affect work choices did not evolve in a vacuum. They developed out of the needs of our society, as perceived by various interest groups. The increase in benefits themselves resulted from the realization that something needed to be done for the older population. At the same time, higher benefits, as well as such provisions as mandatory retirement, were useful in balancing labour force supply and demand and in opening up jobs to younger workers — a reflection of the trauma experienced during the high-unemployment period of the 1930s and, indeed, of the needs created more recently by rapid labour-force growth. In these circumstances, the income-testing of retirement programs may have helped both to keep public expenditures down and to secure jobs for younger workers. What remains to be seen is how effective these various incentives and disincentives are and whether the present balance of incentives in our retirement programs will be appropriate in the face of slower demographic growth and the increasingly frequent tendency to distinguish between the "young old" — those still very much physically capable of an active life — and the "old old."[2]

THE TREND TOWARDS EARLIER RETIREMENT

Canadian men aged 65 and over have participated less and less in the labour market on a full-time basis in recent years, continuing a long-run trend that has been present since at least the end of the First World War (Charts 7-1 and 7-2). Since the mid-1960s, this trend has been reinforced by the lower labour-force participation of men aged 55 to 64. Those in this group who have withdrawn from the labour force have, for the most part, left it entirely; few of them have undertaken part-time

CHART 7-1
LABOUR FORCE PARTICIPATION RATES[1] OF OLDER CANADIANS, 1962-78

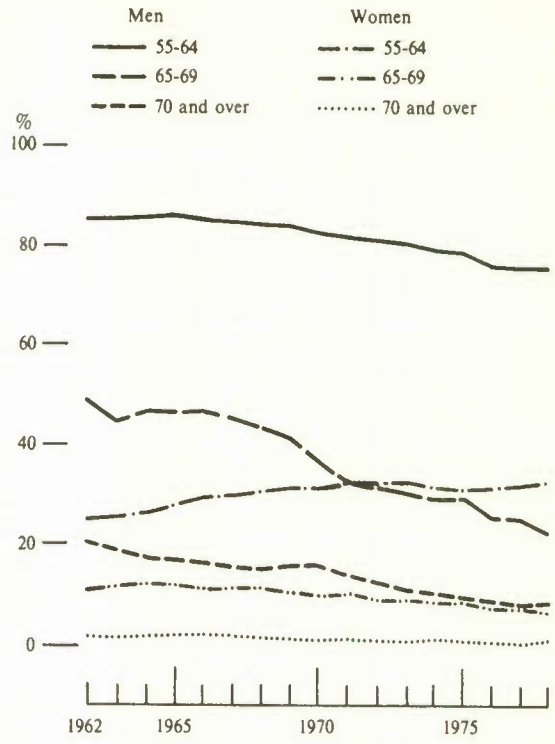


CHART 7-2
LABOUR FORCE PARTICIPATION RATES OF POPULATION AGED 65 AND OVER, CANADA, 1921 TO 1971

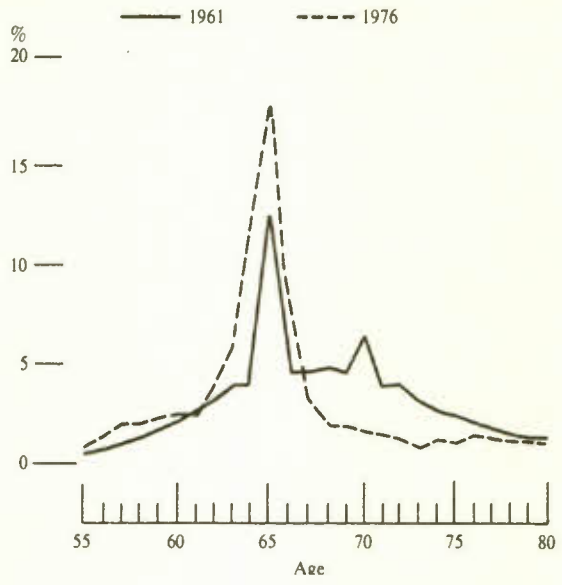
work. The participation of older women in the labour force has provided a marked contrast. Women aged 55 to 64 became more and more engaged in full-time work in the late 1950s and early 1960s, although this trend has slowed down recently, while the participation rate of women aged 65 and over has remained relatively stable for many years.

In comparison with the early 1960s, the number of Canadians now retiring after age 65 is down, while the number of those retiring at 65 or even earlier has risen (Chart 7-3). It is worth noting, however, that the participation rate of Canadians aged 65 and over is already closer to European levels than that of their U.S. or Japanese counterparts, for example (Table 7-1).

Of course, longer retirement has not been the only way in which the proportions of work and leisure in the life cycle have been altered. Over the last four decades, the average duration of working time has been shortened both in terms of hours per day and days per week; holidays have been increased in length; and a larger proportion of the population has remained longer in school. Nevertheless, earlier retirement has become increasingly important, and in re-examining the alternatives, it is worth asking what has brought it about.

Canada has had earnings-related public pension programs only since 1966 and during the first 10 years of the CPP and QPP, the plans contained both incentives to delay retirement and disincentives to labour force participation in the form of earnings and retirement tests.[3] Thus the experience of those years is of limited value in explaining the long-run effects of the plans. Some additional light was cast on the subject by the Retirement Survey carried out by Statistics Canada for Health and Welfare Canada in 1975 — after the disincentives were removed from the CPP — although even the data from that investigation are not completely satisfactory and results based on them must be treated with great caution.[4]

CHART 7-3
PERCENTAGE OF MEN THAT LEFT[1] THE LABOUR FORCE, BY AGE, CANADA, 1961 AND 1976



When discussing early retirement, it appears necessary to distinguish between two things: the long-run decline in the average age of retirement or of labour force participation by older people, and the reasons for retiring before or after what has come to be considered the normal retirement age — roughly 65 in Canada.

The long-run decline in the labour force participation of older people cannot be explained by health considerations, since the lengthening of life expect-

TABLE 7-1
ACTUAL AND PROJECTED LABOUR FORCE PARTICIPATION RATE OF POPULATION AGED 65 AND OVER, BY SEX, SELECTED COUNTRIES, 1950, 1970, AND 2000

	Men			Women		
	1950	1970	2000	1950	1970	2000
	(Per cent)					
Canada	36.9	20.9	15.0	2.7	5.1	4.1
United States	45.0	25.8	19.3	9.7	9.2	7.8
Japan	54.5	54.4	37.2	21.6	19.6	14.5
Sweden	36.6	18.3	13.2	7.9	4.0	3.2
United Kingdom	31.8	19.8	14.9	5.3	6.3	5.4
West Germany	26.6	16.0	11.9	9.4	5.8	4.9
France	38.4	13.6	9.4	13.8	6.0	4.5
Spain	66.6	23.1	13.5	10.6	4.3	2.5

ancy has been accompanied to some extent by an improvement in health. Nor can it be explained entirely by the presence of organized pension plans, since it began well before such plans were widespread in Canada. Rather, it probably reflects such general factors as rising income levels, which have in turn been reflected in more adequate pension plans.

But once some norm for the retirement age is established, the major influences on early retirement appear to be pension-related factors and health considerations. Less important, apparently, are a variety of other factors not related to pension considerations, including aggregate economic variables such as unemployment. Health considerations are obviously related to income and pension considerations, however, and the effects of each set of factors are difficult to disentangle, let alone quantify.

The Council's own work based on the Retirement Survey brings out several interesting points: the likelihood that individuals will retire before the age of 65 increases with the level of retirement income; the likelihood that an individual will retire because of health reasons decreases with the level of retirement income; the likelihood that individuals with poor health will retire early is much greater for those with high retirement incomes than for those with low retirement incomes (Table 7-2). These results confirm expectations. People with a high retirement income have a greater degree of choice. Other things being equal, lower-income people are more likely to work longer, whatever the state of their health, than high-income people.

Further confirmation of the relationship between retirement income and earlier retirement is provided by econometric work commissioned by the Council to examine the incentives to early retirement in the public pension plans.[5] It would appear that individuals with high retirement income might retire perhaps two years earlier than those with low retirement income. Given this finding, it is not difficult to understand why the sharpest drop in the participation rates of older men took place after the retirement income system was improved in the mid-1960s, or why the sharpest decline occurred in the 64-65 age group.

Universal income-tested pension plans such as GIS and provincial top-up programs, while providing a basic minimum income for the elderly poor, can be expected to discourage them from seeking employment after the age of entitlement. For every two dollars of income received from any other source, including pensions, the GIS payment is reduced by one dollar — an effective marginal tax rate of 50 per cent. For several of the provincial programs, this rate is 100 per cent. Unfortunately, the Retirement Survey does not distinguish the recipients of GIS and provincial top-up benefits from the others, so that the degree to which these programs discourage labour force participation cannot be estimated with any certainty. Since, however, they apply only to persons aged 65 and over (and in some cases to the disabled at an earlier age), the number discouraged from working would be much smaller than for programs such as unemployment insurance, which affect the whole work force.

The effects of mandatory retirement on the decision to withdraw from the labour force are contentious but ambiguous. Mandatory retirement provisions usually specify withdrawal from a particular job rather than from the labour force itself, although in some cases — multi-employer plans, for example — they may preclude holding a job in any part of a specified industry. Because this withdrawal may involve loss of seniority, however, the older worker may find it more difficult to obtain a new job. On average, Canadian men subject to mandatory retirement appear to retire slightly earlier than

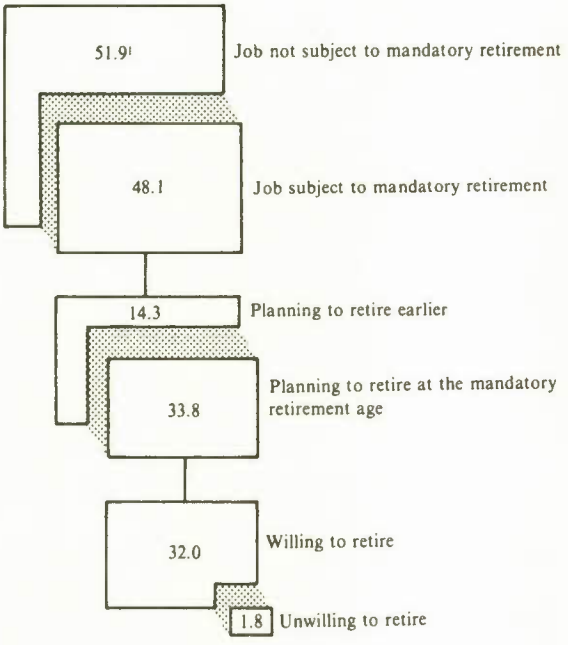
TABLE 7-2

NUMBER OF MEN PER SAMPLE OF 1,000 WHO RETIRE BEFORE, AT, OR AFTER AGE 65, BY RETIREMENT INCOME GROUP AND BY REASON OF RETIREMENT, CANADA, 1975[1]

	Reason for retirement											
	Before 65			At 65			After 65			Total		
	Health	Other	Total	Health	Other	Total	Health	Other	Total	Health	Other	Total
$0-$4,000	171	41	212	198	504	702	49	38	87	418	583	1,000
$4,000-$8,000	106	128	234	151	558	709	10	47	57	267	733	1,000
$8,000 +	105	485	590	25	356	381	--	29	29	130	870	1,000
Weighted average	130	202	332	131	478	609	21	38	59	282	718	1,000

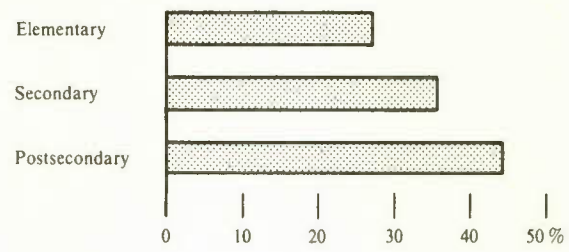
those not so affected. Since mandatory retirement is more often linked to membership in a pension plan, however, this earlier retirement date may simply reflect the availability of a higher retirement income. In any event, what does seem to emerge from the evidence available is that mandatory retirement itself prevents only a minute percentage of the older group from further labour force participation (Chart 7-4). We emphasize again that these results must be treated with caution, although it is encouraging that they conform rather closely to the outcome of similar work in the United States.[6]

CHART 7-4
DISTRIBUTION OF FULL-TIME EMPLOYEES AGED 55 AND OVER IN RELATION TO MANDATORY RETIREMENT, CANADA, 1975



The decision by older men as to whether to withdraw from the labour force is also affected by their level of education, since education enlarges the range of choices available. The better-educated older people tend to remain in the labour force somewhat longer than those with less education (Chart 7-5). It should perhaps be noted also that since January 1976 an unemployed individual aged 65 and over cannot apply for unemployment insurance benefits. Instead, at age 65 all unemployed workers receive a lump sum payment equal to three weeks of such benefits.

CHART 7-5
LABOUR FORCE PARTICIPATION RATES OF MEN AGED 66 TO 70, BY LEVEL OF EDUCATION, CANADA, 1975[1]



FLEXIBLE RETIREMENT

Today's debate about the age of retirement has several facets. Some critics of the retirement income system suggest that the trend towards earlier withdrawal from the labour force should be reversed because of its cost, while others believe that it will continue and that it should be encouraged. On the other hand, although human rights advocates and health experts have come out strongly against mandatory retirement, there is much support for such provisions from both industry and organized labour.

One point should be made clear. While there are arguments both for and against a specific age of retirement, there is no particular reason why that age should be 65. Indeed, the fact that 65 has become the average age of retirement in a number of countries seems to be an historical accident having its origin in Germany in 1916, when that age was set.

The economic crux of the present debate lies in the advantages and disadvantages of extending freedom of choice as to retirement age and labour force participation:

> "Whether they want to work after 65 or not, most workers resent being denied the choice. They would like to retire at a time that suits them rather than their employer, their union, or their government. And because their numbers are growing, and with it the power of their votes, they are bringing strong pressure to bear on politicians to raise the mandatory retirement age, or do away with it altogether."[7]

Actually, a more flexible retirement policy could involve two features: more freedom to select the time at which a pension would begin, and expanded possibilities for part-time work. But, regardless of how freedom of choice is increased, it involves costs and benefits that will vary depending upon the

method used. Whatever else is done, the ability to make rational choices would be greatly enhanced by the regular provision to pension plan participants of more information on benefits.

Increasing Early Retirement Choices

There will always be some occupations where a retirement age earlier than the average is desirable because of their hazardous nature or more demanding physical requirements; protective services and mining are good examples. There are others where sheer boredom and lack of job satisfaction will remain valid causes for earlier retirement as well. Many of these situations can and should be handled by collective bargaining.

A far more important question arises in connection with providing public benefits to people under age 65, since such action would not only involve an increase in public expenditures, but it would also, in all likelihood, influence private pension plans. Simply lowering the age of entitlement to public pensions while maintaining benefits at the same level would be very costly, although it would extend freedom of choice considerably. Another possibility would be to keep the normal age of entitlement at 65 but to provide actuarially reduced benefits for those retiring earlier. This approach, which is followed in the U.S. social security program, keeps public expenditures constant for any given number of retirees; in addition, it involves a lesser reduction in the labour supply than when annual benefits per person are kept constant in the face of a lowering of the retirement age. Nevertheless, U.S. experience shows that the method does result in a considerable reduction in labour force participation.[8]

Provisions for early retirement are, however, largely aimed at relieving the problems caused by the unemployability of some older workers, and the real question is whether or not this is the appropriate method. In Canada, the Retirement Survey suggests that a significant number of Canadian workers retire early because of poor health, even when their retirement incomes are relatively low (Table 7-2), although, as noted earlier, the *probability* of the low-income group doing so is less than that of the high-income group. Rather than extend present benefits to all who retire early, which would be very costly in terms of direct expenditures, or even reduce benefits — which could still affect labour force participation — priority might be given to the expansion of CPP and QPP disability benefits, perhaps with the level of qualifying disability decreasing with age. It is worth noting, too, that some European countries have taken long-term unemployment (for example, for a year preceding the application for benefits) as qualification for earlier retirement benefits.[9]

There is the more general question of the costs and benefits of earlier retirement compared with those of other options for increasing leisure time. Examination of longer holidays, shorter work weeks, or delayed entry into the labour force does not fall within the terms of reference for this study. Nevertheless, they should come under more intensive examination as alternatives to earlier retirement. Until that is done we cannot be sure, for example, which alternative is the least costly for the economy in terms of forgone output.

Encouraging Later Retirement

Fear of the consequences of slow demographic growth for the "pension burden" has led some critics of the present system to suggest that the age of entitlement to pension benefits be raised. Such action would certainly lead to a sharp reduction in the direct costs of benefits, and it would increase the labour force participation of older people. But it would, at the same time, reduce the present range of choice. On the basis of our demographic and expenditure projections, we do not believe that such drastic action is warranted. Nor should later retirement be seen as a substitute for more adequate retirement income programs. Thus the question boils down to the cost-efficiency of various alternatives for at least maintaining, but hopefully extending, the present range of choice.

Since a substantial group of workers retire at age 65 or earlier because of poor health, programs to improve health earlier in their careers might induce them to retire later. It is worth noting, however, that since retirement income is also likely to increase with better health, the latter would not necessarily, in itself, lead to extended labour force participation. Further action to reduce disincentives, or to increase incentives, for older people to work longer would therefore be required.

A similar conclusion can be drawn with respect to the abolition of mandatory retirement or the raising of the mandatory retirement age. There is no question that such action would provide benefits. It would increase freedom of choice for older workers, and medical experts suggest that work opportunities in later years could improve life expectancy and general health. It would lead to some increase in

labour force participation, but as Chart 7-4 suggests, the increase resulting from the abolition of mandatory retirement alone would be very small — much too small to compensate for slow demographic growth. On the other hand, it must be recognized that it could involve substantial costs, particularly if it were implemented quickly. Organized labour has argued that the removal of mandatory retirement could expose workers to more arbitrary management decisions, bar opportunities for younger workers, and reduce the incentive for companies to improve pension plans. It might also induce industry to employ more younger workers in order to avoid the additional costs involved with older workers. It would involve complex changes in existing retirement programs as well as in group insurance programs. Industry representatives also fear that it would raise the cost of present retirement programs and complicate personnel management. In the federal public service, the mandatory retirement age was adopted at least in part to offset political pressures — often for humanitarian reasons — to keep older people in jobs.

Perhaps more important, present retirement practices have developed as a result of a great deal of experience and through the collective bargaining process. To intervene in that process by legislation would seem undesirable unless potential benefits were quite high and costs very low. The Council believes that industry and labour will begin to experience very different problems in the future as a result of the slower growth in the labour force and that mandatory retirement provisions will wither away on their own as a result. Thus, rather than legislate against the practice, government should perhaps take action to encourage later retirement.

Reduction or removal of the GIS income test (in effect, enlarging the OAS program) would be one possibility. In 1975, about 332,000 men were in the 65-69 age group — the group most likely to be induced back into the labour force. Of those, some 141,000 received GIS payments and did not work. On the basis of the Retirement Survey, we can assume that perhaps one-third of this group could not work because of poor health. That leaves 94,000 men; if all of them were to go back into the labour force on a full-time basis — an unlikely prospect — it would roughly double the present participation rate of that age group. It would, however, bring about only a small increase in the total labour force and GNP, and it would involve considerably larger total benefit payments.

It would appear likely that more positive action would be required in order to get many older people back in the labour force. Certainly this would be the case for those not now affected by income-testing. Possibilities here would include accelerated pension benefits — benefits that would accrue faster after age 65, for example, than before. Obviously, too, it would be necessary to broaden job opportunities for older workers. The standard working conditions facing all workers, the eight-hour work day and five-day work week, may suit many younger workers, but according to the Retirement Survey, many elderly Canadians, both retired and working, would prefer more flexibility in the amount of time spent working both before and after the normal retirement age. It is worth noting that, at present, older workers in Canada, more so than the work force in general, are concentrated in occupations like farming, sales, or services, which provide better scope for part-time work (Table 7-3).[10]

TABLE 7-3

DISTRIBUTION OF LABOUR FORCE AGED 15 AND OVER AND AGED 65 AND OVER, BY INDUSTRY AND BY SEX, CANADA, 1978

	Men		Women	
	Aged 15 and over	Aged 65 and over	Aged 15 and over	Aged 65 and over
	(Per cent)			
All industries[1]	100.0	100.0	100.0	100.0
Agriculture	5.5	24.0	3.0	7.8
Other primary industries	4.0	– –	0.6	– –
Manufacturing	23.3	12.0	13.5	– –
Construction	10.5	6.0	1.3	–
Transportation, communication and other utilities	11.0	4.5	4.3	–
Trade	16.6	15.8	18.2	19.0
Finance, insurance and real estate	3.5	8.3	8.0	– –
Service[2]	17.7	24.1	44.0	58.8
Public administration	7.4	3.8	6.1	– –

From a medical and psychological point of view, a gradual reduction in work over a period of years is a sound approach to the problem of retirement. Perhaps retirement should no longer be thought of as a fixed point in time at which all work ceases, but rather as a time of gradual change from full-time work to full-time leisure, perhaps spread over a decade or more. This phasing-in period of leisure would enable the elderly to better equip themselves for the enjoyment of full-time retirement.

By broadening employment opportunities and increasing the rate of activity among the aged population, the number of those completely dependent on retirement benefits would be reduced, and GNP could be at least slightly increased. Moreover, it may be that people are often enticed to retire without fully realizing the inadequacy of benefits or the irreversibility of their decision. Hence there is an increasing need for a change in the attitude of government and employers towards job opportunities for the elderly. A program enabling older workers to vary the number of hours worked would have important implications for firms. Some firms could adapt very easily, while others could not do so as readily because of the nature of their operations. The reduction in the number of hours worked could be in the form of shorter working days, shorter weeks, or even extended periods of leave from work. Sweden has an interesting program in which two older workers share one job, each working part of the week.[11] The nature of the job would dictate how the reduction in working time should take place.

Many members of occupational pension plans find it necessary to work at their present job on a full-time basis until they retire, in order to protect their accrued pension credits, even though, for health or other reasons, shorter working weeks or days, or less onerous work, would be preferable. There is a need for greater flexibility in designing pension plan formulas that would enable elderly workers to take advantage of more suitable employment and yet protect their accrued pension credits.

At the present time, there are a number of agencies attempting to extend labour force participation among the elderly. While useful, most of these efforts are aimed at specific groups, such as executives and trades people. There are no comprehensive counselling and retraining services in Canada to assist those nearing retirement age to prepare for the last few years of active employment or to facilitate a smooth transition into full-time retirement.

THE CHANGE-OF-WORK CHOICE

The retirement income system as it now stands also affects an individual's decision to change jobs — and thus the mobility of labour and perhaps the efficiency of the economy. Perhaps more important, the more frequently that workers change jobs, the smaller their retirement benefits are likely to be and the less their ultimate freedom of choice about retirement age.[12]

It is quite clear that in Canada the presence of pension plans does, on balance, reduce labour mobility somewhat. Tenure with the principal employer is, on average, roughly five years longer where a pension plan exists, although there is considerable variation among industries in this respect (Table 7-4). It is also clear, however, that workers — particularly younger workers — do change jobs rather frequently; for example, in Ontario, less than 20 per cent of working men aged 20 to 24 and less than 40 per cent of those aged 25 to 44 remained with the same employer during the 1968-72 period (Chart 7-6).

TABLE 7-4

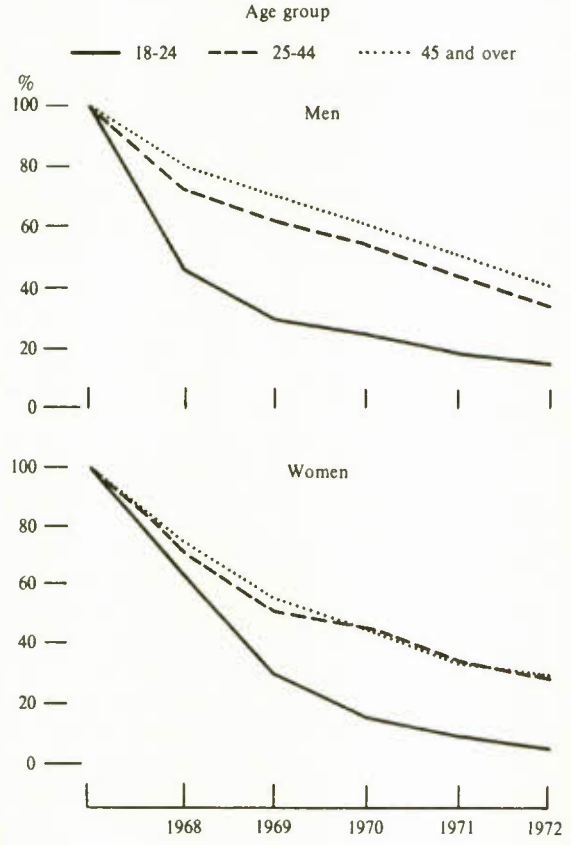
PENSION PLANS AND DURATION OF EMPLOYMENT,[1] BY INDUSTRY, CANADA, 1975

	Without a plan	With a plan
	(Years)	
Agriculture, forestry and fishing	13.8	21.6
Mining and manufacturing	20.0	23.4
Construction	13.8	14.2
Transportation and communication	18.6	25.6
Trade	19.7	23.9
Finance and service	17.7	21.3
Public administration	20.5	21.3
All industries	18.4	23.0

The protection of pension benefits of workers who change jobs involves provisions for vesting, locking-in, and portability of pension rights. Vesting refers in general to the right of employees, should they change jobs prior to retirement, to all or part of the benefits associated with the contributions made to a pension plan on their behalf by an employer, whether those benefits are taken in cash or as a deferred pension. In Canada, however, vesting is now usually associated with mandatory locking-in provisions,

which prevent workers from withdrawing either their own or their employer's contributions in cash and which require them to accept a deferred pension. Portability refers to the ability of employees to take their pension along in one form or another when they change jobs.

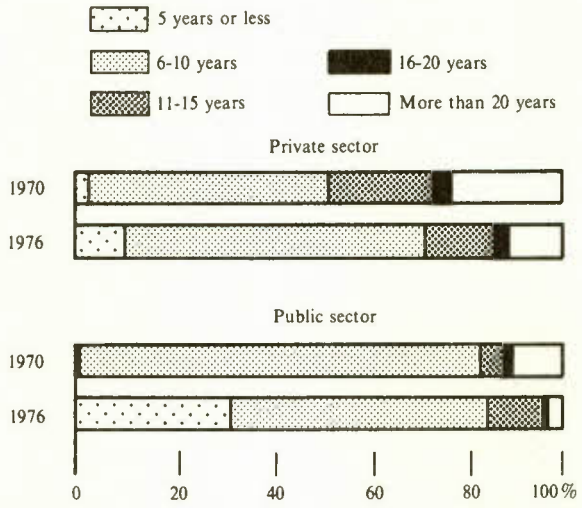
CHART 7-6
JOB PERMANENCY[1] OF WORKERS IN ONTARIO, BY AGE-SEX GROUP, 1968-72



The longer the vesting period, the more likely that a worker will end up with benefits far below the maximum available to employees who do not change jobs. Employer contributions to the Canada and Quebec Pension Plans are vested in full immediately, and accrued benefits are both completely portable and, to a large extent, adjusted for rising wages. This is not the case for many occupational pension plans.

The legislation governing most Canadian occupational plans requires that the employer's contributions be vested at least when a member attains age 45 and has 10 years of service with the employer. This minimum standard leaves a wide margin for variation among plans, and there is a marked difference between government and private employers. Although there has been some improvement in recent years, by 1976 only about 10 per cent of the members of private-employer plans could qualify for full vesting within five years, compared with 40 per cent of those in public-employer plans (Chart 7-7). And, while more than 90 per cent of the membership of public-sector plans qualified within 10 years, the same was true for only 68 per cent of those in private-employer plans.

CHART 7-7
DISTRIBUTION OF OCCUPATIONAL PENSION PLAN MEMBERS, BY PERIOD REQUIRED[1] FOR VESTING, CANADA, 1970 AND 1976



To what extent does this situation result in reduced pensions for many Canadian workers? Data from the Retirement Survey suggest that only about 11 per cent of male workers spend less than 10 years — and 40 per cent spend 25 years or more — with their longest-term employer during their entire working life (Table 7-5). Other evidence suggests, however, that even if coverage of the work force by occupational plans were complete, male workers in Canada would qualify, on average, for only between 7 and 22 years of pensionable service under the 45-and-10 rule, depending upon the assumptions about labour mobility.[13] As the age of qualification and minimum length of service decline, of course, the expected years of pensionable service rise substantially. It must also be noted that the average in this case covers a diversity of people. Those in government service with generally shorter vesting periods and a great deal of portability, as well as managerial and white-collar workers, are more likely to qualify for pensions — and higher pensions at that — than blue-collar workers.[14]

TABLE 7-5

FULL-TIME EMPLOYEES AGED 55 AND OVER, BY LONGEST DURATION OF EMPLOYMENT WITH SAME EMPLOYER, CANADA, 1975

	Men	Women
	(Per cent)	
Years of employment		
0–4	3.2	8.7
5–9	7.9	13.7
10–14	13.7	27.0
15–19	21.9	15.2
20–24	14.9	10.5
25+	38.5	24.9
Total	100.0	100.0

If pensions are considered strictly as deferred wages, there is a strong argument for immediate vesting. This approach would lead to some increase in mobility and economic efficiency, and it would be much more fair to the mobile workers than delayed vesting. Yet shortening the vesting period may also involve costs. Employers suggest that delayed vesting seems to reduce labour turnover and so enables them to train and retrain greater numbers of skilled workers. Shorter vesting periods could also add directly to employer costs; in that sense, then, they should be considered as competing for priority with other possible improvements to benefits.

Care should be taken not to exaggerate either the gains to employees, or the costs to employers, of shorter vesting periods. The Council's projections of the proportion of GNP required for various levels of pension benefits are already based on the assumptions of immediate vesting of coverage of the whole work force, and of indexation of benefits.[15] In a mixed public/private system a shorter vesting period would, however, imply an increased share of that proportion for private-plan contributors. Work for the federal Task Force on Pensions suggests that, unless vested benefits were also indexed, there would be no increase in the employer cost of contributory plans, even with substantial reductions in the vesting period, as long as vested contributions became locked into a deferred pension at a rate of interest below the market rate.[16] For noncontributory plans, there would be a small increase in employer costs even in the absence of indexation.

Locking-in as it now exists is one of several features that could reduce prospective gains for employees and costs for employers. Before locking-in and vesting provisions were tied together by legislation, many employees in fact opted for an immediate cash refund of their own contributions, even if that meant forfeiting their employer's contributions. Such behaviour was not entirely irrational; many younger workers prefer greater near-term receipts in order to support a family or to invest in a house. And, particularly during inflationary periods, they might well earn a lower rate of return on a deferred pension than if they were to put those savings into another instrument. In brief, during an inflationary period, even with immediate vesting, deferred (nonindexed) pensions would suffer.

In addition, it should be noted that during the initial years of employment, employer contributions to a deferred benefit plan are not likely to be large in any event. Moreover, with reduced vesting requirements, employers could still favour long-term employees by changing their wage structure or escalating other fringe benefits.

Vested benefit rights may be preserved in several ways: through reciprocal agreements among employers, through a deferred pension, or through purchase of a deferred annuity from an insurance company. Reciprocal agreements are extensively used in Canada between governments and their agencies, between governments and universities, and between the universities themselves, as well as in some multi-employer plans. By and large, however, they are difficult to set up among private-employer plans because of the wide differences in structure.

One very interesting proposal for overcoming the difficulties associated with portability among private pension plans has recently been made by the Canadian Life Insurance Association.[17] The CLIA scheme is being put into effect this year for the pension plans of 15 major life insurance companies, with other members of the Association indicating that they plan to join it later. The Association hopes that it will also be adopted by employers outside the insurance industry.

The scheme provides that employees moving to a new employer would take with them a credit for a specified number of years of service. The credit would be used, in effect, to buy into the new employer's plan, after an adjustment had been made to put both plans on an equivalent basis. For example, if the employees move to a more generous plan, a credit of say 10 years in their original plan might buy only 8 years of service in the new plan. The key element in the proposal is that employers would have to agree to use the same formula for valuing the pensionable service of employees who are leaving and of those who are arriving, so that what the employers lose in one direction, they might gain in another. Thus there may be no advantage to a firm setting either artificially high or low values. The CLIA has also suggested that each company should

include in its pension plan a minimum money-purchase benefit for all employees, with matching employer/employee contributions. This provision would put a floor under the amount to be transferred.

There are two other possibilities for improving the benefit protection of mobile workers: the expansion of the public retirement income system, and the creation of a central agency of some sort to manage deferred occupational pensions. The Canadian Labour Congress has recommended the first approach because of the private occupational system's inadequate coverage and its limited protection of benefits in the face of mobility and inflation, and because the CLC feels that immediate vesting would be impractical and costly in private-sector plans.[18] Under this approach, the expanded public benefits would presumably be protected in the same way as they are now under the CPP and QPP.

The report of the COFIRENTES+ Committee in Quebec recommended the second approach mentioned above, namely that the management of deferred pensions be entrusted to a central agency, administered by the Caisse de dépôt et placement, that would invest the acquired funds through its segregated account.[19] The advantages of this approach might be enhanced if employers and employees were represented on the board of the agency. The central agency need not be administered by government, however. Such an agency exists for the forest industry in British Columbia, and in France there are two main central agencies covering different groups of industries. A central agency could, in any event, improve administrative efficiency, and it might be used to promote greater harmonization of private pension schemes. A far more important question, however, is whether or not the central agency would offer some indexation of deferred benefits against inflation. In the United Kingdom, for example, a central agency created by the government is used to administer a supplementary pension scheme. Employers may "contract out" of the state supplementary scheme, which indexes deferred benefits in line with the general increase in earnings, upon proof that their own pension fund arrangements are at least as good as those of the government plan.[20] The central agency administers the funds of those employees who are not members of contracted-out schemes and of those who move from one contracted-out plan to another.

CONCLUSION

Canada's present retirement income system contains some work disincentives, but they affect a proportion of the population that is small relative to the total work force. That proportion would increase, of course, if the age of entitlement, especially to public retirement income benefits, were lowered to draw in the increasingly larger age groups under age 65.

There is increasing pressure, however, to have more freedom of choice with respect to retirement age and labour force participation. Extension of such freedom involves costs and benefits in terms of expenditures, labour force participation, and gains to physical and psychological well-being. It will become ever more important in the future, with the growing number of older people, to provide more information on benefits to pension plan participants and to search out the least costly ways of increasing the range of choice. Among other things, this will require much more extensive information on the work-force experience of individuals over extended time periods.

The present mix of incentives in the retirement income system undoubtedly tends somewhat to discourage later retirement and greater labour force participation by older people. Greater participation by older people would not involve any major reduction in the potential "pension burden," but it could provide important gains for some individuals and at least some increase in the economy's productive capabilities. Improvements in health and the elimination of mandatory retirement would increase freedom of choice for older people, although they might not result in much greater participation in the labour force by this group. To achieve that, additional action would probably be necessary, including perhaps the alleviation of income tests, expanded job opportunities, and even positive incentives such as accelerated pension benefits.

Equally important, the present system imposes a serious trade-off for individuals when considering job changes, largely because of deficiencies in the private occupational pension plans. Unless those deficiencies can be removed, the provision of adequate retirement income for the majority of Canadian workers will have to depend upon expansion of the public system.

8 Inflation: The Achilles Heel

Inflation has been described as "a method by which the able-bodied rob the aged."[1] Strongly worded though it may be, this definition may be plausible enough to warrant closer examination. More than any other single factor, the sharp rise in price levels has brought an air of urgency to discussions of the problem of income security for the elderly. If that security is to be provided, older people must be protected against inflation because so much of their income comes from sources other than employment. It is income that does not adjust quickly — if at all — to price increases, particularly unexpected increases, unless by policy action. The elderly are therefore much more vulnerable to those increases than are those in the work force. But can this protection be provided, particularly at a time when the number of older people is increasing, without threatening Canada's economic viability and the competitive position of its industry?

THE EFFECTS OF INFLATION ON THE ELDERLY

To appreciate the potential effects of inflation on older people, consider that consumer prices in Canada increased by an average annual rate of 5.75 per cent from 1966 to 1976 (Chart 8-1). If a person retired in 1966 with a pension of $10,000 — and most Canadians retired on far less — that was not protected against inflation, the purchasing power of that pension would have been only $5,717 ten years later (Chart 8-2). Even if prices continued to rise at the same average rate — and in fact they have been rising more rapidly — that purchasing power would be only $4,323 by 1981 — a drop of roughly three-fifths from its original level. A comparison with employment income is revealing: while the consumer price index rose by a total of 78 per cent between 1966 and 1976, the average weekly industrial wage increased by 137 per cent (from $96.30 to $228.03). It should be remembered, however, that workers under age 65 do not receive the additional tax exemptions that are available to older people.

CHART 8-1
YEAR-TO-YEAR PERCENTAGE CHANGE IN CONSUMER PRICE INDEX, CANADA, 1960-78

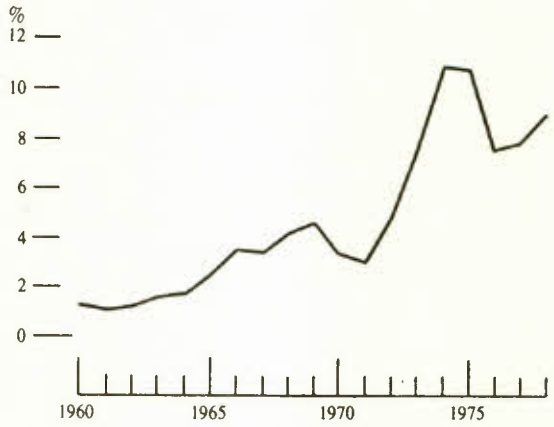
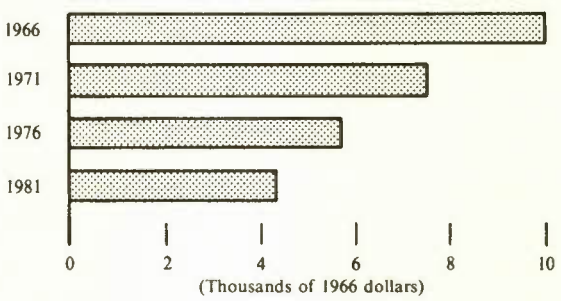
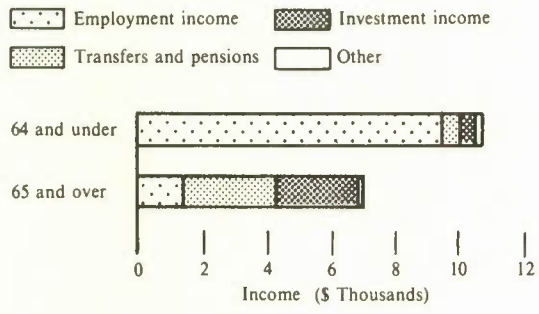


CHART 8-2
PURCHASING POWER OF UNINDEXED PENSION OF $10,000 WITH 5¾% PRICE INCREASE, 1966 TO 1981



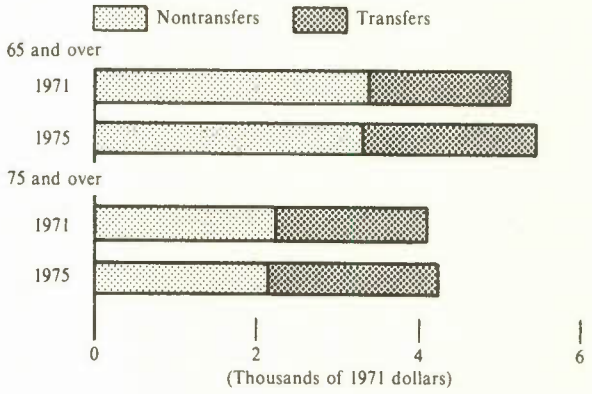
For those people who filed income tax returns in 1976, investment income (largely interest) and pension and transfer payments were far more important, and employment income far less important, for those aged 65 and over than for those under 65 (Chart 8-3). Unfortunately, interest income is not likely to be well protected against inflation. A bond, for example, pays a fixed rate of return — the nominal rate. But, in effect, that nominal rate at any point in time consists of two parts: a premium to cover the expected rate of inflation, plus a real rate of return. As long as individuals know what rate of inflation can be expected, they will know what return they will get in real terms from the bond, or to put it another way, how much they will have to invest to maintain a given level of real income in the face of rising prices. But if the rate of inflation rises beyond what was expected, the individual will find the income from the investment falling in real terms. In this sense, it is the *unexpected* increases in inflation that cause problems.

CHART 8-3
DISTRIBUTION OF AVERAGE ASSESSED INCOME OF CANADIANS FILING INCOME TAX RETURNS, BY AGE GROUP AND INCOME SOURCE, 1976



Income from pensions and government transfer payments is another matter. While the majority of participants in government-sponsored occupational pension plans are now well protected against inflation during both their working years and their retired years (see Chapter 2), such protection, particularly for the post-retirement period, is much less prevalent in plans sponsored by private employers. The importance of OAS, GIS, CPP, and QPP payments is understated in Chart 8-3 because the data refer only to those who file income tax returns; many older people who depend entirely on those payments, especially OAS and GIS, do not file tax returns because their income is not sufficiently high. These sources of income are now indexed for inflation, however; as a result, the average income of the elderly increased very slightly between 1971 and 1975, in terms of 1971 purchasing power (Chart 8-4). In other words, the rise in the real value of those payments was slightly more rapid than the decline of the real value of other income.

CHART 8-4
AVERAGE INCOME OF FAMILY UNITS, BY SOURCE AND AGE OF HEAD, CANADA, 1971 AND 1975



This positive development may lend added perspective to the situation, but it provides no grounds for pride or complacency. That transfer payments have kept up with inflation does not mean that they were adequate to begin with. Besides, older people have been hit particularly hard by the prices of such important items as food, which have risen more rapidly than the overall consumer price index.

Examination of income flows alone does not, of course, provide a complete picture of the effects of inflation on the elderly. In Chapter 2, we pointed out that one of the most important methods of saving for old age is through home ownership. In fact, in 1971 more than two-thirds of household heads aged 65 and over owned their own homes. While home ownership has turned out to be a useful hedge against inflation in recent years — because of rising capital values and the avoidance of increasing rental payments — it also presents a problem. Because of rising property taxes and high maintenance and utility costs, as well as the reduced incomes of the retired and the overall inflationary increases in the general cost of living, the ability of the elderly to keep their homes has become increasingly jeopardized. At the same time, they are innately reluctant to give up the homes in which, in many cases, they have spent their whole lives. Coupled with this is the realistic expectation that giving up their own homes for rental housing leaves them vulnerable to inflation-induced rent increases that they may not be able to afford — especially once their one major inflation-proof asset has been liquidated.

The ideal solution to all of these problems, of course, would be to stop inflation, but recent experience shows that that is no easy task. Thus it is necessary to seek other, less-encompassing solutions. Since opportunities for older people to earn income from employment are limited and, for the very old, virtually nonexistent, what are the difficulties entailed in protecting the major sources of nonemployment retirement income from inflation?

INFLATION AND PRIVATE PENSION PLANS[2]

Despite the recent expansion of public pension plans in Canada, benefits from private plans — both occupational and individual — remain a very important source of income for the elderly. Indeed, these payments will grow more rapidly in the coming years, since so many private plans were established or expanded only in the last two decades or so. Whether or not participants in these plans can be protected against inflation will have an important bearing on decisions about the future mix of public and private plans in Canada's retirement income system.

The Limitations of Private Plans

The present system of private pension plans suffers from several limitations in respect of inflation. First, many employees are still not covered by plans that protect accumulating pension rights from inflation during their working years, let alone benefits during their retirement years. Second, while some defined-benefit plans do protect pension rights from inflation to a great extent, they are rarely portable. Even when the pension rights of employees who change jobs are vested, the deferred annuity to which they become entitled is likely to be seriously eroded by inflation during their working years. Third, sponsors of defined-benefit plans are often unable or reluctant to commit themselves to the contractual indexation of benefits during the post-retirement period. Finally, there is the inability of members of money-purchase plans (including RRSPs) to acquire indexed annuities. If action is not taken quickly to improve occupational plans in these respects, there will almost certainly be further pressure to expand public programs.

The vulnerability of private pension plans to inflation differs greatly among the various types. Very few plans sponsored by private employers provide post-retirement indexation, although many employers have made *ad hoc* adjustments. In contrast, a high proportion of public employees are now covered by full post-retirement indexation, although legislation to reduce this protection was introduced in the last Parliament. The preservation of the real value of pension rights is much more widespread, at least for workers who remain with the same employer. The degree to which rights are protected depends on the benefit formula, with final- and average-best-earnings plans providing the best protection (see Chapter 2), and on the willingness of sponsors to upgrade plans whose benefits have been eroded by inflation.

In part, at least, the recent expansion of final-earnings plans within the private sector reflects more favourable tax legislation.[3] Many employers remain hesitant to adopt such plans, however, and most are reluctant to index benefits contractually after retirement. The reasons for this reluctance are the perceived relationship between pension plans and the financial health and competitive position of the sponsors, the response of pension fund liabilities and assets to inflation, and the effect of inflation on the profitability of a firm's own operations. The effect of inflation on investments in existing financial instruments also makes insurance companies reluctant to provide indexed annuities.

Current accounting and taxation procedures may significantly influence the effect of inflation on the profitability of firms. Because profits, as calculated for tax purposes, are distorted upwards, business taxes are correspondingly higher and equity values lower. At the same time, capital assets must be depreciated at historical costs, and these are much lower than actual, inflated replacement costs. Inventories must also be replaced at costs higher than those used in the calculation of profits for tax purposes. Previous work for the Council also suggests that inflation has benefited the financial sector because of its debtor/creditor position, while imposing additional costs on manufacturing and non-manufacturing industries (excluding utilities and finance).[4]

Inflation and Pension Costs

Employers incur costs for pensions in several ways. They must contribute to the Canada and Quebec Pension Plans, and their taxes help to pay for the OAS and GIS programs. If they also sponsor a private plan, the costs they must assume may, at least initially, vary considerably, depending upon the plan chosen.

In both defined-benefit and defined-contribution plans, the employers and/or employees contribute to a fund. The proceeds of that fund are invested, and benefits are paid from it. For a fund to remain solvent over its lifetime, the contributions and the investment income received must equal the benefits paid out and any administrative expenses.

The sponsor's responsibility differs greatly between the two types, however. In a defined-contribution plan, employee contributions are fixed, but the benefits are not. When employees retire, they are entitled only to the proceeds of the employer and employee contributions invested on their behalf, whatever amount may result from such investment. In contrast, under a defined-benefit plan, both the benefit payments and the employee contributions, if any, are fixed by formula, and the sponsor must pay any supplement necessary to keep the fund solvent. At least initially, therefore, the sponsor must bear most, if not all, of the risk, should the fund fall short of whatever is required to pay the benefits promised. How these additional costs are absorbed ultimately is a question to which we shall return later. It should also be noted, however, that under some circumstances the sponsor may actually gain from inflation.[5]

The sponsor's contributions are affected by three types of cost: for current service, for past service, and for experience deficiencies. Current-service costs are those resulting from the pension rights or credits that have been earned in the current year by current members of the plan as well as the cost of *ad hoc* increases for inflation in existing pensions. These costs must be met each year by the sponsor. Past-service costs arise from recognition of the service of employees prior to the inception of the plan they are now in and of improvements made to a plan after its inception. Shortfalls in investment funds caused by these factors must generally be extinguished by the sponsors over a period of 15 years. Experience deficiencies — the other component of unfunded liabilities — arise, in effect, because experience turns out to be more adverse than the assumptions on which a plan was based. In Ontario and in most of the other provinces that regulate private plans, sponsors are required to make up these deficiencies over a period of five to fifteen years, depending on the source of the deficiency.

Many employers have had to face dramatic increases in the costs of pension plans in recent years, largely because of the payments required to extinguish past-service costs and experience deficiencies.[6] Current-service costs, which account for more than one-half of total employer pension costs, have nonetheless remained almost constant as a percentage of total payroll costs. According to a survey conducted in 1977, they averaged 5.5 per cent of wage and salary costs for final-, final-average-earnings, or average-best-earnings plans and 3.2 per cent for career-average plans.

Inflation may have played only a small part in respect of current- and past-service costs, but it has played a major role in the recent increases in experience deficiencies. The law requires that, at regular intervals — usually every three years — a defined-benefit plan's financial position be reassessed by an actuary to verify that it has sufficient funds to meet its obligations. To carry out such a procedure, the actuary must make some educated guesses about a number of factors that could affect benefit payments or the flow of income from the investment fund. The three most important assumptions concern the future increase of wages and salaries, the termination rates of the employees covered, and the expected rate of return on investments. If salaries increase faster than expected or if investment returns or termination rates are lower than expected, experience deficiencies will occur.

Considerable caution must be used in comparing the pension costs of Canadian and U.S. firms. Unlike the situation in Canada, most U.S. occupational plans do not require employee contributions (nor are such contributions tax-deductible, as in Canada). Moreover, while the U.S. social security system is financed entirely from employer and employee payroll contributions, a substantial part of the Canadian system is financed from general government revenue. Pension costs are, of course, only a part of the total labour cost package that, together with capital costs and the efficiency with which both labour and capital are employed, determines the competitive position of our industries. At present, pension-related employer costs appear to be higher in the United States than in Canada, but extensive expansion of Canadian plans could, in the absence of offsetting changes in other costs or of similar action by U.S. firms, change the situation.

Pension Fund Liabilities and Assets

The two types of assumptions that have most often been violated by actual experience in recent years, largely as a result of the changing rate of inflation, are those about salaries and wages and the rate of return. There is no problem as long as prices rise in line with the actuary's expectations, but when the actual inflation rate is higher than expected, the trouble begins.

Unexpected inflation may affect pension plans in various ways. First, the wages of plan members may increase faster than expected. Since wages tend, on average, to remain in line with prices (and productivity gains, if any), real wages will not change. Benefits are related in most plans to final, final average, or average-best earnings, however; as a result, the money value of future benefits will be greater than expected, and, other things being equal, the plan's liability will be increased. Even if the value of the accumulated investments is not reduced, the sponsor will have to make additional payments into the fund to meet the larger future obligations. However, the real rate of return on investment funds is also likely to be reduced by inflation, as has happened in the 1970s (Table 8-1). The evidence suggests that this adverse effect is not unique to the recent period of price increases.[7]

TABLE 8-1

AVERAGE NOMINAL AND REAL RATE OF RETURN ON TRUSTEED PENSION PLANS, CANADA, 1963-77

	Average rate of price increase[1]	Average rate of return	
		Nominal	Real
		(Per cent)	
1963-67	2.66	5.43	2.77
1968-72	3.91	8.23	4.32
1973-77	8.95	6.07	-2.88

Unexpected inflation is likely to cause people to anticipate even larger future price increases. Analysis shows that financial markets push up the nominal interest rates on fixed-income securities in line with expected inflation. If the pension fund concerned holds only cash when inflation occurs — including additional payments from the sponsor to meet the effects of wage increases — that cash can be invested at the new, higher rate of interest. The fund will then grow rapidly enough to meet benefit payments unless, of course, there is a further change in the expected rate of inflation. Suppose, however, that the fund is already invested in fixed-income securities such as bonds or mortgages. Until these mature, interest will be earned at the old lower rate, the flow of income will not match the increase in benefit payments, and the sponsor will have to make up the difference.[8]

Traditionally, common stocks have been considered a much better hedge against inflation than bonds and mortgages. Indeed, pension funds have been encouraged to use this form of investment by legislation permitting them to invest all of their assets in common shares. More recent analysis throws a different light on this approach, however. While it is true that, over long periods, the rate of return on common stocks has exceeded the rate of inflation — that is, the real rate of return has been positive — for shorter periods ranging in length from four to ten years, it has declined in response to inflation. In recent years, this effect may have been aggravated by such factors as the particularly rapid increase in energy costs, but other, longer-run factors have undoubtedly played a role as well.

The Burden of Unfunded Liabilities

Data taken from the annual reports of a sample of the 200 largest Canadian companies indicate that, on average, unfunded liabilities were equal to 6 per cent of common equity in 1977, if the transportation industry is excluded.[9] Since the average after-tax rate of return on this equity was 14 per cent (implying a before-tax return of roughly double that figure), only slightly more than one-quarter of a year's before-tax earnings would be required, on average, to extinguish these liabilities.

With the transportation group included, unfunded liabilities were on average equal to 11 per cent of common equity in 1977. That group is dominated by Canadian Pacific Limited and Canadian National Railways, which together accounted for $1.9 billion (almost 50 per cent) of the surveyed companies' unfunded liabilities. Because of the special circumstances surrounding the railway plans, however, the companies were allowed an amortization schedule that is much longer than otherwise called for under Canadian pension benefits legislation.

The size of unfunded liabilities in the United States has also drawn a great deal of attention.[10] Our examination suggests that Canadian firms tend to have lower unfunded liabilities, on average, than do U.S. firms in the same industries. This result should occasion no surprise, since the U.S. pension legislation was, at least until recently, much less elaborate than Canada's. The comparison also provides at least some additional indication that the competitive ability of Canadian firms vis-à-vis U.S. firms has not been greatly impaired by pension costs in themselves.

The concept of unfunded liability is of dubious value in comparing the competitive position of individual firms. First, the method of calculation varies among firms and among actuaries, not only because of differing actuarial assumptions but because costs that appear as current-service charges

for one firm may be considered past-service costs by another. Second, the measure of unfunded liability tells us nothing about the effects on costs of *ad hoc* increases in pensions for retired employees. Nor does the presence of unfunded liabilities necessarily imply that a plan would be insolvent if it were terminated; in such circumstances, benefits would be based on current wages while the calculation of unfunded liabilities is based on projected wages.

Whatever interpretation is placed on current figures, many firms are more concerned about the pace of the increase in pension costs and about problems that may emerge in the future. Pension plans sponsored by private employers have in recent years been "caught in a squeeze between low rates of return on their investments and rapidly growing benefit liabilities."[11] The survey conducted in 1977 by the Financial Executives Institute suggested that for the companies it covered, unfunded liabilities were growing at an "alarming" pace — from 3.2 per cent of net capital employed in 1970 to 5.7 per cent in the 1976 fiscal period.[12]

Although this change may in part only reflect lags in the adjustment process, private employers see pension costs as another factor — and one of significance — contributing to the general cost increases that have faced Canadian industry. They are particularly worried that pension commitments appear to be open-ended and that, once they are built in, their evolution tends to be largely beyond the control of the company. They see such commitments as another facet of institutionalized cost increases, along with inflation-indexed government programs and cost-of-living clauses in collective work agreements. They are well aware that contribution rates to the Canada and Quebec Pension Plans will have to be increased before long. They are uneasy about the pressures exerted on them by the example of fully indexed pensions for public servants. And, perhaps most important of all, they are concerned about the cost increases that may result from prospective changes in pension benefit legislation.

These fears make employers particularly reluctant to index post-retirement benefits. To some extent at least, the costs of pre-retirement indexation can be shifted by granting lower wage increases to current employees who benefit from increased pension credits. However, the cost of post-retirement benefits — and, even more so, of indexing deferred annuities for employees who change jobs — cannot be shifted in this way. If the indexation of post-retirement benefits were imposed on employers without providing them with some insurance against unexpected costs that could result from inflation, they would become less willing to sponsor pension plans. In addition, companies with pension plans would be penalized relative to competitors who did not have them.

INFLATION AND PUBLIC PENSION PLANS

The impact of inflation on the universal public pension plans depends on their funding structure. Pay-as-you-go plans are better protected against inflation than funded plans. The OAS and GIS programs, for example, are financed from general tax revenues. Since the tax base increases with the general price level, the tax burden is not affected.[13] Both fully and partially funded public plans, however, suffer from the same inflation problems as do similar private plans. Since the CPP and QPP provide indexation for both pension rights and pension benefits, their liabilities rise even more rapidly with inflation than do those of most private plans. At the same time, the real rate of return on their investment funds will decline. This implies that their contribution rates will need to be increased earlier than anticipated.

But these plans, as well as the federal and provincial employee plans, have one major advantage over those sponsored by private employers: they are ultimately backed by the taxing power of the government concerned. This may, of course, cause problems of a different order, relating to the perception of rising government expenditures and, in the case of public-employee plans, to the preferential treatment accorded one segment of the work force and to the pressures that may result for private employers.

The Implications of Indexation

There have been some notable disagreements in recent years between economists and members of the private pension plan industry over the question of indexation. In part at least, these divergences derive from the fact that many economists tend to focus on the implications of indexation for the economy as a whole, while the industry looks at it from the viewpoint of individual pension plan sponsors, who fear that pension costs may increase beyond their control, adversely affecting their competitive position. The same reasoning has led many people to express concern that full price indexation of all pensions would bankrupt the economy. Is there any basis for such worries?

Suppose, for example, that 5 per cent of this year's GNP is devoted to pension benefits, that prices increase at 10 per cent a year, and that pensions are fully price-indexed. If there were no increase in real GNP, pensions would still represent only 5 per cent of GNP as long as the pensioner/worker ratio remained constant, because GNP itself would rise with the price level. If the pensioner/worker ratio doubled over a given period, the pension pay-out at the end of that period would represent 10 per cent of GNP, but the increase would be the result of demographic change rather than inflation. Indeed, if GNP were to rise in real terms also, if pensions were indexed to prices only, and if the pensioner/worker ratio remained constant, the share going to pensioners would decline.

The point of this exercise is that some of the doom-and-gloom predictions about the repercussions of indexation derive from a failure to make proper comparisons; they project pensions in inflated (future) dollars while projecting GNP in terms of today's prices. The claim that the overall economy cannot "afford" indexation appears to be based on the assumption that an acceleration of inflation exerts a depressing influence upon both the rate of growth and the level of GNP, but that is an enormously complex question for which little conclusive evidence is available.[14] Of course, when inflation here is more rapid than abroad, Canada's international competitive position may be impaired. And, although depreciation of the foreign exchange value of the Canadian dollar may temporarily restore competitiveness, it does not solve the fundamental problem.

There may also be concern about two other aspects of indexation: its implications for stabilization policy, and for equity considerations. There has been very little work on the effects of indexation on the relative efficiency of monetary policy in particular. Economic theory suggests that indexation may assist stabilization policy when inflation arises from monetary changes; when inflation is caused by real shocks, however — such as the massive increase in petroleum prices experienced in the 1970s — there may be more of a problem. In the matter of equity, care must be taken that the interests of one particular group are not protected at the expense of others. At the very least, inflation protection must be extended to all older people, not just to the participants of occupational pension plans.

Protection of Retirement Income

A number of ways have been suggested to provide more protection for the income of older people against inflation. For post-retirement pension benefits, these include the issuance of indexed financial instruments or the provision of inflation insurance to enable the private system to provide fully indexed pensions. Another possibility would be the expansion of the public retirement income system. These proposals, as well as the possibility of converting home ownership by elderly people into a source of income, are evaluated briefly here.

Indexed Bonds and Annuities — If indexed bonds — that is, bonds that guarantee some predetermined real rate of return — were available, private pension plan sponsors would be able to provide full indexation of post-retirement benefits. Such bonds would also enable life insurance companies to offer indexed annuities to plan sponsors. A study carried out for the Council suggests, however, that there is little likelihood that private corporations in Canada will introduce indexed bonds in the near future. In fact, the international experience to date is that only central governments have been willing to underwrite the risks associated with inflation by issuing such instruments.

In Canada, the issuance of such bonds by the federal government would nevertheless involve problems. If they were issued in sufficient volume to enable pension plans to offer indexed benefits, the potential impact on the Canadian financial system would be quite dramatic. The yields on alternative assets could change sharply, and the federal government's role as a financial intermediary could expand. If the indexed bonds were issued on a more limited scale, the impact on the financial system would be reduced, but the ability of private plans to provide indexed benefits would be diminished. There is also the possibility that the introduction of such bonds — which would have to be specially earmarked for pension funds — would reduce the depth and breadth of the market for the normal marketable bonds of the federal government. If this were so, the conduct of open-market operations might be impaired.

In order to limit the amount of government indebtedness in indexed instruments, the federal government might consider selling price-indexed annuities to pension plans. To limit the government's commitment, such annuities might be made available only at the time of a participant's retirement. They could also be available for purchase by individuals at the time of retirement out of the proceeds of registered retirement savings plans. This would give inflation protection to pension plan members in the post-retirement period, when it is required the most. While this proposal would affect

Canadian financial markets in the same way that indexed bonds would, the magnitude of the effect would be smaller since less government indebtedness would be involved: pension plan assets backing pre-retirement pension credits would not be involved, as they might be if indexed bonds were issued.

Inflation Insurance — Rather than issue indexed bonds or annuities to pension funds, the federal government might instead consider providing insurance that would protect plan sponsors from the inflation-associated risks of indexed pension benefits. Such insurance would enable life insurance companies to provide indexed annuities, which in turn could be used to protect the benefits from money-purchase plans (including RRSPs). A form of this system is already operating in the United Kingdom.

Here, in brief, is how the proposed system would work. A defined-benefit pension plan involves a promise to pay a certain amount each year to plan participants when they retire, usually at age 65. Suppose that amount is $10,000 and the average member lives for ten years after retirement. If there were no inflation and the rate of interest were 3 per cent — and, in the absence of inflation, that would be the real, as well as the nominal, interest rate — for $85,300 the plan sponsor could buy from an insurance company an annuity of $10,000 for ten years.

Actually, the real rate of return on long-term Government of Canada bonds seems to have been in the vicinity of 2 to 3 per cent over long periods. Thus a bond offering 10 per cent is really paying about 3 per cent in real terms and 7 per cent to offset expected price increases over the life of the instrument. An insurance company could invest in such bonds and use them as backing for an annuity that it could then sell to a plan sponsor. For $85,300, that annuity would guarantee the retiree not only $10,000 a year for ten years but also an additional amount each year ($700 in the first year, $1,449 in the second year, etc.) that would offset the expected 7 per cent annual increase in prices. In brief, the insurance company could offer an annuity indexed at 7 per cent per year.

That might still not be sufficient, however, to support the promise of a pension that was fully indexed against price increases. As noted earlier, much of the problem arises when the rate of inflation turns out to be higher than expected. This is where inflation insurance could play a role. In return for a promise by the insurance company to provide full indexation of the annuity, the federal government would sell the company some inflation insurance. If the rate of inflation at the end of the first year turned out to be 10 per cent rather than the expected 7 per cent in our previous example, the government would pay the insurance company an additional $300 on an annuity of $10,000. The $700 yield from the original bonds plus the $300 insurance payment would match the total price increase of 10 per cent. On the other hand, if inflation turned out to be only 4 per cent instead of 7 per cent, the insurance company would be required to reimburse the $300 to the government.

If, over long periods of time, forecasts of expected inflation rates provided by the nominal interest rates on government bonds would turn out, on average, to be correct, the government would only need to charge a premium for such insurance sufficient to cover its administrative expenses. And there is some evidence to suggest that pension plan members would be prepared to pay for insurance that would protect them fully against price increases.

Variants of the inflation insurance scheme might also be used to solve the problem caused by the inflation-induced erosion of the benefits of mobile employees. The portability of pensions protected against this erosion could be assured if all employers offered final-earnings plans that were sufficiently similar to enable them to credit new employees with past service and to receive in turn from prior employers an amount sufficient to buy the deferred annuities to which their new employees had already become entitled. Such reciprocity would be difficult to achieve because existing private-employer plans are so diverse, but it is available for a number of government-employee plans. If inflation insurance were available, an employer could purchase an indexed deferred annuity for employees leaving the firm during the course of their working lives, in just the same manner as he would buy one for retiring employees.

The major advantage of this proposal is that the impact on the stability of the financial system would be small. There would be no need to deposit large amounts of pension funds with the federal government, as would be required with indexed bonds. This feature in itself would mean fewer problems for the conduct of monetary policy. The proposal could be used for money-purchase plans (including RRSPs), and inflation insurance could be made available directly to plan sponsors, if they so wished, rather than through insurance companies. Because chronic inflation is such a recent phenomenon in Canada, however, it is probably advisable to investigate the implications of this proposal more thoroughly before its implementation is considered.

Expansion of Public Pension Plans — If nothing can be done to effect major and widespread improvements in the inflation protection provided by private pension plans, there will be little alternative but to expand the Canada and Quebec Pension Plans. One approach that might offer a way of retaining the best features of the private system while moving quickly to overcome its deficiencies would involve the establishment of a fully funded supplement to the Canada and Quebec Pension Plans, with an option for employers to contract out, as in the present British system. In the United Kingdom, employers may participate in a state scheme that offers price-indexed benefits, or they may contract out of that scheme, provided their own plan meets certain specified standards. Indexed deferred benefits are transferred to the government plan for employees who change employers prior to retirement, thus effectively making a minimum level of pension benefits fully indexed and portable for all employees. Employers outside the plan may limit their liability for indexing benefits to 8.5 per cent a year by paying a premium to the state scheme, which then assumes responsibility for making up any additional indexation required. Employers in the state plan may, if they wish, offer supplementary benefits in addition to those offered by the state plan.

Adjustments for Economic Growth — Even if all retirement benefits were fully adjusted for inflation, the real income of older people in Canada would still not rise at the same rate as the average industrial wage. Industrial wages reflect real growth in the economy — that is, in productivity — as well as price increases. The Canada and Quebec Pension Plans and the employer-sponsored defined-benefit plans do adjust benefits to varying degrees for increases in real wages until retirement. Apart from *ad hoc* adjustments to the OAS and GIS programs, however, we know of no retirement income program in Canada that provides post-retirement adjustment for general increases in real wages. For a retired person, the effect is equivalent to a decline in the income-replacement ratio.

The needs of individuals depend largely upon the community's lifestyle. Over time, as real incomes rise, what were once luxuries become necessities — central heating, telephones, radios, or television sets, among others. If older people do not share somehow in productivity gains, it means that they will have to forgo amenities that the rest of us now take for granted.

In our view, this problem is not nearly as serious as that caused by inflation. Nevertheless, it cannot simply be dismissed, because it may be particularly acute for the elderly poor. To force them to live in the future with even the same real income as today is to force them to remain poor. Yet many of them depend almost exclusively on OAS and GIS payments, which — unlike CPP and QPP benefits and many occupational pension payments — do not automatically reflect real wage increases to the point of retirement. At the very least, OAS and GIS payments should continue to be reviewed from time to time in light of increases in the average industrial wage in the economy and other considerations.

Income from Home Ownership — We noted earlier that home ownership has provided a useful hedge against inflation but that it presents the elderly homeowner with a dilemma. One method of expanding the choice open to elderly homeowners is the reverse-annuity mortgage, which has been in use in the United Kingdom for some years and is being introduced on an experimental basis in several areas of the United States. For the plan to be of substantial benefit to many elderly homeowners, however, mortgage interest would have to be deductible from taxable income.

A reverse-annuity mortgage is an arrangement whereby a loan is taken out with the house as security and is used to buy a lifetime annuity. Repayment of the principal is deferred until the death of the owners or liquidation of the property. The periodic payment made to the individual is reduced by the mortgage interest.

Such mortgages have several attractive features. They would increase the freedom of choice for older people by providing them an additional source of income. They would be particularly beneficial to lower-income homeowners; although the absolute amount of home equity rises with income, the ratio of home equity to income is higher among lower-income groups. Finally, during prolonged periods of inflation the house can continue to provide protection against price rises, since the mortgage, and hence the annuity payment received, can be periodically increased as the value of the house increases. Moreover, a reverse mortgage arrangement allows the elderly homeowners to remain in their own homes and to enjoy continued "indexed" rental accommodation.

On the other hand, it should be emphasized that since the amount of the annuity increases with the age of the homeowner at the outset, these plans are likely to be of primary benefit to those aged 70 and over — widowed women in particular, many of whom receive few, if any, benefits from occupational pension plans.

Under current Canadian tax law, the interest component of the annuity would be taxable as ordinary income. This would reduce the value of the annuity for those with sufficient other income to make the annuity taxable. If mortgage interest were deductible from gross income, the reduction in tax liability would more than offset the tax payable on the annuity.[15]

While we have not investigated the willingness of the private sector to provide the required funds, it is known that the Metropolitan Trust Company has recently launched a trial "Independent Income Mortgage" in Toronto. A reverse mortgage program would, however, increase the demand for mortgage funds in the coming period, when the increasing proportion of older people might imply a reduced demand for housing. As an alternative, reverse mortgages could, perhaps, be sponsored by an institution like the Canada Mortgage and Housing Corporation.

CONCLUSION

Inflation has placed a severe strain on our pension system. Beneficiaries of private-sector occupational plans see the real purchasing value of their pensions falling, and they are powerless to do anything about it. Some relief is granted from time to time by *ad hoc* increases, but this is not enough. Not only may those increases be insufficient but, because they are not systematic, they do not remove a pensioner's uncertainty about the future.

Private-sector pension plan members receive much less protection from inflation than those in the public sector. There is a need to move public- and private-sector plans much closer together in respect of inflation protection, but to a very considerable extent, this should be done by removing the inadequacies of the private plans.

Preserving the real purchasing power of retirement pensions — either public or private — against the ravages of inflation will not "bankrupt" the Canadian economy. No more real resources are required for price-indexed pensions in an inflationary environment than for unindexed pensions in a noninflationary environment. But the indexation of pension benefits does present problems for sponsoring firms; inflation pushes up benefit liabilities and pushes down the value of pension fund investments, since no investment instruments available at present seem to be capable of ensuring a positive real rate of return. Moreover, the situation may be exacerbated by the effects of inflation on the profitability of a firm's own operations.

The weakness in the present system cannot be removed by industry alone, but it can be overcome by goverment, or by government in partnership with industry.

9 A Range of Choice

At the outset of this report, we defined the primary objectives of the system of income security for the elderly and indicated a variety of ways to reach those objectives. In later chapters, we discussed the implications of these various alternatives for the economy, including their possible impact on other national goals. Although more attention has been devoted to the structure of the system than to actual benefit levels, this is not because the Council necessarily believes that the latter are adequate at present. The emphasis on structure reflects, rather, the concern that the achievement of adequate benefit levels could be jeopardized by an inappropriate system.

The Council recognizes that differences of opinion about the goals and objectives of such a complex system will endure. Similarly, views about the price that people are prepared to pay to achieve specific objectives will vary. It has been difficult, even in our own deliberations, to arrive at any consensus; it will be much more so in the country at large.

We have had heated discussions about the adequacy of benefit levels and about the degree and desirability of government intervention in the retirement field. We have debated the use of the retirement income system as a means of accelerating economic growth or reducing the level of foreign ownership in Canada. We have argued over the possibility that measures to improve the lot of older people could adversely affect the fiscal position of our governments, the competitive position of Canadian industry, and Canada's balance of international payments, or that they could create an intolerable burden for the work force of the future.

As individuals, we have differed — indeed, we still differ — as to the importance to be assigned to these many areas of interest. Nevertheless, in the course of our debates and research, as we came to better understand how the system works and how it does in fact impinge on a variety of goals, we have narrowed many of the areas of disagreement.

We have found that the costs of the system, in terms of the resources required to support our older population, and the ease or difficulty of transferring these resources to them, can be greatly affected by demographic trends, by inflation, and by productivity growth — factors beyond the purview of retirement income policies. On the other hand, our work also suggests that a wide variety of policy alternatives can be employed with no significant cost in terms of economic growth. In brief, our work draws attention both to considerations that narrow policy choices and to others that need not be viewed as severe constraints. The subject is so complex, however, that the Council itself found it necessary to summarize and review the findings and the policy alternatives before making any recommendations.

A SUMMARY OF FINDINGS

Here, in brief, are the major findings of this report:

— The number of older people in Canada is increasing rapidly. More important, the more this country moves in the direction of a low-demographic-growth scenario, the smaller will be the future work force to supply the goods and services required by the older generation.

— Even with a medium-to-low population growth rate, until well into the next century Canada will not reach the high ratios of elderly to work force now experienced by some Western European countries. Even then, the Canadian ratio will not rise much above that now being experienced in these other countries.

— Even with present retirement benefit levels, the share of total goods and services required for our older population will increase somewhat. To remove some of the existing gaps in the retirement system will, of course, require an even

greater share, although much can be done while staying within limits that are reasonable by international standards.

— It is not likely that the increased requirements of our older population will be balanced by a decline in expenditures on the young, particularly after the year 2000.

— No matter how rapid the growth in real GNP — and projections of growth as far ahead into the future as those in this study must be treated with caution — the growth in the *share* of total goods and services required for our older population will be little reduced. It may well be that the adverse effect on GNP per capita of a labour force that will grow more slowly will be more than offset by increased productivity or output per worker. But output per worker is reflected in real wages, and it turns out that pension benefits have been closely linked to real wages. The higher the level of GNP per capita, however, the less difficult it will be to transfer any given percentage of GNP to older people.

— The present system of public retirement income plans, in aiming to ensure adequate income for older Canadians, redistributes income among age groups and among various income classes. Such redistribution can affect work and saving incentives, as well as the degree to which the system is supported by the various groups. It must be taken into account when considering the future viability of the system.

— If employer/employee contribution rates to the Canada and Quebec Pension Plans were to remain at the present level, the reserve funds that have been accumulating in recent years would be exhausted early in the coming century. In other words, contribution rates will have to be raised by the first decade of the coming century at the latest, just to keep the plans on a pay-as-you-go basis. Even with existing benefit provisions, redistribution of income to those now in the work force implies that, at some time in the future, workers may, depending upon the rate of growth of population, have to pay contribution rates in excess of those that would be required to fully fund their own pensions.

— Pension-related employer costs appear to be higher at present in the United States than in Canada. Of course, extensive improvement in Canadian pension plans could change this situation if it were not accompanied by reductions in other costs or matched by similar improvements in the United States.

— The economy's productive potential will, other things being equal, tend to be lower as a result of the aging of the population, especially because of slower growth in the labour force. On the other hand, although the *pattern* of economic growth may be affected by the retirement income system, the *rate* of economic growth and the future level of GNP do not seem to be extremely sensitive to it. As far as we can detect, the retirement income system does not have a strong adverse effect on the supply of savings (and capital formation) or the supply of labour. Canada's present retirement income system contains fewer work disincentives than the U.S. social security system, and those that do exist affect a relatively small proportion of the population (see Chapter 7). That proportion would increase, however, if the age of entitlement to public benefits were lowered to draw in the increasingly larger age groups approaching 65.

— Canadians cannot, of course, look with equanimity on policies that would reduce domestic saving. For many years this country has, on balance, supplemented its domestic saving by drawing on that of other countries to finance an important part of its domestic investment. Such investment has brought many benefits, but it has also been reflected in deficits on the current account of the balance of international payments and in increasing levels of foreign ownership and net international indebtedness. If these features are to be reversed, more of our domestic investment will have to be financed from our own savings. This will be particularly important in the coming decade or so, when there will be major requirements for capital formation. Over the long run, however, slower growth in population may also bring with it some reduction in the need for capital. Given the amount of capital per worker, total capital formation will slow down with the growth in the work force. Whether that will be offset by the provision of more capital per worker is open to debate. In this connection, it is worth noting that Canada is already one of the most capital-intensive industrial nations. But, whatever savings objectives are decided upon, there is also a need to consider the efficiency and fairness of the methods used to provide those savings.

— The present mix of public and private pension plans, as well as the growing institutionalization of the retirement income system, has had a considerable impact on the way in which Canadian savings have been channeled into vari-

ous uses. Pension funds now supply a high proportion of government-sector capital requirements, but they make a much smaller contribution to corporate financing, particularly with respect to newer firms or firms in high-risk activities. If those pension savings now going directly into the government sector were recycled through capital markets or if the role of private-sector trusteed and insured pension plans were increased, the cost of corporate financing and the flow of foreign savings into Canadian business might both be reduced. On the other hand, care would have to be taken to avoid having those who invest pension funds exercise undue control over industry — a concern that is already apparent in Britain and the United States.

— Even under the present system, the assets of occupational pension plans would increase more rapidly than GNP and could equal about four-fifths of annual GNP by 2031. If the CPP and QPP were fully funded, the total assets of all pension funds could amount to nearly twice the value of GNP by that time (see Chapter 10). The assets of pension funds would, of course, represent a somewhat smaller proportion of the country's capital stock than of GNP.

— The assets of pension funds in Canada are already concentrated to a considerable extent in a small number of plans. Concentration is a double-edged sword: it can detract from capital market efficiency by reducing competition, but at the same time the ability of large funds to acquire and use information promotes efficient investment and resource allocation. The possibility of nonmarket considerations affecting investment could be greatly increased if the CPP and QPP were to move to a more highly funded basis.

— Present restrictions on the holdings of foreign securities by Canadian pension funds may increase the problems of concentration and control, particularly in view of the funds' potential for growth. These restrictions could also act to reduce the potential returns on the pension savings of Canadians.

— The present policies of both government and industry in Canada do very little to serve the needs of those older people who are both able and willing to work. Greater work-force participation by older people would not provide any major reduction in the potential "pension burden," but it would provide important gains for individuals and at least some increase in the economy's productive capabilities. The present mix of incentives in the retirement income system tends to discourage later retirement and labour force participation by older people. Increasing freedom of choice in either direction would involve costs, and encouraging more labour force participation by older people would likely involve positive incentives, as well as improvements in health and job opportunities.

— There are a number of gaps and inequities in the present system: the maximum OAS/GIS payments are not yet sufficient to raise the income of a number of older people — many of them unattached women, to the low-income cutoff as calculated by Statistics Canada, and public pension benefits cannot be accumulated directly by one major group — housewives. An even greater number of issues arise with respect to the private occupational system: the inadequacy of spouse and survivor benefits; the need for wider coverage to include, for example, those employed by small businesses; the much less favourable treatment accorded private-sector employees compared with government employees; the treatment of mobile workers relative to those who remain with one employer for long periods; and the income vulnerability of those in retirement compared with those in the work force. Many of these problems are greatly exacerbated by inflation, especially by unexpected changes in the rate of price increases.

OPTIONS AND ALTERNATIVES

The provision of income security for older people is only one of a number of national goals in Canada, but it has come to occupy a rather high priority in recent years. Canadians are faced with a wide range of alternatives — and perhaps some very hard choices — about the specific objectives of the income security system and the methods used for achieving those objectives.

Most people are concerned about the level of the pension they will receive after they retire and wonder if it will be sufficient to provide them with a decent standard of living. They are also concerned about the opportunities available to them for building up those pension benefits. On the other hand, they do not appear to worry as much about such seemingly technical questions as how their pensions are funded or how their pension savings are invested. Yet the answers to questions such as these may go a long way towards establishing just how large or how secure the individual's benefits will ultimately

be. The funding formula selected, for example, will affect the way in which the "pension burden" will be shared between pensioners and labour force participants or between present and future workers.

The System's Goals and Objectives

The primary purpose of the system — the provision of income security for older people — is too vague for policy purposes. For a start, it is useful to think of it as the need to ensure a basic income for all people over a specified age, regardless of previous circumstances, and to replace some specified proportion of the income earned prior to qualifying for retirement benefits.

Until quite recently, Canada tended to emphasize the first of these needs in its public retirement income system. Something had to be done about the widespread incidence of poverty among older people — a situation that reflected a breakdown in the traditional family support in the context of an increasingly urbanized industrial society with a mobile work force. Indeed, the Parliament of Canada has paid continuing attention to the matter, particularly since the passing of the Old Age Security Act, which set the universal old age pension at $40 a month beginning in 1952. That amount was raised to $46 and then $55 in 1957, to $65 in 1962, and to $75 in 1963. Since that time, the emphasis has been on changing the basis of payment to provide for automatic adjustment as prices rose, although further *ad hoc* increases have also been made to both OAS and GIS benefits.

As progress was being made in the direction of providing a basic income, however, concern grew about the second goal — the need to prevent too large a decline in income once full-time work ends. This concern is an explicit recognition of the difficulty of defining poverty or social deprivation. Affluence for one may seem like poverty to another, if he or she has become accustomed to a higher standard of living. Linking retirement income to pre-retirement income is one way — albeit an imperfect one — of dealing with this relative aspect of the problem. But it does help to avoid the situation in which individuals who had been earning an adequate income while working suddenly find themselves with a very sharply reduced living standard after retirement.

The two goals may or may not coincide. When an individual's pre-retirement income is low — and there will always be people who, for various reasons, are unable to work or who receive only low incomes — even a high level of income replacement will not provide sufficient basic income. When pre-retirement income is high, on the other hand, some level of replacement will accomplish both goals. But the provision of a basic old-age income sufficiently high to prevent, by itself, a sharp drop in the retirement income of middle- and upper-income workers would be extremely expensive and could involve serious distortions of work and saving incentives. For these reasons, many countries use separate methods to achieve each goal. The U.S. social security administration has run into problems in its attempt to achieve both through a single system, and it has now begun to move towards a split system also.

To make these goals operational for policy purposes, however, it is necessary to define a number of much more specific objectives. In the case of the basic-income goal, this means, among other things, the establishment of an age of entitlement and of defined benefit levels. Whether a given level can prevent destitution will depend on its being adjusted to rising prices, as well as on the access of older people to related services, including housing and health care.

There is wide public support in Canada for some measure of basic income support, although there may be disagreement about the levels and methods used. The income-replacement goal is more contentious. Nevertheless, governments have stepped in, partly because of a growing realization that the private system has not provided sufficiently high income-replacement levels for a large proportion of the work force, particularly if these levels are calculated in terms of their real purchasing power. The Council believes that there should be adequate opportunities for all working Canadians to build up earnings-related pension entitlements, in real terms, regardless of where or with whom they were employed or how many times they changed jobs. But, for policy purposes, this goal too must be made more specific as to conditions of entitlement and target replacement ratios, for example.

Basic-Income Alternatives

The decision to ensure a basic income for all, regardless of previous circumstances, implies that there will be some redistribution of income. Although that can be undertaken effectively only by government, there is still a wide range of choice with respect to revenue sources, benefit structure, and benefit levels.

Payroll taxes are used in some countries — for example, the Netherlands — to support basic flat-rate benefits. This type of financing bears more heavily on lower- than on upper-income groups, however, and the present Canadian method of financing the OAS and GIS programs through general tax revenues seems fairer, since it spreads the costs more progressively across all income groups.

With respect to the benefit structure of basic-income programs, the main choices concern the adjustment of benefits to changing prices and wages, the degree of selectivity, and the benefit level itself. Benefits granted under the OAS and GIS programs are already indexed to the consumer price index. Without this, the basic income of older people would fall very rapidly in real terms during inflationary periods such as Canada has been experiencing in the last few years. It has also been suggested that benefits be adjusted to specially constructed price indexes that would focus more on the specific needs of older people.

The issue of linking pensions to wage rather than price levels is more contentious. Without this protection, the basic income of retired people falls, relative to that of those still in the labour force, even when benefits are price-indexed. Yet wage indexation would add substantially to the cost of the system, and it would add a further element of rigidity. One approach would be to leave the matter to government discretion with respect to *ad hoc* increases, depending upon the state of the economy and the federal government's budgetary position — as is now the case — but to have a review procedure built into the Old Age Security Act.

The GIS benefits are income-tested, although OAS pensions are not. The application of such a test increases the selectivity of the program, and expenditures are reduced since payments go only to those who need them most. Using such a test for the OAS program too — in effect combining the present basic-income programs — would offer a way to further reduce expenditures or to raise the basic pension for those most in need without increasing the total cost. Enhancing selectivity in this way could also have disadvantages, however, as it might foster work and saving disincentives. More importantly, there is a long history in Canada, as well as in the United States and Britain, of struggles against such tests. Prolonged policy debate in Canada in the late 1940s and the 1950s finally led to political support for a universal nontested program from various groups. The universal character of the OAS program is an important element in that support.

On the other hand, some suggest that antipathy towards means tests will change. Retirement programs, including some basic-income programs, are means- or income-tested in some European countries and in Australia. In Canada, since such tests are already built into the tax structure (as, for example, in Ontario's GAINS program) — a much more impersonal approach than in earlier years — they already apply to many people. Even if a change were contemplated, however, it would have to be undertaken gradually, in order to give people enough time to take it into account in their retirement plans.

The adequacy of the benefit levels themselves is a difficult matter. It cannot be considered in isolation from the availability of other services to the aged, such as medical care and housing. And, in fairness, it must also involve consideration of programs available for those in other age groups — the disabled for example — who are unable to participate in the labour force. Apart from that, the range of choice is very wide, and the decision will depend ultimately upon the electorate's priorities, the state of the economy, and demographic trends.

Income-Replacement Alternatives

The choice of methods for implementing an income-replacement objective is very wide, though perhaps not so great as first appears. Some methods preclude others. Indeed, to a very considerable extent, the public/private mix may be predetermined by decisions made with respect to other questions, such as the most desirable method of funding.

Funding Alternatives — Pensions may be fully funded, partly funded, or financed on a pay-as-you-go basis. Private-sector occupational pension plans are generally required by law to be fully funded — within certain limits, their assets must be sufficient to meet all accumulated rights to benefits — so that they will be secure even if the employer goes out of business. Partly funded and pay-as-you-go plans are available only to governments. Among the former, there is a further range of alternatives, depending upon what the fund is designed to do. It may be just large enough to avoid frequent changes in contribution rates or, perhaps as has been the case with the CPP and QPP, to provide a part of provincial borrowing requirements. Under a pay-as-you-go system, of course, the question of how the funds are to be invested is not relevant.

Pensions provided by private plans are made secure largely by investing contributions in the obligations of third parties — other corporations or governments. In the case of public plans, or at least those of the federal and provincial governments, the third-party concept is more difficult to apply; in any event, the pension promise is backed by taxing powers. Therefore, the choice of a funding method for public plans has very little to do with security, except perhaps in an indirect way. Instead, the choice depends largely on how the burden of ultimately transferring goods and services to older people will be shared and how the growth and level of GNP will be affected.

The larger the country's GNP when the time comes to honour the pension promise, the less difficult it will be to transfer any given percentage of that GNP to the older population, even if that percentage itself does not change, or changes very little, as GNP changes. If the choice of a pay-as-you-go scheme greatly reduced saving — and, as a consequence, capital formation and growth — or if it caused many people to withdraw from the labour force, GNP could be much lower in the future, and the burden of transfer would increase.

We have pointed out, however, that the relationship between saving and growth is more tenuous than is generally believed. Moreover, we have not been able to detect any highly adverse impact of the CPP and QPP on personal saving; and, to date at least, the plans have increased government saving. Finally, even if personal and total domestic savings were reduced by public pension plans, historical experience suggests that the outcome would more likely be an inflow of foreign savings — which, of course, would raise questions in its own right — than a decline in domestic capital formation.

Although a public pension system that is less than fully funded does not appear to reduce domestic saving significantly, a fully funded system, partly because of its compulsory nature, would undoubtedly generate large savings. Indeed, even without full funding of the CPP and QPP, pension fund assets in Canada will grow more rapidly than GNP.

For some time to come, Canada will require increased domestic saving if it is to reduce its present balance-of-payments deficit, its balance of international indebtedness, and the level of foreign ownership. Large savings will also be required for investment in energy development and for the rationalization of Canadian industry. But a word of caution in the other direction may also be warranted. With high savings levels over the longer run, keeping the economy at full employment would call for either continued rapid growth in investment or deficit financing by governments.

A fully funded public system would also involve fewer disincentives to work than a pay-as-you-go or partly funded system since, by contrast with the latter two, it does not give rise to the type of wealth redistribution that could affect work choices. Our results also indicate, however, that work-incentive effects in the existing public system will not be too important unless there is a substantial lowering of the age of entitlement.

What this suggests is that the choice of either a pay-as-you-go or a partly funded system need not be constrained by fear of the consequence for the growth and level of GNP. Instead, it can be made on the basis of how the burden of transferring goods and services to future pensioners will be shared between them and the work force of the future.

The more the system moves in the direction of full funding, the more the retirees of the future will provide for their retirement needs through their own savings; the more it moves towards the pay-as-you-go approach, the more those needs will be met by the future work force. There are reasons for suggesting that future pensioners should not have to depend entirely on their own savings. Among other things, they have helped to lay the basis for future growth by paying for the education of the future work force and many of the public facilities which that work force will use. It only seems just that they should enjoy some of the returns from such investment.

There are limits, however — uncertain though they may be — as to how far this process can go without affecting the continued viability of the system. Pay-as-you-go schemes are sensitive to demographic bulges such as Canada now faces. As the ratio of prospective pensioners to workers rises, pay-as-you-go contribution rates must also increase. At current CPP and QPP benefit levels, the increased rates would not be that high by international standards (see also Chapter 10). But the greater the increase in promised benefits or the decline in the age of entitlement, the more that contribution rates will rise. Political resistance to such changes can obviously be lessened if they are undertaken in a series of small steps rather than in one or two large increases. Nevertheless, at some point, additional benefits must be paid for by the future recipients themselves if any semblance of fairness is to be maintained.

There are limits in the other direction too. A fully funded system takes care of the demographic bulge by having participants save enough to provide for their own benefits. But such a system, whether public or private, is likely to be adversely affected by inflation; assets are not likely to increase in value as fast as obligations. In contrast, pay-as-you-go schemes are better protected from inflation, since their revenue base increases at least as fast as the general price level. Bitter historical experience with inflation in Germany and France, for example, has led those countries to depend largely on the pay-as-you-go approach.

Thus the choice of a funding option is not clear-cut. It will depend on assessment of future demographic trends and on the potential for inflation, as well as on how these features determine the way that the burden of transfer should be shared.

Sources of Funds — Occupational pension plans may depend upon employer or employee contributions or on a combination of the two. In Canada, the combined approach (a contributory plan) is the more usual; in the United States, where only employer contributions are tax-deductible, noncontributory plans (involving employer contributions only) are in the majority. In any event, the source of occupational plan funds is largely confined to the equivalent of a payroll or earnings tax. Public income-replacement schemes, no matter how they are funded, could draw upon wider revenue sources through the tax system. Partly or fully funded plans may also draw upon their investment income.

The choice of revenue sources also determines how the costs of supplying goods and services to older people are to be shared. To the extent that an income-replacement program involves redistribution of income — and whether it should or not is debatable — there is much to be said for using a wide revenue base.

A payroll- or earnings-based contribution — particularly one that applies only to earnings up to some maximum, as in the case of the CPP and QPP — bears more heavily on lower-income groups; as a percentage of total earnings, the contribution rate declines as earnings rise above the maximum. If the program is used to transfer income to the very poor, those only moderately better off will pay a larger percentage of their income to support the poor than will the rich. On the other hand, linking income-replacement schemes to earnings has an advantage, in that participants perceive them as being related directly to their own efforts, so that they are more inclined to accept their share of the burden. In other words, if the pension plan is viewed more as a compulsory saving mechanism, whereby each participant provides for his/her own share of the goods and services required on retirement, the payroll tax is a more appropriate revenue source.

Use of Funds — The question of the investment of funds is relevant only for partially or fully funded plans. For those plans, there could be a wide range of choice, ranging from unrestricted use to various eligibility conditions for investment. These conditions may set the kinds of investments that can be made — such as government bonds, stocks with good dividend records, and Canadian or foreign securities — and the proportions in which they can be held. Other possibilities could include various methods of breaking up any concentration of funds and economic power that might be held by a relatively small number of large public or private funds.

The choice of options here may directly affect the amount of goods and services accruing to pensioners — as in the case of money-purchase plans — and the security of an individual pension. They may also have a bearing on economic growth, the concentration of economic power, and foreign ownership and control of Canadian industry.

To maximize the amounts accruing to individual pensioners, pension savings must be allocated to their most productive uses — whether in Canada or abroad — consistent, of course, with the security of benefits. If rates of return were generally higher in Canada than abroad, this approach would also be consistent with increasing this country's rate of economic growth in terms of real GNP per capita. Some argue, however, that Canadian pension savings should be used only in Canada, to increase capital formation in this country. It is not unusual, of course, for countries to earmark savings for specific social purposes; when that is the case, however, the purpose should be set out explicitly, and the level and distribution of costs and benefits should be recognized.

Because of its compulsory nature, pension saving might, for example, provide a very effective method of repatriating control of Canadian industry or increasing the domestic financing of capital formation. On the other hand, one might question the fairness of achieving either of these objectives through a payroll tax that would weigh most heavily on lower-income groups. Equally important, the real purpose of investment is not a larger capital stock but increased real income. If savings were invested only in Canada, without regard to the rate of return, the ultimate result could be a much larger capital stock but little increase in income.

Concern has also been expressed that governments will use pension savings for current expenditures or for low-return investments — possibilities that could be avoided by channeling more pension savings through capital markets. It is also feared that private pension funds may be too averse to risks, but that situation could be mitigated by the creation of "venture investment agencies" or the type of re-insurance scheme recently announced by the federal government (see Chapter 6).

Encouraging greater investment in domestic equities, in particular, would naturally increase the possibility that control of Canadian industry would become more and more concentrated in pension funds — a fear that has already surfaced in the United States and Britain. The problem could be aggravated if public income-replacement programs were to become more fully funded, unless action was taken through either the adoption of some version of the Swedish pension fund investment system or the auctioning-off of public pension funds to private institutions.

The Benefit Structure — Many of the questions of greatest interest to individuals, including what opportunities are available to build up their benefits and how large those benefits will be in terms of real purchasing power, are related to the benefit structure. The level and structure of benefits — including rules for eligibility and coverage — also play a major role in determining what proportion of GNP will ultimately be allocated to older people, how those benefits will be shared among various individuals and groups, and what the costs will be to individual employers.

Some of the possible choices are: benefits based on various calculations of earnings from career-average to best earnings; benefits protected through price and wage indexation and shorter vesting requirements; benefits proportional to earnings or decreasing with higher earnings (under public plans only); and various replacement ratios, ages of entitlement, and eligibility conditions.

The more that benefits are based on best earnings, the more costly the system but also the higher the ultimate level of benefits and the better the protection provided pension rights against price and wage increases. As for post-retirement benefits, CPP and QPP payments are already indexed to the consumer price index; but, in the absence of an investment that is proof against unexpected inflation, such indexation is difficult for private plans.

There can be no doubt about the urgent need to protect retired people from the effects of inflation. On the other hand, post-retirement indexation of income-replacement pensions to wage increases is, we would think, a much less urgent matter. In the absence of such indexation, and even with post-retirement price indexation, the real income of pensioners will naturally fall relative to that of workers. On the other hand, building wage indexation into the system, whether public or private, would greatly increase rigidities, making it less amenable to modifications in line with the state of the economy. For the private system in particular, it could pose even greater problems than price indexation.

The protection of benefits in private-sector occupational pension plans is also greatly reduced at present by the relatively long periods required for vesting as well as by locking in provisions. Shorter vesting periods with continued provision for locking into deferred pensions provided by the employer would not much affect employer costs unless such pensions were indexed during pre-retirement years. Without some form of inflation protection, mobile workers would still face losses of accrued pension benefits during inflationary periods.

The way in which total benefits are shared among individuals will depend, among other things, on whether individual benefits are proportional to earnings or whether they decrease with them (a progressive system). Progressive replacement rates can be achieved through an earnings-related system offering a minimum benefit and replacement rates that decline with rising earnings, or through an income-replacement system where benefits are proportional to earnings, accompanied by a basic-income system that is not related to earnings. At present, the United States follows the first course; Canada has a mixture of the two systems, since the CPP and QPP (when they mature) will redistribute wealth to lower-income groups.

The choice of an income-replacement system in which benefits are proportional to contributions implies a complete separation of the income-replacement and basic-income systems. There are several advantages to this approach. First, the required basic-income targets would be financed through general taxation, and CPP and QPP benefits would then be appropriately financed by the payroll tax. Second, all workers would receive an equitable return on their contributions; in the present Canadi-

an system, higher-income workers might, before long, find the return on their contributions too low and support for the system could weaken. Finally, with benefits proportional to contributions, the system could, if so desired, be more flexible by allowing people to opt out upon proof of adequate coverage elsewhere.

Changing the benefit structure by lowering the age of entitlement, increasing income-replacement rates or extending eligibility would obviously have a significant impact on the total resources accruing to older people. The Council recognizes the need for better coverage of groups such as mobile workers and housewives. But changes of this nature cannot be considered in isolation from the system. The way in which the costs of such changes are shared between future pensioners and the then-current work force (the funding decision) or among various income groups (the revenue-source choice) will affect the ultimate viability of the system itself.

The Public/Private Mix — There is wide variation over time and among countries in the public/private mix of income security systems for the old. Choices range from a public system for both basic income and income replacement, at one extreme, to a system based on individuals and families, at the other. Combinations in between would include a public system for basic income and a private system only for income replacement, such as exists in Australia, or a mixed public/private system for income replacement, as in Canada. Within the private system, there are various mixes of institutional and individual schemes possible.

It would not be practical to rely completely on individual and family support in any urbanized industrial society. Moreover, many of the public/private mix options are closed automatically by the choices made with respect to other structural issues. By and large, governments must accept responsibility for any program that involves large-scale redistribution of income. Thus, to the extent that the basic-income objective or the need for some transfers between different generations is stressed — as in the case of blanketing-in, for example — the government system will expand. What remains are largely considerations that bear on the choice between government or private fully funded income-replacement programs.

Private pension plans provide greater freedom of choice, and they can be better tailored to the differing needs of various workers through the collective bargaining process. In addition, since their funds are invested through the capital market, they are generally channeled into the most productive uses. On the other hand, public plans seem better able to adjust their post-retirement benefits for inflation and growth, and they also solve the mobility problem. Moreover, it has proven easier in most countries to achieve wide coverage of the labour force through public, rather than private, plans. Government plans may involve even greater concentration of power than private systems, however, and they raise questions about the level of government intervention. The ultimate balance will depend upon whether means of removing the disadvantages in either system can be found or, apart from that, upon straight political choice.

10 Policy Recommendations

Canada can ensure its older people an adequate income without risk to the economy. To be sure, there will be many more of them — perhaps as many as one in every three Canadians aged 20 and over. Nor will the job be easy; it will involve continuous, careful and prudent choice from among a wide range of policy alternatives, as circumstances change.

One possibility would be to allow the system to continue to evolve in its present form and to attempt, through minimal adjustments, to ensure its financial soundness and to alleviate present inadequacies. Without detracting in the least from the present system's positive points, however, the Council does not feel that this would be a viable option. It might do very little, for example, to alleviate the continued high incidence of poverty among older women or to improve the coverage and benefit protection of the private system.

The cost of the retirement income system, in terms of the proportion of GNP required to support older people, will increase even if the system continues in its present form. The greater the increase in the number of pensioners relative to workers, the higher that proportion will be, even without improvements in benefits. We would be surprised, however, in view of the inadequacies of the present system, if Canadians were not prepared to accept some additional increases in cost in order to improve benefits, even if a scenario of low demographic growth were to evolve. But there are limits to this process. The higher the total cost of these programs, the less the proportion of GNP that can be devoted to achieving other national objectives and the more important it becomes to ensure that the burden is shared fairly between the beneficiaries (through their own saving) and the future work force.

COSTING THE OPTIONS

Depending on the demographic-growth assumptions that are selected, there are wide variations in the percentage of GNP that would be required in the critical year 2031 to provide older people with any specified benefit package (Table 10-1). So long as benefits remain closely linked to real wages, that percentage changes very little, no matter what growth in those wages is assumed. Among the options we have attempted to cost are the proposals made by the Canadian Labour Congress in its submission to the Royal Commission on the Status of Pensions in Ontario.[1] The brief itself did not contain detailed calculations of cost.

The basic-income package must be financed from general taxation, which will bear mainly on the future work force. Table 10-1 also shows what proportion of their contributory earnings the workers of 2031 would have to pay in order to support income-replacement benefits for those aged 65 and over if they had to bear the whole burden of transferring the equivalent goods and services to that group and if a pay-as-you-go system were the only way to accomplish this. No one, as far as the Council is aware, is proposing anything like the burden on the work force that is implied by some of the higher pay-as-you-go rates in the table. Rather, the table is designed to highlight the types of choice that may have to be faced with respect to improving benefits within specific cost limits or sharing the burden more widely as those costs rise.

If present OAS and GIS benefits were not augmented in line with real wage increases (Option 1), the GNP cost would decline over time — even in the context of low demographic growth — but benefits would fall sharply in relation to the going real wage level. For those totally dependent on the basic package, this would soon imply a standard of living far below that of the average industrial worker. Options 2 or 3 would avoid such a development. Option 3, which is roughly equivalent to the proposal made by the Canadian Labour Congress to the Royal Commission on the Status of Pensions in Ontario, would also provide current beneficiaries with an immediate catch-up of OAS and GIS benefits in relation to the

TABLE 10-1

EXPENDITURES ON SELECTED RETIREMENT INCOME POLICY ALTERNATIVES AS PERCENTAGES OF GNP AND CONTRIBUTORY EARNINGS UNDER VARIOUS DEMOGRAPHIC GROWTH SCENARIOS, CANADA, 1981 AND 2031[1]

		Demographic growth to 2031		
	1981	High	Medium	Low
			(Per cent)	
A NORMAL RETIREMENT AGE 65; NO ACTUARIAL ADJUSTMENT TO AGE 60				
Basic income package				
(1) Maintain present OAS/GIS benefits, including price indexation	2.1	1.0	1.4	1.9
(2) Maintain present benefits, but index to wages		2.6	3.5	4.9
(3) Canadian Labour Congress proposal[2]		2.7	3.6	5.0
(4) As for (2), but increase selectivity by income-test of combined OAS/GIS		1.1	1.5	2.0
Income-replacement packages				
(5) Maintain present benefit levels	1.0	2.8	3.8	5.4
	(3.6)[3]	(7.3)	(10.0)	(14.2)
(6) Double the present benefits		5.5	7.6	10.8
		(14.5)	(19.9)	(28.4)
B NORMAL RETIREMENT AGE 65; ACTUARIAL ADJUSTMENT OF INCOME-REPLACEMENT PACKAGES TO AGE 60, WITH ALL WITHDRAWING FROM LABOUR FORCE AT AGE 60				
Basic income package				
(7) Maintain present OAS/GIS benefits, including price indexation		1.1	1.5	2.1
(8) Maintain present benefits, but index to wages		2.7	3.7	5.1
(9) Canadian Labour Congress proposal[2]		2.8	3.8	5.2
(10) As for (2), but increase selectivity by income-test of combined OAS/GIS		1.2	1.6	2.3
Income-replacement package				
(11) Maintain present benefit levels		2.8	3.8	5.4
		(7.3)	(10.0)	(14.2)
(12) Double the present benefits		5.5	7.6	10.8
		(14.5)	(19.9)	(28.4)

average industrial wage. Then the payment for each ensuing group that reached age 65 would bear the same relation in the initial year to the then-current average industrial wage. After that point, however, the CLC proposal calls only for price indexation, so that there could still be a problem for those who live a long time in retirement. As they stand, either Options 2 or 3 would build an additional element of automaticity into the system.

It is worth noting also that through the use of the selective approach (Option 4), full wage indexation could be provided for those who depend entirely on the basic-income programs at a GNP cost of only 2 per cent, even in the context of low demographic growth. Alternatively, the basic-income benefits for that group could be increased substantially and yet remain within a limit of 5 per cent of GNP.

Whether any specified level of basic-income benefits will be adequate will, in our opinion, be a matter for the continuing exercise of judgment. Obviously that judgment would depend in part upon the availability of income-replacement programs as well as the provision of services for the old.

Our calculations suggest that with slow population growth, the maintenance of present CPP and QPP income-replacement benefits, together with a wage-indexed basic-income package, would absorb about 10 per cent of GNP by 2031. Expansion of the existing private system on top of that — assuming maintenance of its present benefit levels but a rise of labour force coverage from 40 to about 60 per cent — would increase that proportion to about 11.8 per cent. This compares with between 8 and 9 per cent of GNP — and a much smaller GNP than Canada can expect in the coming century — already devoted by some European countries to their older people (Table 3-1). Overcoming the inadequacies of the present system would mean a further increase in the proportion of GNP devoted to the elderly. For example, we calculate that to pro-

vide double the income-replacement benefits of the present CPP and QPP to the whole labour force would, under the low-demographic-growth scenario — and, again, including the basic-income package — require about 15 per cent of GNP by 2031.

No matter what level of combined benefits the economy as a whole can afford, however, as that level rises, it will become increasingly important to ensure that the burden of providing real goods and services to the older generation is not borne entirely by the work force of the time. To maintain the present CPP and QPP benefit levels (a maximum of 25 per cent of the average industrial wage, price-indexation after retirement, and survivor benefits equal to 60 per cent of the basic pension) would, under a pay-as-you-go system, call for the rate to rise to 14.2 per cent of contributory earnings under the low-demographic-growth scenario (Option 5). By contrast, the work force of 2031 could provide the same level of benefits for themselves with an advance funding contribution rate of about 9 per cent.

Again, under the low-demographic-growth assumption, if benefits were doubled (increasing from 25 to 50 per cent of average industrial earnings, with a corresponding doubling of survivor benefits), the corresponding pay-as-you-go and advance funding rates would also double, to about 28 per cent and 18 per cent, respectively (Option 6). Increasing survivor benefits to 70 per cent of the basic pension, as recently recommended by the Canadian Labour Congress, would involve a small additional increase in the two rates of about 0.5 percentage point. Provision of the same total benefits, on an actuarially adjusted basis, for early retirement at age 60 (Option 12) would not involve higher income-replacement contribution rates; to the extent that those electing earlier entitlement actually dropped out of the labour force, however, higher basic-income costs would be incurred. That option would, as noted earlier, raise additional problems (see Chapter 7).

BASIC-INCOME POLICIES

Ensuring a basic income for all older people, regardless of their previous circumstances, will remain a continuing concern of social policy in Canada. The basic elements of this policy have been the OAS and GIS programs. These programs have come to provide the foundation for the retirement income planning of many Canadians, and any large or rapid change would greatly increase the uncertainty surrounding this process. The Council feels that the emphasis on these programs should therefore continue. Much could be done, however, to clarify their objectives and to adapt them in a regular but flexible fashion to economic and demographic trends and the evolving needs of the older population.

Unfortunately, age remains an important element of the poverty problem in Canada. There has been substantial improvement in the income position of families with heads aged 65 and over; by 1977 only 20 per cent of these families were in the low-income category, as calculated by Statistics Canada, compared with 44 per cent in 1961. But 60 per cent of unattached individuals aged 65 and over, most of them women, were still in the low-income group in 1977, down from 70 per cent in 1961.[2] The maximum OAS/GIS benefit for married couples was raised to $6,753 in 1979, slightly above the national average low-income line of $6,563 for that group. At the same time, the maximum benefit for unattached individuals was increased to $3,654 a year, which was still well below the Statistics Canada national average low-income line of $4,527.

Particularly because of the growing proportion of older women, the incidence of lower incomes among the elderly unattached members of our society will continue to be a problem for many years to come. Quite simply, there will remain a hard core of Canadians who have been unable to build up adequate earnings-related pension benefits. The basic-income package should be designed not only to prevent this group from falling below some minimum income level in real terms, but to provide a flexible way to improve their benefits over time.

There are, of course, several possible measures of Canada's low-income line, all of which must be interpreted with caution.[3] We believe, however, that the establishment of the principle that the basic-income package should be explicitly related to some measure of low income is far more important, at this time, than the choice of a particular measure or calculated benefit level. Therefore,

Recommendation 1

We recommend that the Government of Canada explicitly state that the objective of the OAS and GIS programs is to prevent the income of any individual aged 65 and over from falling below some acceptable measure of a low-income cut-off, with that measure to be determined in accordance

*with the general economic and social policies of the time.**

Whatever the choice of benefit level at a particular point in time, serious consideration must be given to the question of how these levels should be adjusted over time. One method is already built into the OAS and GIS programs. Because they are linked automatically with the consumer price index, benefits are prevented from declining in real terms. We view this feature as a necessary minimum for the adjustment process. Accordingly,

Recommendation 2

We recommend that all payments under the OAS and GIS programs continue to be indexed to the consumer price index.

Even with benefits price-indexed, however, they would tend to decline over time relative to the standard of living of those currently in the work force. Our projections suggest that there will be scope for improving benefits, but that scope will be greatly affected by demographic and economic trends, by the fiscal positions of the federal and provincial governments, and by changing perceptions of poverty — features that cannot be taken into account adequately by any automatic formula. In fact, Canadian governments have frequently taken these matters into consideration, and major changes to the Old Age Security Act have been made on a number of occasions since the program was established in 1952. It would be useful from the viewpoint of pension planning, as well as fiscal-policy planning, to make this process more systematic and to expand it so that the income problems of the growing numbers of older people are ensured consideration by Parliament and the public at regular intervals. Therefore,

Recommendation 3

We recommend that the Old Age Security Act be reviewed at regular intervals and that the review process include public hearings and a published report by the appropriate Committee of Parliament. We further recommend that the Committee appraise various possible benefit levels in relation to the distribution of income of the elderly; various statistical measures of the low-income cut-off lines; the facilities and services provided to the elderly by public authorities at all levels; the standards of public support provided by the provincial and municipal governments to other persons in need; as well as the best possible forecasts of the costs of such benefits and their relation to demographic, social, and economic trends.

Implementation of this recommendation would provide a flexible method for reviewing the existing benefit structure in line with evolving needs and the capability of the economy. In its deliberations, the Committee would undoubtedly wish to consider whether any suggested changes should be implemented through an increase in OAS or GIS benefits, or some combination of the two. In this connection, the Council wishes to reiterate the importance of the universal OAS program as a basic cornerstone for retirement income planning. It notes too that over time the GIS should decline in importance, as increasing numbers of Canadians are able to qualify for more adequate earnings-related retirement benefits. In order to retain the status of OAS and yet take advantage of the direction in which the GIS will evolve,

Recommendation 4

*We recommend that, while OAS payments should be maintained at approximately their present level in real terms (as per Recommendation 2), any increase in the basic income of the elderly take the form of discretionary changes in the Guaranteed Income Supplement, which would be made in accordance with the considerations set out in Recommendation 3.**

Whatever the choice of adjustment method, for the work of the Committee to be truly effective, there would be a continuing need to monitor the changing demographic scene and to develop better data and research on the needs and problems of older people. Accordingly,

Recommendation 5

We recommend that Health and Welfare Canada, with the assistance of Statistics Canada and the federal Department of Insurance, be assigned responsibility for the regular monitoring of demographic trends and of the impact of the changing age composition on the economy; the development of more adequate data and research bearing on the needs of older people; and the co-

*See the dissenting comments by Messrs. McCambly and Pearse at the end of this chapter.

*See Mr. Pearse's dissenting comment at the end of this chapter.

ordination of background work for the parliamentary Committee reviewing these subjects.

The range of work that could be undertaken in this respect is very wide. As a minimum, the Council sees specific requirements for the development of information that would improve the prediction of birth rates, for an increase in the availability of data that would trace the lifetime patterns — for example, the savings habits and work experience — of individuals through to retirement age, and for an expansion of information on the needs of, and services available to, older people.

In general, what we are suggesting are measures to increase direct assistance to older people in need. It might be noted that this approach would weaken the rationale for special income tax exemptions for the elderly. The existing provision in the Income Tax Act for such exemptions was first implemented in 1948, well before the recent increases in Canada's basic-income programs. Any suggestions about changing exemptions for older people, however, should be considered only in the context of the broad range of all income tax exemptions.

INCOME-REPLACEMENT POLICIES

If there is one feature that emerges clearly from our projections, it is that an increasing proportion of Canada's total goods and services will be required to provide retirement benefits for the older population. That proportion would increase even if nothing were done to improve present benefits. It will increase even further if action is taken — as we believe it must be — to extend the coverage of the labour force by adequate income-replacement plans or to improve benefits for such groups as dependants and survivors, housewives, or mobile workers.

If the retirement income system is to remain viable as that proportion increases, it will become more and more necessary for the future retirees themselves to bear an increasing share of the burden — to shift it away from the future labour force, which will be growing more slowly. In brief, particularly as benefit levels rise they will have to be increasingly pre-funded through saving for retirement. This could be accomplished by increasing contribution rates and expanding the present CPP and QPP programs; through expansion of private pension plans — particularly occupational plans; or through some combination of the public and private approaches. The Council feels that a mixed public/private system should remain the cornerstone of Canada's income-replacement policies but that this will necessitate a greater degree of co-operation and partnership between government and the private pension industry than has existed in the past.

By international standards, the contribution rates that would be required to support the present CPP and QPP benefits on a pay-as-you-go basis during the critical 2015-30 period are not unreasonably high, even if demographic developments were to follow a low-growth scenario. For example, the employer/employee contribution rate for the U.S. social security scheme is already over 10 per cent, and it is expected to rise further. And, bearing in mind the volume of savings that will be generated by other parts of the income-replacement system, we are not convinced that moving immediately to fully funded rates for all future benefits under the present system is either necessary or desirable. Continued partial funding of the present system could, however, be used to prevent the contribution rate from significantly exceeding the rate that the work force, during the critical period from about 2015 to 2030, would incur to fully fund similar pension benefits for themselves. Therefore,

Recommendation 6

We recommend that the Government of Canada propose to the provincial governments that contributions to the Canada and Quebec Pension Plans be increased moderately every few years, beginning in the early 1980s, in order to maintain some growth in the funds during the remainder of this century and to reduce the burden that will otherwise fall in the early decades of the next century on those who are now young workers.

To implement this recommendation under our extreme case — the low-demographic-growth scenario — would require that one way or another the contribution rate be raised to about 9 per cent within 15 years. The more quickly that rate is reached, the greater will be the investment fund generated. If it becomes evident that the low-growth scenario will not occur, then the contribution rate could be lowered. For example, if the medium-growth scenario were to occur, the rate would need to be raised to only about 7 per cent within 15 years and maintained at that level to 2051.

Implementation of Recommendation 6 would, in effect, place a limit on the share of now-promised pension benefits that would have to be borne by the work force during the critical period of the coming century. Benefit levels above those now promised by the CPP and QPP should, in our opinion, be financed

largely, if not entirely, by the savings of the future retirees themselves.

One of the deficiencies of the present public income-replacement system is that parents who care for young children at home may receive less, if any, employment income for a certain period, with the result that their pension credits may be reduced. In order to overcome this deficiency, the Province of Quebec has passed legislation that will allow parents caring for children under the age of 7 to drop those years out of the lifetime earnings calculation on which the QPP pension is based. Similar legislation has been passed by the Parliament of Canada but it has not yet been ratified by the governments of Ontario and British Columbia. Although the provision may benefit higher-income families more than lower-income families (see Chapter 4), it is one step towards providing more-adequate pension benefits for women (as well as men). For this reason, therefore, and to bring the CPP into line with QPP,

Recommendation 7

We recommend that the governments of Ontario and British Columbia ratify the provisions now existing — in the Canada Pension Plan Act but not yet proclaimed — that would allow family allowance recipients to drop those years in which they had children under 7 years of age from the calculation on which the amount of their retirement pension is based.

Increasing benefits through expansion of the present occupational pension system would permit them to be tailored to the requirements of workers in individual industries. It would mean less government intervention, avoid concentration of retirement savings in government hands, and reduce fears that such savings might not be allocated to their most productive uses. It would also result in very large pools of savings. Our calculations suggest that if occupational plans were to provide an income-replacement ratio equal to a further 25 per cent of the average industrial wage (that is, in addition to the 25 per cent now provided by the CPP and QPP) for the whole labour force, their funds would triple in size. Under the low-demographic-growth scenario, this would imply that, by 2031, the funds would be equivalent to twice the size of GNP, or slightly greater than the country's total capital stock, assuming present capital/output ratios were to continue.

The real question, of course, is whether the present deficiencies of the private occupational pension system can be overcome — deficiencies that are worth recalling here:

— The present coverage of private plans is very inadequate. As recently as 1976 only 46 per cent of employed paid workers were covered and the coverage was very uneven among industries and sectors. Half of those workers covered were public-sector employees. The coverage was particularly low in the trade field, particularly retail trade, and in community, business, and personal services (Chart 2-5).

— Preservation of accrued benefits as prices or real wages rise is also very limited. Although most government-employee plans are of the final-average or average-best-earnings types, which provide a good deal of pre-retirement inflation protection, less than one-third of private-employer plans are of those types. Moreover, because of inadequate vesting and portability features, only a small percentage of those participating in private plans are likely to qualify for maximum benefits. And, while most public-employee plans provide for post-retirement price indexation, most private-employer plans do not.

— Many private occupational plans have inadequate survivor benefits.

The Canadian Labour Congress has recommended to the Royal Commission on the Status of Pensions in Ontario that the present CPP and QPP system be expanded, based on the premise that the private plans will not, in fact, be able to overcome these deficiencies. The CLC believes that the benefit improvements needed would involve an assumption of risks that most employers would not be willing or able to accept.[4]

The CLC proposes that the CPP and QPP be expanded to provide a replacement rate of 50 per cent of the earnings of an individual at the average industrial wage, compared with the present target of roughly 25 per cent, to be financed by increased contribution rates. Their proposal would take care of the inadequate coverage of the existing private system; it would directly increase the protection of benefits in the face of inflation and mobility; and it could allow for a range of choice in contribution rates as the demographic scenario evolved.

For those proposals, too, the Council has prepared estimates of cost based on its own population and labour force projections. Once again, the level of contribution rates could be set so as to limit, to varying degrees, the burden on the work force during the critical period in question. Secondary

considerations would include the size of the savings fund that could be generated, the impact on the financial position of provincial governments, and the size and timing of changes in contribution rates.

Our calculations suggest, for example, that to fully fund the proposed increase in benefits from 1980 on (though still leaving an unfunded liability for benefits accrued to date) would require an employer/employee contribution rate of 18 per cent of contributory earnings.[5] This is the rate that should be compared with that required under pay-as-you-go or partly funded alternatives. Under a complete pay-as-you-go system, the work force of 2031 would, by way of illustration, face contribution rates of 19.9 and 28.4 per cent under the medium- and low-demographic-growth scenarios, respectively (Table 10-1). In other words, increasing the contribution rate for an expanded CPP and QPP scheme to 18 per cent in 1980 would be sufficient, even under a low-demographic-growth scenario (and assuming a real rate of return on the invested funds of 2.5 per cent), to pay the increased benefit from that year until the bulge of the retired population disappears and to bring the required contribution rate for 2031 down by 10 percentage points. Moreover, it would generate a large pool of savings in the interim. Those savings would amount to roughly 115 per cent of GNP at the fund's peak in about 2031, or to two-thirds of the country's capital stock at that time (given a continuation of the present ratios of capital to output). The fund would be extinguished around 2051, when the population bulge will disappear.

By way of illustrating what amounts to the opposite extreme, the increased contribution rates could be phased-in over a much longer period. For example, the higher benefits could be financed by increasing the contribution rate from 1980 on by 0.5 percentage point a year, from its present level of 3.6 per cent, to reach a maximum of 22 per cent (in the year 2017), where it would remain during the critical period. Under this option, the work force of 2031 would, under the low-demographic-growth scenario, face a rate 6 percentage points lower than the pay-as-you-go rate, and the accumulated investment fund would also be considerably smaller — amounting to a maximum of about 50 per cent of GNP, or roughly one-third of the capital stock, by 2021. Under this more flexible approach, contribution rates could also be revised easily (that is, not increased as much) should population growth turn out to be greater than that implied by our low-demographic-growth scenario.

What the CLC proposal would entail, however, is considerably more government intervention in the retirement system than at present. The Council is perhaps less pessimistic than the CLC about the ability of private plans to overcome the present deficiencies. We wish, however, to emphasize strongly these two points. First, time is very rapidly running out for accomplishing the required improvements; second, it is highly unlikely that they can be achieved in the absence of some form of partnership with government.

The Council has discussed at length some of the ways in which government and private employers could try to overcome jointly the deficiencies in the present private system. One approach that could retain many of the best features of the private system, while moving quickly to overcome its deficiencies, would involve the establishment of a fully funded supplement to the Canada and Quebec Pension Plans, with an option for employers to contract-out, as in the present British system.

Such a supplementary plan could be designed to provide a further pension equal to, say, 25 per cent for the individual at the average industrial wage, on top of the present 25 per cent, with immediate vesting and locking-in. Rights to the additional pension would be adjusted for price increases after retirement. Employers could contract-out only if they provided benefits at least equivalent to those in the public scheme, except — and this would be a major attraction — that those benefits would be fixed in cash terms at retirement. The state would assume responsibility for adjusting all benefits to the equivalent of the additional guaranteed pension, whether contracted-out or not, for inflation after retirement. That part of the scheme could be financed on a pay-as-you-go basis. Alternatively, an inflation premium might be charged, as in the federal public service superannuation plan, with indexation (as now proposed for that plan) subject to some sort of limit.

This type of plan would set the minimum standard for occupational plans, and it could be used, as in Britain, to administer the deferred pensions of employees who leave contracted-out plans. In Canada, however, this function would presumably be handled by agencies within each province, preferably with representation by employers and employees.

Such a scheme could provide many advantages with respect to coverage, benefit protection, and portability. Like some of the funding options that could be used to finance the CLC proposals, it would, of course, also raise problems — though by no

means insurmountable problems — as to how the funds should be invested or insulated from political influence. Moreover, we recognize that even this scheme would involve much more government intervention in the retirement field than at present, and that could reduce the incentive for improvement in the private sector. We have noted too that steps have been taken recently to improve the adequacy of private pension plans — notably the expansion of multi-employer schemes, as in the construction industry, and the proposal of the Canadian Life Insurance Association for improving portability (see Chapter 7). For these reasons, the Council is not prepared at this time to recommend the establishment of a supplement to CPP and QPP benefits. Instead, we wish to propose, for the time being, certain more limited steps to improve the viability of the private pension system, while urging employers and labour to expand coverage of the system without delay.

We have noted some of the obstacles to improvement and extension of benefits under private pension plans. For small business, the costs and complications of administering their own pension plans are said to be deterrents. Private employers are generally uneasy also about what they consider to be an open-ended commitment to index benefits to prices. Furthermore, because of the wide variety of private-employer plans and the range of actuarial assumptions used in them, it has been difficult to establish portability among plans. This works to the severe disadvantage of persons who work for several employers in the course of their career, and the problem is further exacerbated by inflation. Because the tax base tends to increase with inflation, governments are in a much better position to prevent the redistribution of real income away from pensions that inflation entails. Therefore,

Recommendation 8

*We recommend that a co-ordinated plan be established by the federal and provincial governments to encourage and induce the extension and improvement of private occupational pension plans. As part of such a plan the federal government should be prepared to sell price-indexed annuities. Such annuities would be limited to purchases by individuals out of the proceeds of registered retirement savings plans, and by pension funds that meet defined standards, on behalf of individuals, at the time of or after their retirement from the labour force. Such defined standards would include the early vesting of contributions made on behalf of individual employees and the transfer of such vested contributions to special registered retirement savings plans of employees leaving one employer to work for another. The amount to be transferred should not be less than the employee's contribution plus accumulated interest or the actuarial value of accrued benefits, whichever is greater. Employers not wishing to establish formal pension plans should be encouraged to contribute to employees' special registered retirement savings plans. Funds deposited in special registered retirement savings plans could not be withdrawn prior to an employee's retirement, at which time the proceeds could be used to purchase price-indexed annuities.**

In order to place some limit on the federal government's commitment, such annuities could, perhaps, be provided in amounts limited to the protection of pensions equivalent to some specified proportion of the average industrial wage. Moreover, we are not proposing that the federal government supply deferred annuities on an indexed basis, since savings accumulated in tax-free RRSPs under inflationary conditions will usually increase fairly rapidly in comparison with inflation rates — certainly more rapidly than funds locked into deferred pensions provided by sponsors.

We recognize too that there are difficulties in calculating the vested pension to be transferred to an RRSP. These difficulties exist even under present pension benefits legislation, however, and for that reason proposals for similar transfers require the approval of pension supervisory authorities. We wish to stress that this approach would by no means eliminate all of the deficiencies of the present private pension system, but it would be of assistance in expanding the post-retirement price indexation of benefits. It would do considerably less for the preservation of accrued benefits prior to retirement. To the extent that funds transferred to special RRSPs were reinvested in the market as nominal rates of interest rose, it could provide somewhat better pre-retirement protection for mobile workers against unexpected price increases than if their vested benefits had to be locked into a deferred pension or annuity. It would induce pressure for shorter vesting periods and, in effect, provide mobile employees with a better career pension than many could expect at present. To further enhance improvement in this regard, however,

*See the dissenting comments by Messrs. Kaplansky, McCambly, and Pearse at the end of this chapter.

Recommendation 9

We recommend that the federal and provincial governments consider requiring, as a minimum, graded vesting of employer-funded pension credits, with 20 per cent being vested each year until full vesting is reached after five years of employment with the plan sponsor. We further recommend that all vested pension credits be locked-in until retirement or that their value be deposited in a special locked-in registered retirement savings plan for employees. When the contributions plus accrued interest of employees who change jobs exceeds the value of their deferred annuity, the excess should be returned to them.

It should be recognized that Recommendations 8 and 9 will not ensure expanded coverage and that they will, in contrast with the present system of locking vested benefits into a deferred pension provided by the employer, add somewhat to employer costs. In other words, they will require private plans to assume some of the burden of mobility, albeit in exchange for an indexed post-retirement benefit that many employers find difficult to provide on their own. By so doing, it will, we hope, encourage private employers to respond by moving ahead rapidly themselves.

In this respect, the Council again draws attention to the prospectus recently set forth by the Canadian Life Insurance Association (CLIA) for providing portability among private plans (see Chapter 7). Unfortunately, not all of the details have been worked out, and firms in other industries such as manufacturing, with characteristics much more diverse than life insurance companies, could find it much more difficult to implement. As part of the co-ordinated plan suggested above, however, these proposals should be examined intensively by government, industry, and labour.

If it could be coupled with the special registered retirement plans and with post-retirement price indexation through the annuities suggested above, the CLIA plan could go a long way in filling some of the major gaps in private pension plans. What would still be lacking, of course, is the incentive for employers — particularly small businesses — to adopt pension plans in the first place. The Council urges consultation between governments and industry associations in those sectors where pension coverage is inadequate, to search for solutions that would avoid the need for further large-scale government intervention in the pension industry.

Whatever choices are ultimately made with respect to the public/private mix of income-replacement policies, there will be a continuing role for private plans. If the private pension industry is to administer effectively the much larger volume of retirement savings that will be generated in the future, additional action will be required to strengthen it, to enhance its acceptance by participants and the general public, and to ensure an adequate level of benefits at minimum cost.

There has been much criticism of the investment performance of private pension funds in the 1970s. The Council's work has been directed more at the aggregate impact of the retirement income system on the economy, and it has not looked in detail at investment procedures. The projected growth of the pension system, as well as prospective developments in financial markets, suggests very strongly, however, that it will be important to make a wider variety of investments accessible to Canadian pension funds over time. The supply of mortgages for investment, for example, will not be rising as rapidly in the future as in the recent past, and it may well be that the supply of high-quality Canadian equities will not rise as rapidly as pension savings. More generally, it could well be that, in the not-too-distant future, Canadian savings will turn out to be in excess of domestic requirements. The problem will be alleviated by measures to make it easier for pension funds to invest in new and small enterprises, such as those recently suggested by the federal government (see Chapter 6), but it will not be removed.

One very obvious possibility is an increase in the holdings of high-quality foreign securities by Canadian pension funds. The ultimate limitation on such holdings is not provincial pension benefits legislation but the provisions of the federal Income Tax Act. At present, most Canadian pension funds do not, in fact, invest up to the allowable limits, but greater use of foreign securities might provide higher rates of return on investment portfolios without increased risk. With the projected growth in pension funds, the present 10 per cent limit on holdings of foreign securities would be a much more severe constraint. Immediate easing of this constraint might increase Canada's present balance-of-payments difficulties; but, over the longer run, it would seem to be a logical and necessary move. Therefore,

Recommendation 10

We recommend that, as the balance of payments and other circumstances permit, the Government of Canada amend the Income Tax Act to permit an

*increase in the proportion of the assets of Canadian pension funds that may be held in the form of foreign securities.**

Some will undoubtedly voice concern about such a suggestion. There is a strong feeling that Canadian savings should be used for development in Canada. In reply, one must ask whether any one group should have to bear the burden of Canada's economic development. To meet the primary objective of pension policy — that is, to guarantee the return to pensioners — it is not the stock of capital in Canada that should be the concern, but rather the stock of capital, wherever it may be located, that will provide an adequate return to our pensioners. The costs of Canada's economic development should, in brief, be borne by Canadians generally and not just by some. In addition, it must be remembered that the real goal is an increase in income, not simply an increase in Canada's capital stock.

Implementation of Recommendation 10 might also help to prevent undue concentration of Canadian equities in large institutional funds. In this connection, it has been suggested that pension funds, which are normally tax-exempt, should receive the dividend tax credit that is available to individuals, in order to further encourage their participation in equity markets. The decision not to provide the credit to tax-exempt institutions when the Income Tax Act was changed in 1972 was deliberate, and we do not feel that circumstances have altered in a way that would warrant changing this earlier decision.

There has been a continuing attempt in Canada, particularly on the part of the Canadian Association of Pension Supervisory Authorities (CAPSA), to promote greater standardization of the various pension benefits standards acts in Canada. Further alignment of these acts could be of considerable assistance to firms whose operations extend across provincial borders. It would reduce the costs of administration and impediments to both the movement of labour between provinces and the establishment of pension plans by more employers.[6] Therefore,

Recommendation 11

We recommend that the federal and provincial governments take measures to further standardize the provisions of the Canada Pension Benefits Standards Act and the relevant provincial acts.

Some provinces have already amended their benefits standards legislation in one particularly important area — the provision of information to pension plan participants. Quebec's Supplemental Pension Plans Act, for example, now requires that information on plan investments be made available to participants at least once a year and that information on their accrued benefits be provided to individual participants at intervals of not more than three years. Such provisions could assist greatly in the pension planning of individuals and focus greater emphasis on the responsibility that pension fund managers bear towards plan participants. They would also be a substitute for more detailed government supervision of pension plan operations, particularly if they were reinforced by the presence of employee and employer representatives on pension boards. Since most of the required information would already be available in computerized form for the management of the funds, such procedures should not involve any substantial additional costs, particularly if more standardized benefits legislation could be agreed upon by the provinces as per Recommendation 11. Accordingly,

Recommendation 12

We recommend that, as part of the co-ordinated planning referred to above, the federal and provincial governments undertake jointly, after consultation with industry and labour, to amend the relevant pension benefits legislation to require representation of plan participants, as well as sponsors, on pension plan advisory committees and to require public disclosure of information to occupational pension plan participants or their bona fide agents. We further recommend that this information consist of at least the following:

(1) The plan text and amendments, to be made available on request for collective bargaining purposes;

(2) A written explanation of the plan, including its rules, the basis for employer and employee contributions, and the benefits on termination of employment, death, or retirement;

(3) Annual statements of portfolio composition and rates of return and triennial statements of the actuarial evaluation of a plan, including the assumptions used as a basis for that evaluation; and

*See Mr. McCambly's dissenting comments at the end of this chapter.

(4) An individual employee pension statement, to be made available on request at intervals of not more than three years, indicating contributions to date by the employee and the employer, the accumulated benefits purchased to date, and the current benefits in event of death or termination of employment.

There has been great concern in the business community about one particular group of occupational pension plans — those for government-sector employees. By contrast with private-employer plans, many government plans provide full post-retirement price indexation. In the case of the federal public service plan, legislation was introduced that would limit the indexation, but it has not yet been adopted by Parliament. Many businessmen feel strongly that the federal plan sets an example that would be extremely costly for them to follow, and they fear that indexation may involve large future demands on the public purse. On the other side, there are those who argue just as strongly that indexation is a vital necessity for pensioners, that to remove it from public plans would not only be a retrograde step but also an infringement of the collective bargaining process (although the federal plan itself is not a subject of collective bargaining).

Implementation of Recommendation 8 would contribute to a reduction in present disparities of treatment between government and private-sector employees. The indexed annuities that we have recommended would be made available on the same basis to both government and private-sector plans. Beyond that, however, it can be argued that governments should not, simply because of their taxing powers, be able to provide pension benefits that are not available to those in private industry. In brief, any additional price indexation should be paid for by matching employer and employee contributions combined. It would also seem advisable to put government-employee pension funds on the same basis as private-sector funds in respect of investments. Accordingly,

Recommendation 13

We recommend that all government-employee pension plans be put on a fully funded basis equivalent to that required of private-employer plans; that their assets (including claims on the employing government, which should be represented by securities of suitable maturities and with interest rates equivalent to market rates) be segregated from consolidated-revenue accounts and placed in special trust funds; and that all future increases in such funds be invested through the market in securities selected on the principles of prudent management followed by the managers of private-sector funds.

*These government pension funds should be entitled to purchase indexed federal government annuities for retiring employees on the same terms as other funds and subject to the same limits. Benefits beyond those limits should be indexed only to the extent permitted from time to time by the special contributions made by, or on behalf of, participants for this purpose and by the earnings of the portion of the fund attributable to pensioners in excess of the interest rates required to provide basic benefits to them, after taking into account the premium paid for the indexed pension purchased.**

Implementation of this recommendation would imply that the pension savings of all government employees would be recycled through the capital market. It would put government pension funds in the same basic position as private-sector funds in respect of the post-retirement price indexation of benefits through access to federal government price indexed annuities. Beyond that, it would imply a "cap" on price indexation that would, in effect, limit claims on public funds to matching combined employer and employee contributions.

The Council is also concerned with the need to expand the choice of workers with respect to the length of working life. We have noted that there is a need for much more intensive examination of alternatives to earlier retirement; but, that said, it seems likely that some action will have to be taken to provide more freedom of choice with respect to the minimum age of retirement itself. We recognize that this can, and should, vary among industries and occupations, depending upon the nature of the work entailed; however, that is largely a matter to be decided in the process of industrial relations. The question here is whether the universal public pension schemes should also provide more flexibility.

For public pension plans there would appear to be three possible alternatives — to lower the general age of eligibility, to provide a fair actuarial adjustment for retirement before age 65, or to alter the schemes to provide for the earlier retirement of those whose need is greatest. The first option would be the most expensive; and, although we reiterate that we do not regard any particular retirement age as sacred, in our opinion there are needs with higher

*See Mr. Kaplansky's dissenting comments at the end of this chapter.

priority at this time. The U.S. social security scheme provides fair actuarial adjustment for all participants to age 62, but that approach locks some people into permanently lower retirement incomes.

The evidence suggests that a substantial number of Canadian workers retire early because of poor health, even when their retirement incomes are relatively low. It suggests also, however, that a higher proportion with low retirement incomes than with higher retirement incomes work till age 65 or later despite poor health. Rather than generally extend CPP and QPP benefits on an actuarially adjusted basis, the Council feels that priority should be given to relieving the problems caused by the unemployability of older workers. Therefore,

Recommendation 14

We recommend that the federal and provincial governments jointly consider easing the CPP and QPP disability provisions and expanding the disability program so that the qualifying level of disability would decrease with age.

In the coming years, it will also become increasingly important to extend the retirement choice in other directions, to remove impediments to, and provide opportunities for, greater labour force participation by older people. The Council does not accept the view that later retirement should be considered as a substitute for more adequate retirement programs, and it wishes to reiterate its findings that even sharply higher participation rates by people aged 65 and over would not go very far to reduce the "pension burden."

There are strong social and medical arguments for increasing the labour force participation of older people, however, and the economic benefits will also increase over time. Perhaps unfortunately, much of the discussion of the subject has come to focus on the issue of mandatory retirement. It must be recognized that the general abolition of mandatory retirement could involve substantial costs — including intervention in the collective bargaining process — especially if it were implemented quickly. There is evidence to suggest that this factor is not the major impediment to continued work-force participation. We are convinced in any event that mandatory retirement provisions will wither away in the future, as the number of older and experienced workers rises relative to that of new entrants to the labour force. What is needed is positive action to expand job opportunities for older people. Accordingly,

Recommendation 15

We recommend that the federal and provincial governments, in consultation with industry and labour, promote later retirement from the labour force through expanded opportunities for retirement planning and through counselling, training, and job opportunities for older people.

THE TREATMENT OF WOMEN

For many elderly women, provision for retirement income under the existing system is most inadequate. Unfortunately, the reasons for this situation extend well beyond the scope of retirement policies. Some women do not participate in the paid labour force at all. For those who do, earnings records are often intermittent. Then, too, women are more likely to be in low-paying, nonunionized jobs, where pension coverage is low for all workers. Women are also often affected more adversely than men by coverage and eligibility requirements and by vesting and portability problems.

The implementation of some of our recommendations would, by improving the retirement income system generally, help to improve the lot of elderly women in particular. Moreover, more than half of all adult Canadian women are now in the labour force. As this participation rate increases, women who are full-time homemakers may form a relatively small proportion of the adult female population. According to our own projections, the proportion of women aged 65 and over who will not be beneficiaries of a retirement (as opposed to a survivor's) pension under the CPP and QPP will decrease from 68 per cent in 1981 to 12 per cent by the year 2031. Nevertheless, these women will still be disadvantaged unless ways can be found to deal with the particular problems of women workers outlined above.

It would be presumptuous for the Council to make comprehensive recommendations to deal with such problems. The background work for this Report, detailed as it may be, simply would not be sufficient, particularly since some of the problems can be traced to wider questions concerning the position of women in the economy generally. Nevertheless, we are convinced that action will have to be taken on these matters without delay, and we would hope that our broad estimates of costs will be of assistance in setting out priorities. Beyond that, we would like to set out some of the other considerations that should be kept in mind.

For the minority of women who remain as full-time homemakers, the proposal that they be allowed to contribute voluntarily to the CPP and QPP raises a number of difficult problems. In particular, a voluntary contribution scheme would favour those homemakers with family incomes high enough to enable them to afford the contributions, whereas it might be the wives of low-income husbands who would most need the provisions for retirement income.

An alternative would be to introduce additional compulsory CPP and QPP provisions for dependent spouses. Under the present system, an employee pays 1.8 per cent of contributory earnings, with a further 1.8 per cent being paid on the employee's behalf by his/her employer (the self-employed contribute 3.6 per cent). With the proposed modification, a further 3.6 per cent of contributory earnings would be contributed to the CPP and QPP in the case of employees with a dependent spouse (the additional 3.6 per cent could be paid entirely by the employee or split equally between the employer and the employee). Such a revised scheme could thus be operated in a manner similar to that of the Ontario Health Insurance Plan, whereby employees with one dependant pay double the premium of single employees. Of course, this would pre-empt the need for survivor benefits, since all spouses would be entitled to their own retirement benefits under the revised CPP and QPP scheme.

Alternatively, instead of increasing contributions, the CPP and QPP could be modified so that half the earnings (and hence the benefits) of an employee or self-employed person would be deemed to belong to the wife and half to the husband.

As far as the private pension plan system is concerned, any measure designed to expand coverage and improve vesting and portability provisions for all workers would likely be beneficial to women as well. Nevertheless, there remains the problem that private pension plans make hardly any provision for all those women who have had little, if any, participation in the paid labour force, upon the death of, or divorce from, their husbands. Of particular concern is the fact that the provision of survivors' pensions under private pension plans is rare outside of government employment.

A survivor's pension is a pension over and above the plan member's basic pension — i.e. similar to that which exists under the CPP and QPP. Many plans have options whereby the member's pension can be reduced to provide a benefit to a survivor. That is not an extra benefit, but simply a way of dividing up a single pension. In 1976, only 4.5 per cent of private-sector occupational plans, covering 22 per cent of all participants, provided a widow's pension as an additional benefit in the event of the death of the participating member before retirement. In the case of death after retirement, the comparable figures were 2.8 and 24 per cent, respectively. If one considers a pension as a deferred wage, however, then it follows that individual contributors with no dependants should receive higher pay to compensate for that fact.

A modest alternative to survivors' pensions per se would be to classify pensions as wealth, subject to sharing, as with any other marital asset; of course, though, the division of matrimonial property is governed by provincial legislation and varies considerably from one province to another. This could involve mandatory provision of joint benefits, whereby pension benefits would be shared through a joint annuity based on both lives. Under a joint life annuity, the plan member's retirement benefits would necessarily be lower than otherwise in order to provide a survivor benefit. Such a mandatory provision could be extended to cover RRSPs and occupational pension plans. Furthermore, it has been suggested that the pension benefits legislation be amended so that pension credits would be divided equally between partners in the event of marriage breakdown. This would parallel the 1978 changes in the Canada and Quebec Pension Plans.

A CONCLUDING PERSPECTIVE

This country has the basis for a remarkably good system of ensuring decent retirement incomes. Certainly there are holes in the present fabric. Yet our basic conclusion is that despite the future growth in the number of older people who will have a legitimate claim on this system — a system to which they will have contributed in many ways — we can meet those claims and correct any shortcomings without risk to the economy. Our objective should be a system that is reasonable, effective, affordable, and equitable. That goal is well within the grasp of a country that is energetic and growing, and aptly described by one of our members as a young nation maturing, not a mature nation aging.

Comments and Dissents

Comment by Mr. Robert Lévesque

As I pointed out to the members of the Council during our deliberations about this report, I was a member of the Comité d'étude sur le financement du Régime de rentes du Québec et sur les régimes supplémentaires de rentes (COFIRENTES+) in 1976 and 1977. In that capacity, I signed the Comité's report — entitled *La sécurité financière des personnes âgées au Québec* — which was published in September 1977.

The COFIRENTES+ report is somewhat narrower in scope than the Council's, but the issues of income security examined by the two organizations are the same, the problems identified are quite similar, and the analysis is also largely comparable. Furthermore, the goals identified by the two groups are essentially the same.

Nonetheless, there are differences between the two reports, notably in some of the conclusions and recommendations. In particular, the relative importance given to the goals and the methods proposed for achieving them differ — only slightly in some cases, more substantially in others.

As to which set of recommended measures could be implemented most easily and which is best suited and most likely to help resolve the issues identified and to bring about the desired results, that question is, in most instances, a matter of judgment. While some of the COFIRENTES+ recommendations go somewhat farther than those contained in this report, I believe that the Council's proposals, if implemented, will constitute an appropriate strategy for dealing with the problems identified here.

Dissent by Mr. Kalmen Kaplansky

While I appreciate that this report reflects a great degree of consensus reached by the Council after lengthy discussions attempting to reconcile the various opposing points of view, I have to voice reservations regarding two interrelated aspects.

As a general principle, the *basic* pension rights of all employees should be protected. Having pointed out the many serious deficiencies of the private occupational pension system with respect to coverage, vesting and portability provisions, protection of benefits in the face of inflation, and survivors' benefits, the report stops short of making recommendations commensurate with these deficiencies. The fact is that, except for a minority of individuals — usually in the higher-income category — occupational pension provision is, in general, inadequate, and implementation of Recommendation 8 would, in my view, do little to overcome the fundamental inadequacies that permeate the present occupational pension plan system. Since many employers appear to be unwilling or unable to make the needed improvements, I see no alternative but to expand the Canada and Quebec Pension Plans, as advocated by the Canadian Labour Congress and in the COFIRENTES+ report, or, at the very least, to establish a fully funded scheme for *all* employees (as described in Chapter 10), that would supplement the existing Canada and Quebec Pension Plans and provide an option for employers to contract-out.

I am also disturbed by Recommendation 13, which constitutes a veiled criticism of those occupational schemes — namely, government-employee plans — that, unlike most other occupational pension plans, do, by and large, protect employee pension rights. The connotation appears to be that these plans have an unfair advantage over their counterparts in the private sector. Such plaintiveness about the generosity of government-employee pension plans is a total misdirection of attention and argumentation. The objective of public policy should be to ensure that private-sector occupational pension plans are improved in line with their public-sector counterparts, rather than to bring the latter

down to the often mediocre standards of the private sector.

Finally, I would like to reiterate my belief in the principle of universality, as embodied in the Old Age Security program. It is a fundamental feature of the present system and, as such, should not be called into question, as is the case in some of the supporting chapters. Universality remains the best way to minimize both bureaucratization and arbitrariness of any kind in the delivery of this program. Accordingly, it is the best way to safeguard the dignity of each and every senior citizen.

Dissent by Mr. James A. McCambly

In its report the Council has, quite rightly, focused considerable attention on two fundamental areas of weakness in Canada's existing retirement income system. First and foremost, adequate occupational pensions cover too few of the working population. Secondly, the incidence of poverty among elderly unattached individuals who have been unable to build up adequate earnings-related pension benefits remains a cause for concern.

Unfortunately, the report fails to make the kind of recommendations that, if implemented, would go a long way towards correcting these serious shortcomings.

I have severe misgivings concerning the major suggestions for remedying the deficiencies in occupational pension plans. There is a need for increasing the earnings-replacement rate over and above the present 25 per cent target level provided by the CPP and QPP. An option discussed, but not recommended, by the Council, involving the establishment of a fully funded supplement to the CPP and QPP, with or without the contracting-out option, would, in my opinion, impair the viability of existing private pension plans. On the other hand, Recommendation 8 will do little to alleviate the problem. I would like to see discussion of more alternatives, which might include the possibility of a gradual increase in the CPP and QPP earnings-replacement rate above its present level, or a supplementary plan that would be open to employees not covered by an occupational plan.

I am also disappointed by the Council's reluctance to give guidance to the government in Recommendation 1, as to what it perceives as an acceptable measure of income adequacy. Of the three measures that are in widespread use, the one developed by Statistics Canada is the lowest and does not seem to be an unreasonable minimum which could be attained over a period of time through an expanded GIS program. This would greatly alleviate the incidence of poverty among elderly unattached individuals, the majority of them women, who are unable to accumulate adequate earnings-related pension benefits through CPP or QPP or through supplementary private schemes.

Finally, I am not convinced by the arguments presented in support of Recommendation 10. I am reluctant to agree to a proposal that would increase the limit on the holdings of foreign securities by pension funds beyond the present 10 per cent level without a more detailed analysis of the possible repercussions of such a move.

Dissent by Dr. Peter H. Pearse

I dissent from several of the recommendations made in Chapter 10, mainly because they fail to focus attention on the particular problems identified in earlier chapters as deserving high priority. In my opinion, some of the reforms proposed by the majority of the Council are not sufficiently discriminating; they would therefore be unnecessarily costly and, at the same time, fail to meet certain urgent needs adequately. The financial implications of the pension arrangements in Canada have become so enormous, and the future demands on the system will be so great, that I cannot concur in recommendations that would continue to direct large sums to groups that are not in need while other older Canadians would be left with inadequate support.

Accordingly, I disagree with Recommendation 4 insofar as it advocates perpetuation of the OAS; in my opinion this undiscriminating plan has outlived its usefulness and should now be abandoned in favour of an enriched Guaranteed Income Supplement, which provides support according to needs. Our research indicates that if, in 1979, the OAS pension had been replaced by an expanded GIS guaranteeing the same minimum income as that provided under the existing OAS/GIS program, it would have resulted in a saving to the federal government of close to a billion dollars. That is roughly the amount needed to solve one of the problems we identify as urgent — namely, to raise the incomes of single GIS recipients, mainly women, to the minimum level of income adequacy calculated by Statistics Canada. The OAS has unquestionably served a valuable social purpose in the past, but times have changed. In the interests of both taxpay-

ers and older people in greatest need, we should now channel basic income support through our newer and more effective programs.

In this connection, Recommendation 1 does not, in my opinion, go far enough in advising the government to specify a minimum income for those aged 65 and over. Such a floor is already implied by the maximum OAS/GIS entitlement, but this is clearly inadequate, especially in the case of single persons. Selection of any statistical measure of income adequacy involves judgment and is vulnerable to criticism, but until a better one is available, the "low-income cutoff" determined by Statistics Canada appears to be a suitable choice.

Contrary to the statements following Recommendation 5, I feel strongly that the special income tax exemption for those aged 65 and over, together with the pension income deduction, should be abolished. Such provisions are perverse; because of the progressivity of the tax schedule, they provide the greatest benefit to those with the highest incomes; they are of little help to those whose incomes are low and not at all to those whose incomes are too low to be taxable. Our work suggests that in 1977, the exemption alone reduced tax revenues by $210 million, while both the exemption and the pension income deduction together reduced revenue by $365 million. This would have been sufficient to raise GIS benefits by about one-third. While the old-age exemption had some justification when it was introduced in 1948 (before Medicare, GIS, and other basic-income programs existed), today both these provisions merely introduce inequities in the income-support and tax systems.

Finally, and most importantly, I dissent from the crucial Recommendation 8, because it does little to alleviate what this report identifies as the major deficiency in our existing income-replacement system — namely, its failure to provide for that 54 per cent of employed paid workers (many of them with small private employers) not covered by occupational pension plans. Indeed, while the recommendation would enrich provisions for employees of governments and large firms who already have the advantage of such plans, it would aggravate the relative disadvantage of those whose employers do not offer them. The proposal thus fails to address the most urgent need. My conclusion is that if the gap in the present system is to be closed, this can best be done by introducing a fully funded supplement to the Canada and Quebec Pension Plans with an option for employers to contract-out, as in the present British system, described in the paragraphs preceding Recommendation 8.

With these exceptions, I support the recommendations of the majority.

APPENDIXES

A Glossary

In the course of preparing this report, the Council encountered many terms that may be unfamiliar to the general reader. Worse still, there is much confusion, at least in many public discussions, about the use of some of these terms; often they are defined only imprecisely, if indeed they are defined at all. For its own part, the Council found it useful to have a glossary setting out some of the more important terms in the sense in which they are used in this report.

More detailed technical definitions and descriptions of various plans can be found in Lawrence E. Coward, *Mercer Handbook of Canadian Pension and Welfare Plans* (Toronto: CCH Canadian Limited, 1977). For explanation of many of the more difficult concepts pertaining to pension plans, another book has also proved to be particularly useful: D. Don Ezra, *Understanding Pension Fund Finance and Investment* (Toronto: Pagurian Press, 1979).

Income Security for Older People

The report is concerned with various ways of ensuring income security for older people. Such security may be provided by way of income from current employment; but, for the most part, it is likely to involve sources of income that are not related to such employment (although they may be related to previous employment). The latter are referred to here as *retirement income*. Retirement income may come from such things as investments or personal savings, but for many people it now consists largely of various forms of pensions, including government transfer payments (for example, Old Age Security). It is well to realize, however, that income security policies — or retirement income policies — do involve more than pensions; for example, they most certainly involve tax policies.

Types of Pension Plans

Since pensions loom so large in this field, however, much of our report is concerned with them. They can be defined in a strictly formal sense as follows:

> pensions are regular payments arising from government legislation or from employer plans that promise payments bearing some relation to years of employment and salaries received; or that are made as a result of legislation on the attainment of a specified age, or on the attainment of a specified age by individuals with income that is considered by the legislation to be too low.[1]

This definition is useful for economists because it distinguishes pensions from *retirement savings plans*, in which "the payments received depend solely on the accumulated savings and the rates of return received from their investment"[2] — a distinction that can be important for analysis.

For the most part, however, we have included such savings plans — for example, registered retirement savings plans (RRSPs) — in what we refer to broadly as pensions, a treatment more in line with general usage. The real catch is that pension plans, even in this broad sense, may be further classified, and indeed cross-classified, in many ways — in relation to the body sponsoring them, the funding agency, their benefit formula and structure, their financing structure, and so on.

Plan Sponsors and Funding Agencies

The term *public pension plans* in this report refers to those administered by government for citizens at large; in effect, universal plans. The most important of these are the Old Age Security (OAS) program, the Guaranteed Income Supplement (GIS), various provincial supplement programs, and

the employment-related Canada and Quebec Pension Plans (CPP/QPP).

The term *private pension plan* refers to *occupational* or *personal* plans, both of which supplement the public programs. Like the CPP and QPP, *occupational* plans are employment-related. The vast majority of them are *employer-sponsored*, although some are backed by other sponsors such as unions. Sponsors are responsible for the administration of the plan; depending upon the nature of the plan, they may accept ultimate liability for meeting promised benefits. In the text, we try to distinguish between *private-employer-sponsored* plans and *public-employer-sponsored* plans.

Private-employer-sponsored plans are of two main types — trusteed and insured — depending upon the organization that provides the facilities for accumulation of assets and the ultimate payment of benefits. When these facilities are provided by a trust company or a group of individuals, the scheme is called a *trusteed* plan. Pension plans using the facilities of insurance companies are known as *insured* plans.

Public-employer-sponsored schemes, on the other hand, may be of the trusteed or insured variety or they may be *consolidated-revenue* plans. Contributions to consolidated-revenue plans are, like tax revenues, paid into the consolidated-revenue fund of the government concerned and used for general government purposes. The federal public service employee pension program is a consolidated-revenue plan.

The choice of benefit formula for an employment-related pension plan will affect the ultimate level of benefits and, for example, the preservation of pension credits in the face of inflation. There are two main types: *defined-benefit* plans and *defined-contribution* plans.

Defined-benefit plans promise benefits that are determined in one of a number of ways:

(1) *Unit-benefit* plans relate benefits to an employee's previous earnings and number of years of service. Such plans fall into one or a combination of the following subcategories: they may be *final-earnings* plans, in which individuals' pensions are based upon length of service and final earnings, or some average of earnings during their final years prior to retirement; they may be *career-earnings* plans insofar as individuals accumulate annually a unit of pension equal to a percentage of *average earnings* or a percentage of *average best earnings* over their careers. The CPP and QPP are modified forms of career-earnings plans.

(2) A *flat-benefit* plan provides a fixed-dollar amount of pension benefit for employees after they have fulfilled certain age and service requirements. Usually a specified amount of benefits is paid for each year of service. Many flat-benefit plans are the result of collective bargaining, and their benefits may be adjusted from time to time as a result of such bargaining.

Defined-contribution plans include the following:

(1) *Money-purchase* plans, where contributions are specified but the resulting pension is unknown. The pension is determined by the amount of total contributions accumulated, plus interest paid by, or accredited to, the employee.

(2) *Profit-sharing* pension plans, which are similar to money-purchase plans except that employers' annual contributions on behalf of employees vary with their profits.

The most common type of *personal* pension plan is the registered retirement savings plan, which is a contract between an individual and an insurer, trustee, or corporation authorized to issue investment contracts. The plan is essentially a money-purchase plan that allows individuals to contribute to a pension for themselves or their spouses and, at the same time, to deduct such contributions from their gross income in determining their taxable income.

Financing Methods

Pension plans may be financed or funded in several different ways. A *pay-as-you-go* plan is one in which the current contribution rate is set just high enough to pay for all benefits and other charges such as administrative costs in the current period (for example, one year). Many pension plans, however, are funded. A *funded* plan is one in which contributions are set high enough to accumulate a fund that is invested to provide for all or part of future benefit payments and other expenditures.

In a *partially funded* plan, contributions exceed benefits paid out while the fund is being built up. The initial contribution rate, however, is not set high enough to accumulate a fund sufficient to pay all benefits as they accrue, nor is there any formal arrangement for making up the deficiency.

The definition of a *fully funded* pension plan can be even more complicated; and, indeed, there are several ways in which full funding can be approached.[3] Strictly speaking, a pension plan is fully funded when the contribution rate has been set

high enough to accumulate an investment fund sufficient to pay all benefits that have accrued to date on account of the operation of the plan. For this state to be completely achieved at any point in time the plan sponsors' assumptions about such things as rates of return on investment and wage rates would have to be borne out by actual experience. Often this is not the case; however, formal mechanisms do exist for defining the liabilities of the sponsors in such an event. In this report, therefore, we take a fully funded pension plan to be one in which the accumulated investment fund plus the recognized liability of the plan sponsor are equal to the accrued value of the benefits that have been promised to date.

Pay-as-you-go or partially funded pension plans are, by and large, dependent on the backing of governments. In short, the ultimate security of benefits will rest in whole or in part upon the ability of a government to tax. Private-sector occupational plans are required, within certain limits, to be fully funded so that if a firm, for example, were to go out of business, the investment fund would be sufficient to pay accrued benefits.

The limits referred to above cover the ways in which any gaps between the value of the investment fund and the accrued benefits must be closed. A pension plan is said to have an *unfunded liability* when the value of the actual fund is less than that of the fund required to pay future benefits that have accrued to date on account of the operation of the fund. An *experience deficiency* is that part of the unfunded liability that results from the plan's actuarial assumptions being violated by actual experience. Such a deficiency may arise, for example, when wages rise more rapidly than assumed or investment returns are less than originally assumed. A *past-service deficiency* is that part of the unfunded liability resulting from the recognition of employee service prior to the plan's inception or from improvements made to the plan after its inception. A *current-service cost* arises from pension credits that have been earned in the current year by current members of the plan, as well as from *ad hoc* increases to existing pensions to meet inflation. In Canada, pension benefit legislation sets out the time periods during which past-service, or experience deficiencies must be extinguished.

Pension plans may also differ in their sources of contributions. Defined-benefit plans may be either *contributory*, in which case both the employer and employee make contributions on behalf of the employee, or *noncontributory*, in which case only the employer makes contributions.

Benefit Structure

In addition to the various benefit formulas, there are a number of other terms used in the report that bear on the coverage and adequacy of benefits; for example, the report frequently distinguishes between *age of entitlement* (to benefits) and *age of retirement*. The term *retirement* is usually used here in the general sense of withdrawal from the labour force, either completely or partially. In other words, a "retired" person may work part-time. On the other hand, withdrawal from the labour force is not necessarily a condition of entitlement to pension benefits. That is, individuals may be entitled to benefits at a specified age — the age of entitlement — whether they retire or not.

In some cases (for example, the GIS program), however, it is not the age of retirement that is important in qualifying for benefits but the individual's income or earnings. Some retirement income plans are subject to *income*, *earnings*, *needs* or *means tests*. The most comprehensive of these is the *means test*, whereby both eligibility and the level of benefits are determined by income from all sources, as well as holdings of wealth (that is, income-producing assets). An *income test* is similar to the means test but is less rigorously applied. The only real difference is that wealth itself is not taken into account in determining both eligibility and the level of benefits, although pecuniary income from wealth, as well as income from employment, is considered. An *earnings test* is even less restrictive, taking into account only income from employment. The *needs test* differs from the foregoing means and income tests, in that an assessment of need is substituted for an arbitrary income ceiling.

The foregoing terms have a bearing on the benefits that are actually paid out to individuals. Three other terms that are encountered frequently refer to provisions that affect the accumulation of pension credits before retirement. These are *vesting*, *locking-in*, and *portability*.

Vesting, locking-in, and portability provisions all pertain to the methods used to preserve the pension credits of employees who move from one employer to another. *Portability* enables employees to carry their pension credits from one employer to another when changing jobs. Canada and Quebec Pension Plan benefits are completely portable; with occupational plans, however, portability can be complicated. It can be provided through reciprocal agreements between employers, and this approach is in fact used in the case of most government-employee pension plans in Canada, as well as private-sector

multi-employer plans. Because occupational pension plans, sponsored by individual private employers, differ so widely in structure, however, reciprocity as a means of ensuring portability is difficult to achieve. That is where vesting becomes particularly important.

Vesting provisions remove the obligation of plan participants to remain in a pension plan until retirement in order to qualify for pension credits, and they establish the credits to which individuals are entitled if they change jobs. In Canada, if pension rights are not vested, employees will, upon changing employers, get back only their own contributions to the plan plus accumulated interest. *Vesting* refers in general to the right of employees, should they change jobs prior to retirement, to all or part of the pension credits associated with the contributions made to a pension plan on their behalf by the employer, whether those benefits are taken in cash or as a deferred pension. This definition, it should be noted, avoids the confusion that arises in some other definitions that link vesting to either contributions *or* benefits.

In Canada, however, vesting is now usually associated with mandatory *locking-in* provisions. These prevent workers from withdrawing either their own or their employer's contributions in cash; they must accept a deferred pension — that is, a pension that is payable only at the normal age of entitlement, usually 65.

B Development of Canada's Retirement Income System to the 1970s[1]

Until the late 1920s, provision for old age remained primarily a matter of personal or family responsibility in Canada. Individuals were expected to save for their later years, and it was considered a family duty to support elderly relatives who were unable to work.

Apart from figures on annuities, there are no data indicating the extent to which Canadians saved for their old age, but it would appear that long-term saving in the forms familiar today were negligible. The development of a diversified institutional structure of financial markets capable of mobilizing and channeling the long-term savings of individuals into profitable investments is a relatively recent phenomenon in Canada.

Occupational pensional schemes were almost unheard of, although the Superannuation Act of 1870 did make some pension provision for federal civil servants, and the first plan sponsored by a private employer was introduced by the Grand Trunk Railway in 1874. Subsequently, the Pension Fund Societies Act of 1887 permitted federally incorporated companies to establish pension fund societies, and chartered banks were among the first to take advantage of its provisions.

For many years, annuities issued by the insurance companies provided the principal means through which individuals could convert their modest savings into a stream of retirement income. This device developed only very slowly, however; by the end of 1910, less than 2,000 contracts were in force, two-thirds of them underwritten by a single company (Sun Life). In an attempt to fill the vacuum, the Government Annuities Act was introduced in 1908 to facilitate and encourage individuals of limited means to save for their old age. The Act allowed the federal government to sell small annuities to the public at rates that, at that time, were more favourable than those offered by private companies. Then, in 1919, the Income War Tax Act provided some stimulus to occupational plans by permitting the existing income tax deferment for employer contributions to be extended to cover employee contributions as well.

It was becoming increasingly apparent, however, that despite the foregoing legislative measures many individuals were unable to save enough to support themselves in their later years. Employer-sponsored pension plans expanded only slowly, with the number of formal plans growing from 172 at the end of the First World War to some 600 by 1936. Although there is no way of calculating what proportion of the labour force was covered by these plans, it has been suggested that it was in the neighbourhood of 10 to 15 per cent. Yet even this figure probably overstates the case, since employees who change employment before acquiring vested rights to a pension must forfeit their benefit entitlements. Because vesting periods of 20 years or more were not unusual at that time, the number of employees who actually received a pension from private industry was effectively reduced. Furthermore, few Canadians took advantage of the opportunity to buy annuities from the government; less than 12,000 contracts for such annuities were in force at the end of March 1931, almost a quarter of a century after the Act came into effect. The annuity business of private insurance companies was even less impressive, amounting to little over 3,500 contracts in December 1930. Thus, although saving for old age was still considered to be largely a personal responsibility, it came to be recognized that some public support would be required for those who received little family support and those who failed to make sufficient provision for themselves through occupational pension plans or personal saving.

As a consequence, the first significant federal government intervention in the social welfare field occurred in 1927 with the introduction of the Old Age Pension Act. The Act established a framework

for cost-sharing arrangements with the provinces, so as to provide means-tested pensions to all needy individuals aged 70 and over. Legislation adopted by the provinces gradually extended those benefits to all parts of the country.

By the end of the Second World War, which had followed the greatest depression in modern history, perceptions of the economic world had undergone some fundamental changes as a result of what has become known as the Keynesian revolution in economics. Governments were now seen to have a major responsibility not only for promoting full-employment economic growth, but also for providing wide-ranging social welfare programs. Moreover, Britain's Beveridge Report on social insurance received worldwide publicity. In Canada, too, pensions emerged as a priority issue.

A significant modification in public policy took place in 1951 with the introduction of the Old Age Security and Old Age Assistance Acts. The former embodied many of the principles of Beveridge's thinking, including nationwide, universal subsistence pensions financed by contributions and provided by one unitary system. More precisely, the federal government assumed full responsibility for providing a universal flat-rate (as opposed to means-tested) old age pension at age 70, subject only to a residence requirement. A special levy — the "old age security tax" — was imposed and linked to the financing of the program. Receipts were paid into an "old age security fund" that, in effect, constituted a separate account in the consolidated-revenue fund, and benefits were paid out of this fund. The Minister of Finance was also authorized to make loans to the fund, if necessary, so that the program was in effect recognized as a charge on general revenues.

While the cornerstone of the government's policy remained the personal obligation to save for retirement, the Old Age Security Act guaranteed a basic minimum that individuals could supplement as their circumstances allowed and their preferences decreed. Indeed, those with the means and the inclination to do so were expected to provide additional retirement income for themselves through either personal saving or occupational pension plans. In contrast to the universal pension provided under the Old Age Security Act, the Old Age Assistance Act provided for federal contributions to means-tested pension programs, administered by the provinces, for individuals between the ages of 65 and 69.

The decision to institute a universal plan guaranteeing a basic minimum pension became a lankmark in pension legislation in Canada, and though it was made with some reluctance by the government of the day, it proved to be irreversible. There still remained the problem, however, that most workers suffered a drastic reduction in income upon their retirement. Consequently, the idea of relating pension benefits to earnings — that is, of assuring an adequate rate of income replacement upon retirement — began to gain favour in the late 1950s and early 1960s as a method of supplementing, rather than a substitute for, the universal OAS pension.

Private pension plans alleviated the problem only to a very limited degree. To be sure, the Second World War had provided a major fillip to the growth of employer-sponsored pension plans. Faced with policies that restricted wage increases in a tight labour market, industry turned to pension plans and other fringe benefits to attract and retain employees;[2] and, after the war, pension benefits became an important element in collective bargaining. Thus by 1960 there had been a considerable shift from individual to institutionalized pension plans, with over 8,900 plans, including those for public-sector employees, covering approximately 1.9 million workers. In addition, following an amendment to the Income Tax Act in 1957, registered retirement savings plans (RRSPs) were introduced to encourage personal provision for retirement. The amendment, by allowing a tax deferment (within prescribed limits) for contributions paid into RRSPs, provided the self-employed with the same fiscal incentives to save for retirement as those enjoyed by employees in occupational plans, and it also presented the latter with a means of supplementing existing pension plans.

Although institutionalized occupational plans and, to a lesser extent, RRSPs had experienced rapid growth by the early 1960s, many people felt that there were still serious inadequacies in the system. In 1961, government basic-income payments were still the major source of income for 48 per cent of the men and 72 per cent of the women in the 65-and-over age group. The coverage provided by earnings-related occupational pension plans to public-sector employees was almost complete by 1960, but this was not true of private industry. Furthermore, vesting and portability provisions continued effectively to reduce coverage. Consequently, there was a growing demand for fully portable pension plans in which workers could accumulate and retain pension entitlements even though they changed employment. At the same time, the desire both to control costs and to improve benefits militated in favour of contributory plans. The outcome was a significant expansion in the role of government in

the area of pensions, by way of the Canada and Quebec Pension Plans, a restructured basic-income package, and legislation governing the operation of private pension plans.

The changes of the 1960s began with the formulation of separate programs by Ontario, Quebec, and the federal government. Ontario's legislation, introduced in 1963, was designed to serve three main purposes: to establish minimum standards of solvency for private plans, to set a minimum level of vesting, and to require all employers of 15 workers or more to provide a plan with prescribed minimum benefit levels. Until then, there had been virtually no formal regulation of private pension plans other than the general principles adopted in 1946 by the Department of National Revenue on the eligibility of the contributions to such plans as deductions for income tax purposes. It was generally recognized, however, that legislative authority for the regulation of private plans rested solely with the provinces.

Meanwhile, Quebec was formulating a scheme of its own — the Régime de rentes du Québec, or Quebec Pension Plan (QPP) — and the federal Liberal Party was working on the development of the Canada Pension Plan (CPP) at the time that it came back into power in 1963. The Quebec program provided for survivor, death, and disability benefits — items outside the constitutional competence of the federal government — and, unlike the initial formulation of the CPP, which proposed pay-as-you-go financing, it was Quebec's intention to have substantially greater funding of its plan, with consequent higher contribution rates.

The national plan that emerged was a compromise between the sometimes conflicting interests of the federal and provincial governments.[3] The primary objective of this compulsory and contributory plan was to ensure a minimum rate of earnings replacement (up to a given maximum earnings ceiling) for those reaching the age of 65 and, at the same time, to allow plenty of scope for the continuation and extension of private pension plans and personal saving over this minimum level. Pressure from Quebec and other provinces resulted in the national plan providing considerable investment funds for use by the provinces.

In 1965, when the final formulation of the Canada and Quebec Pension Plans was introduced, the Ontario Pension Benefits Act was amended to remove the section that would have forced smaller establishments to implement pension plans. The regulatory elements of the Act and the standards of vesting and funding were retained. Other provinces followed Ontario's lead in regulating private plans within their jurisdictions. Today, similar legislation exists in Alberta, Saskatchewan, Manitoba, Quebec, and Nova Scotia. Undertakings that fall under federal jurisdiction are covered by comparable regulatory legislation administered by the federal Department of Insurance.

The introduction of the CPP and the QPP and more extensive provincial regulation of private plans had a significant impact on the development of Canada's retirement income system. The universal OAS program remained the cornerstone of the basic-income package, but the qualifying age was lowered by one year annually, from 70 in 1966 to 65 by 1970. Moreover, the Old Age Security Act was amended in 1966 to provide, in addition to OAS benefits, a monthly guaranteed income supplement (GIS). Although it was originally directed at those born before 1910 and therefore ineligible for CPP or QPP benefits, the supplement was broadened to cover all those aged 65 and over with a minimum of 10 years' residence in Canada. It is income-tested, with monthly payments being reduced by $1 for every $2 of income over and above the OAS payments.

There were substantial changes also in income-replacement plans, particularly with respect to total assets. Canadian pension funds together (excluding RRSPs) held assets equal in value to about one-fifth of GNP in the early 1960s. That ratio grew to one-third by 1977. By far the largest part of this growth was attributable to the Canada and Quebec Pension Plans. The growth of the assets of trusteed and insured plans has been fairly constant over the past two decades, except during the early years of the Canada and Quebec Pension Plans. Many plans became integrated with the two public plans, and their benefits were lowered in consideration of the benefits expected to be paid by the government schemes. As a result, contributions to the integrated plans were reduced, and the growth of their assets slowed temporarily. Indeed, a few trusteed and insured plans — largely those with limited coverage and comparatively low benefits — were terminated. The total number of occupational pension plans grew much less rapidly after 1965 than during the early 1960s. Indeed, it actually declined after 1970, although membership in existing plans continued to grow.

C Alternative Population and Labour Force Projections: The Underlying Assumptions

The size and composition of Canada's future population will depend on the rates of fertility, mortality, and immigration. The higher the birth rate, life expectancy, and net immigration, the larger the population will be. Because it is impossible to predict with certainty the future levels of these variables, demographers often base their population and labour force projections on a variety of assumed levels. For each variable, usually three levels are assumed: the high, medium, and low.

This is the procedure followed in the projections that have been prepared for the Council.[1] The demographic and labour participation assumptions used are presented in Table C-1. The levels assumed are based on past experience and/or likely trends. Thus, the high fertility level assumes a return to the high birth rates of the postwar baby boom. The medium level postulates that the birth rates of the early seventies would prevail, while the low level assumes a further decline in birth rates from the present level. As for life expectancy, no drastic changes are expected as the decline in death rates has recently leveled off. Thus, the assumed increases in life expectancy vary from a slight rise in the low projection to a moderate improvement in the high one. In the case of immigration, it is assumed that there would be 140,000 net immigrants annually in the high projection, 80,000 in the medium, and 20,000 in the low.

Some twenty population projections have been prepared on the basis of these assumptions about future fertility and net immigration rates, and life expectancy. Eleven of these, identified as P-01 to P-11, are shown below in Table C-2. The assumptions underlying them are as follows:

P-01: "Medium" projection: medium fertility, medium life expectancy, and medium net immigration.

P-02: High fertility; otherwise the same as P-01.

P-03: Low life expectancy; otherwise the same as P-01.

P-04: High net immigration; otherwise the same as P-01.

P-05: Low fertility; otherwise the same as P-01.

P-06: High life expectancy; otherwise the same as P-01.

P-07: Low net immigration; otherwise the same as P-01.

P-08: "High growth" projection: high fertility, high life expectancy, and high net immigration.

P-09: "Low growth" projection: low fertility, low life expectancy, and low net immigration.

P-10: "Old population" projection: low fertility, high life expectancy, and medium net immigration.

P-11: "Young population" projection: high fertility, low life expectancy, and medium net immigration.

Table C-2 indicates a population of just over 38 million in the year 2031 under the "medium" projection (P-01). Under certain extreme assumptions, the population might reach 63 million in that year as in the "high" projection (P-08), or only 24 million as in the "low" projection (P-09).

Table C-3 shows that the proportion of persons 65 and over in the total population will double under the "medium" projection (P-01), from about 9 per cent to 18 per cent by 2031. On the other hand, it will go to almost 25 per cent under the "low population" projection (P-09). The proportion of old people would rise slightly to 13 per cent under the "high population" projection (P-08).

The labour force participation assumptions (Table C-4) are specified separately for men and

women, and 1981 and 1991 are chosen as target years in which the assumed changes would be achieved. The 1991 participation rates are similar to the 1981 rates for men under 55, but lower for those 55 and over, to allow for the continuation of the trend towards earlier retirement. For men aged between 25 and 44 the assumed rates are virtually the same as the actual 1976 rates. For other age groups, the assumed changes are rather small. Much larger changes are assumed for women. This is especially true of women aged 20 to 54, for whom higher participation rates are specified in 1981 and with further increases occurring by 1991. For women under 20 and over 65, a slight decline in participation is expected.

Combining each of three alternative levels of labour force participation rates with various population projections produces a large number of labour force projections. Three of these — referred to in this report as high, medium, and low — are shown in Table C-5 (there are twelve more in the background study). The underlying assumptions are the following:

L-01: "Medium" projection: medium fertility, medium life expectancy, medium net immigration, and medium labour force participation rates.

L-08: "High" projection: high fertility, high life expectancy, high net immigration, and medium labour force participation rates.

L-09: "Low" projection: low fertility, low life expectancy, low net immigration, and medium labour force participation rates.

Under the "medium" projection, Canada would have a labour force of just over 17 million by 2031. Over 39 million people would be in the labour force under the "high" projection, but only just under 11 million by that time under the "low" projection.

TABLE C-1

DEMOGRAPHIC ASSUMPTIONS OF ALTERNATIVE POPULATION GROWTH PROJECTIONS, CANADA, 1976 TO 2051

	Population growth projections														
	High					Medium					Low				
		Life expectancy		Immigration[2]			Life expectancy		Immigration[2]			Life expectancy		Immigration[2]	
	Fertility[1]	Men	Women	Gross	Net	Fertility[1]	Men	Women	Gross	Net	Fertility[1]	Men	Women	Gross	Net
		(Years)		(Thousands)			(Years)		(Thousands)			(Years)		(Thousands)	
1976	2,102	70.1	77.9	172	131	1,923	69.8	77.4	172	131	1,803	69.6	76.9	172	131
1981	2,650	70.8	79.5	171	131	2,024	70.3	78.4	120	80	1,607	69.8	77.4	69	29
1986	2,979	71.5	81.3	180	140	2,085	70.8	79.5	120	80	1,489	70.1	77.9	60	20
1991	2,979	72.3	83.3	180	140	2,085	71.3	80.7	120	80	1,489	70.3	78.4	60	20
2001	2,979	72.7	84.3	180	140	2,085	71.6	81.5	120	80	1,489	70.5	78.9	60	20
2011	2,979	73.0	85.3	180	140	2,085	71.9	82.3	120	80	1,489	70.7	79.3	60	20
2021	2,979	73.0	85.3	180	140	2,085	71.9	82.3	120	80	1,489	70.7	79.3	60	20
2031	2,979	73.0	85.3	180	140	2,085	71.9	82.3	120	80	1,489	70.7	79.3	60	20
2041	2,979	73.0	85.3	180	140	2,085	71.9	82.3	120	80	1,489	70.7	79.3	60	20
2051	2,979	73.0	85.3	180	140	2,085	71.9	82.3	120	80	1,489	70.7	79.3	60	20

[1]Total fertility rate per 1,000 women of child-bearing age.

[2]The difference (about 40,000) between gross and net immigration represents emigration.

SOURCE F. Denton, C. Feaver, and B. Spencer, "The Future Population and Labour Force of Canada: Projections to the Year 2051," a background study prepared for the Economic Council of Canada, 1979.

TABLE C-2

PROJECTED POPULATION, CANADA, 1976 TO 2051

	Population growth projections										
	P-01	P-02	P-03	P-04	P-05	P-06	P-07	P-08	P-09	P-10	P-11
	(Thousands)										
1976	22,993	22,993	22,993	22,993	22,993	22,993	22,993	22,993	22,993	22,993	22,993
1981	24,561	24,929	24,536	24,681	24,314	24,586	24,441	25,076	24,171	24,338	24,904
1986	26,351	27,624	26,278	26,810	25,499	26,426	25,892	28,181	24,982	25,572	27,546
1991	28,099	30,367	27,955	28,933	26,582	28,248	27,265	31,415	25,648	26,724	30,213
1996	29,626	32,841	29,399	30,858	27,478	29,861	28,393	34,433	26,103	27,702	32,597
2001	30,966	35,222	30,655	32,616	28,169	31,288	29,317	37,389	26,341	28,473	34,884
2006	32,289	37,980	31,887	34,374	28,698	32,699	30,203	40,768	26,406	29,083	37,536
2011	33,662	41,298	33,163	36,207	29,086	34,165	31,118	44,774	26,319	29,553	40,731
2016	34,992	44,892	34,394	38,019	29,314	35,588	31,966	49,121	26,071	29,859	44,192
2021	36,162	48,452	35,466	39,683	29,350	36,848	32,640	53,487	25,640	29,969	47,614
2026	37,152	52,013	36,355	41,175	29,185	37,933	33,129	57,906	25,015	29,879	51,025
2031	38,014	55,848	37,109	42,541	28,819	38,896	33,487	62,661	24,204	29,592	54,690
2036	38,796	60,143	37,784	43,828	28,269	39,782	33,763	67,949	23,233	29,116	58,796
2041	39,510	64,831	38,402	45,048	27,570	40,592	33,973	73,697	22,153	28,478	63,285
2046	40,156	69,753	38,970	46,195	26,778	41,312	34,116	79,735	21,027	27,719	68,006
2051	40,758	74,908	39,512	47,295	25,955	41,967	34,221	86,059	19,915	26,900	72,955

SOURCE F. Denton, C. Feaver, and B. Spencer, "The Future Population and Labour Force of Canada: Projections to the Year 2051," a background study prepared for the Economic Council of Canada, 1979.

TABLE C-3

PROJECTED PERCENTAGES OF POPULATION AGED 65 AND OVER, CANADA, 1976 TO 2051

	Population growth projections										
	P-01	P-02	P-03	P-04	P-05	P-06	P-07	P-08	P-09	P-10	P-11
	(Per cent)										
1976	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
1981	9.4	9.3	9.4	9.4	9.5	9.5	9.4	9.3	9.5	9.6	9.2
1986	10.0	9.5	9.8	9.8	10.3	10.1	10.1	9.5	10.3	10.4	9.4
1991	10.7	9.9	10.5	10.5	11.3	11.0	10.9	9.9	11.3	11.6	9.7
1996	11.2	10.1	10.9	10.9	12.1	11.6	11.6	10.2	12.1	12.5	9.8
2001	11.5	10.1	11.1	11.1	12.7	12.0	11.9	10.2	12.6	13.2	9.7
2006	11.7	9.9	11.2	11.2	13.2	12.3	12.2	10.0	13.2	13.8	9.5
2011	12.4	10.1	11.8	11.9	14.4	13.1	13.1	10.2	14.5	15.2	9.6
2016	13.9	10.8	13.2	13.2	16.6	14.6	14.7	10.9	16.8	17.4	10.2
2021	15.4	11.5	14.7	14.7	19.1	16.2	16.4	11.6	19.5	20.0	10.9
2026	17.2	12.3	16.4	16.4	21.9	18.0	18.2	12.4	22.4	22.9	11.6
2031	18.3	12.4	17.4	17.5	24.2	19.2	19.3	12.7	24.8	25.3	11.8
2036	18.2	11.7	17.2	17.4	25.0	19.2	19.2	12.1	25.7	26.3	11.0
2041	17.5	10.7	16.5	16.9	25.2	18.6	18.4	11.2	25.8	26.6	10.0
2046	17.3	10.4	16.3	16.7	25.2	18.4	18.2	11.0	25.8	26.7	9.8
2051	17.6	10.9	16.6	17.0	25.2	18.7	18.5	11.4	25.8	26.7	10.3

SOURCE F. Denton, C. Feaver, and B. Spencer, "The Future Population and Labour Force of Canada: Projections to the Year 2051," a background study prepared for the Economic Council of Canada, 1979.

TABLE C-4

ASSUMPTIONS OF LABOUR FORCE PARTICIPATION RATES, BY AGE GROUP AND BY SEX, CANADA, 1981 AND 1991

	Men			Women		
	1976	1981	1991	1976	1981	1991
	Actual	Medium	Medium	Actual	Medium	Medium
	(Per cent)					
Age group						
15-16	33.2	30.1	30.1	27.7	24.0	24.0
17-19	66.6	63.3	63.3	60.2	59.0	59.0
20-24	85.2	85.2	85.2	67.3	72.0	78.0
25-34	95.5	95.3	95.0	53.9	60.0	68.0
35-44	96.0	96.0	96.0	53.3	58.9	70.0
45-54	92.5	92.0	92.0	48.3	51.1	55.1
55-64	76.8	74.5	70.0	32.0	32.7	34.0
65-69	25.4	21.9	15.0	7.9	6.0	5.0
70 and over	9.7	8.5	6.0	2.1	2.0	1.4

NOTE The participation rates are annual averages based on Statistics Canada *Labour Force Survey* definitions, modified to include the armed forces and residents of the Yukon and Northwest Territories. For years between 1976 and 1981, and between 1981 and 1991, rates are calculated by linear interpolation; for years after 1991, they are assumed constant at their 1991 levels.

SOURCE F. Denton, C. Feaver, and B. Spencer, "The Future Population and Labour Force of Canada: Projections to the Year 2051," a background study prepared for the Economic Council of Canada, 1979.

TABLE C-5

PROJECTED LABOUR FORCE, CANADA, 1976 TO 2051

	Demographic growth projections		
	Medium (L-01)	High (L-08)	Low (L-09)
	(Thousands)		
1976	10,411	10,411	10,411
1981	11,723	11,771	11,668
1986	12,803	13,040	12,559
1991	13,655	14,101	13,201
1996	14,299	15,141	13,510
2001	15,099	16,771	13,689
2006	15,861	18,628	13,673
2011	16,380	20,244	13,428
2016	16,610	21,589	12,922
2021	16,771	23,088	12,291
2026	16,982	25,007	11,613
2031	17,296	27,347	10,960
2036	17,689	29,862	10,409
2041	18,060	32,389	9,900
2046	18,331	34,908	9,383
2051	18,557	37,593	8,888

SOURCE F. Denton, C. Feaver, and B. Spencer, "The Future Population and Labour Force of Canada: Projections to the Year 2051," a background study prepared for the Economic Council of Canada, 1979.

D The Present Value of Future Income

Suppose that the rate of interest on savings accounts is 5 per cent. How much would have to be deposited in a savings account today to have $100 a year from now? The answer is $95.24. That amount is the *present value* of the $100. In other words, if an individual deposits $95.24 today, a year from now he will get back that amount plus 5 per cent interest ($4.76), or $100.

It is important to note that the present value of a given sum will be smaller, the farther away the payment date and the higher the interest rate. To illustrate the first point, suppose we ask how much our saver would have to deposit to get $100 back in not one year but two years from today, still at a rate of interest of 5 per cent a year. The answer is $90.70. At the end of the first year, he would have accumulated $90.70 + 5 per cent ($4.54), or $95.24; at the end of the second year, he would receive $95.24 + 5 per cent ($4.76), or $100.

Now assume that the interest rate is 10 per cent. To receive $100 one year hence would now require a deposit of $90.91; two years hence, a deposit now of $82.64. In other words, with an interest rate of 10 per cent, $100 one year from now is valued at $90.91 today and $100 in two years from now at $82.64 today (the *present value*). Similarly, we can determine the present value for an individual at age 18 of net benefits, less contributions and taxes on benefits, from CPP/QPP or OAS/GIS, although the calculations are somewhat more complicated.

One might ask, however, just how a particular interest rate arises. It is rather like the old saying that a bird in the hand is worth two in the bush. The fact is that people prefer to have $100 now rather than a year from now. They must be paid something extra to wait for it. Just how much extra is required will depend on how important their present needs are relative to their future needs. Economists refer to this as *time preference*. When time preference is high — that is, when present needs are considered far more important than future needs — the reward for waiting (the interest rate) will be higher.

NOTES

CHAPTER 1

1 Thomas Wilson, ed., *Pensions, Inflation and Growth* (London: Heinemann Educational Books, 1974), p. 8.

CHAPTER 2

1 Examples of public or publicly funded programs are the New Horizons program of the Department of National Health and Welfare, Canadian Executive Service Overseas, and Counselling Assistance to Small Enterprise. In the private sector, Associated Senior Executives of Canada Limited offers part-time work to retired senior executives who can provide management advice to small businesses, while the Rockway Repair Committee in Kitchener and the Senior Citizens' Home Repair Committee of Toronto provide part-time work for older workers in plumbing, electrical, painting, and handyman services.

2 Brian J. Powell and James K. Martin, "Economic Implications of an Aging Society in Canada," a paper prepared for The National Symposium on Aging, Ottawa, October 25-27, 1978 (Health and Welfare Canada), p. 18.

3 Social Planning Council of Metropolitan Toronto, "Old Age Insecurity," Toronto, August 1978, p. 53.

4 See, for example, Canadian Manufacturers' Association (Ontario Division), "A Brief to the Royal Commission on the Status of Pensions in Ontario," Toronto, January 27, 1978, Appendix B.

5 For estimates of outstanding liabilities, see Samuel A. Rea, Jr., "Redistributive Effects of Canada's Public Pension Programs," a background study prepared for the Economic Council of Canada, 1979.

6 Lawrence E. Coward, *Mercer Handbook of Canadian Pension and Welfare Plans*, 6th ed. (Toronto: CCH Canadian Limited, 1977); and Statistics Canada, *Pension Plans in Canada, 1976*, Cat. No. 74-401, 1978.

7 Economic Council of Canada, *People and Jobs: A Study of the Canadian Labour Market* (Ottawa: Queen's Printer, 1976), Appendix G.

8 An integrated occupational plan is one in which the calculated pension is inclusive of all or part of the government plan.

9 "Vesting requirements under pension benefits acts" — Six provinces (Alberta, Manitoba, Nova Scotia, Ontario, Quebec, and Saskatchewan) have pension benefits legislation regulating the operation of employer-sponsored pension plans, while the Federal Pension Benefits Standards Act applies to federal employers. The legislation requires plans to provide for the lock-in vesting of employer contributions paid in respect of service after the qualification date, when a member has completed 10 years of service and is 45 years of age. Manitoba requires vesting after 10 years of service regardless of age. For definitions of vesting, portability and locking-in see Appendix A.

10 The major types of pension benefit formula are defined in Appendix A.

11 Tomenson-Alexander Associates Limited, *Report on Certain Aspects of the Public Service Employee Pension Program* (Ottawa: Supply and Services Canada, 1978), pp. 128-31.

12 U.S. Bureau of Labor Statistics, "Revised Equivalence Scale for Estimating Equivalent Income or Budget Costs by Family Type," Bulletin 1570-2 (Washington: Government Printing Office, 1968), p. 4.

13 Jenny Podoluk, "Poverty and Income Adequacy," a paper presented at the Conference on Canadian Incomes, Winnipeg, Manitoba, May 10-12, 1979, p. 16.

14 The following provinces have, in the past, allocated some or all of their Canada Pension Plan funds to specific Crown corporations under their jurisdiction:

British Columbia — British Columbia Hydro and Power Authority; B.C. School Financing Authority; and B.C. Hospital Authority

Alberta — Alberta Municipal Financing Corporation

Saskatchewan — Saskatchewan Power Corporation; Saskatchewan Telecommunications; and Saskatchewan Land Bank Commission

Manitoba — Manitoba Water Supply Board; Manitoba School Financing Authority; Manitoba Development Corporation

Ontario — Ontario Education Capital Aid Corporation; and Ontario Universities Capital Aid Corporation.

CHAPTER 3

1 The Germans coined the word "Rentenberg" — the "pension mountain" — to describe the increased pension requirements in their country. See Harry Weitz, "The Foreign Experience with Income Maintenance for the Elderly," a background study prepared for the Economic Council of Canada, 1979. This study discusses some of the lessons that Canada might learn from the earlier experience of European countries.

2 Frank Denton, Christine Feaver, and Byron Spencer, "The Future Population and Labour Force of Canada: Projections to the Year 2051," a background study prepared for the Economic Council of Canada, 1979. See also Appendix C for an explanation of the assumptions used.

3 Statistics Canada, *Population Projections for Canada and the Provinces, 1976-2001*, Cat. No. 91-520, February 1979, pp. 21 and 46.

4 R. Clark and J. Spengler, "Changing Demography and Dependency Costs: The Implications of New Dependency Ratios and Their Composition," in Barbara Herzog, ed., *Aging and Income: Programs and Prospects for the Elderly* (New York: Human Science Press, 1978); and Linda McDonald, "Changing Population and the Impact on Government Age-Specific Expenditures," an unpublished study prepared for the Treasury Board Secretariat, Ottawa, April 1977.

5 Whether total benefits rise at the same rate as real wages until the time of retirement depends upon the particular benefit formula used. Since the CPP and QPP are not linked to growth in real wages after age 65, a beneficiary's income-replacement ratio will decline relative to the current average real wage. How much the average replacement ratio will decline will depend upon the size of succeeding age cohorts, the length of retirement, and the rate of increase in real wages. In any event, the average ratio would change only slowly, if at all; for present purposes, one can thus assume that it is more or less fixed with respect to the current real average wage at any point in time. Increasing benefits after the eligible age in line with real wages would be the equivalent of raising the replacement ratio at age 65; it would also, of course, further increase benefit levels. OAS and GIS benefits are not officially indexed to real wages but *ad hoc* increases have had the same result. The projections are based on the assumption that this practice will continue in the future.

6 The population and labour force projections used in this report were made in 1978. Since that time, Statistics Canada has published revised data for 1975-78, showing increased participation rates by women, especially those in the 25-44 age group. Our projections, of course, already call for varying degrees of increased female participation; whether the ultimate levels projected, rather than simply the timing of their attainment, should be changed remains questionable.

7 See also Leroy Stone and Susan Fletcher, "A Profile of Canada's Older Population," a background paper prepared for the Economic Council of Canada.

8 J. A. Clark and N. E. Collishaw, "Canada's Older Population," Health and Welfare Canada, Staff Paper 75-1, Ottawa, May 1975, pp. 14-15.

CHAPTER 4

1 The term "wealth" is used here in the economist's sense — that is, as assets from which an income can be derived.

2 The size of the redistribution is affected by the rate of discount used in the calculation.

3 There is a net redistribution of wealth to or from individuals of a particular generation under a pay-as-you-go scheme when the benefits they receive are greater or less than those they could have received if their own contributions had been invested at market rates of interest. For example, if the ratio of workers to pensioners is constant, then the workers' credits under a pay-as-you-go scheme grow at the same rate as earnings. If contributions were invested, credits would grow at the rate of interest. If the rate of interest were less than the rate of growth of earnings, then benefits received under a pay-as-you-go plan would be greater than if the same lifetime contributions had been invested at market rates of interest, and vice versa.

4 A survey of the professional literature on redistributive objectives is provided in A. Asimakopulos, "The Nature of Public Pension Plans: Intergenerational Equity, Funding, and Saving," a background study prepared for the Economic Council of Canada, 1979.

5 Samuel A. Rea, Jr., "Redistributive Effects of Canada's Public Pension Programs," a background study prepared for the Economic Council of Canada, 1979.

6 There is the possibility that some young workers in contributory plans may not even suffer a loss. This would be the case if their contributions exceeded the cost of benefits promised. On the other hand, the nearer a mobile worker is to retirement age, the higher the employer contributions that could be lost.

7 For definitions of the tests to which social assistance programs may be subjected, see Appendix A.

8 It is worth noting that resistance to means tests seems to be much less in continental European countries than in Britain, the United States, or Canada. For some of the possible reasons, see Thomas Wilson, ed., *Pensions, Inflation and Growth* (London: Heinemann Educational Books, 1974), pp. 366-68.

9 That statement is, of course, true for the tax-transfer system in general. The major difference is that the CPP and QPP are extolled as earnings-related plans.

CHAPTER 5

1 For U.S. work in this area, see Philip Cagan, *The Effect of Pension Plans on Aggregate Saving: Evidence from a Sample Survey*, NBER Occasional Paper 95 (New York: National Bureau of Economic Research, 1965); George Katona, *The Mass Consumption Society* (New York: McGraw-Hill Publications, 1964), Chapter 19; Martin Feldstein, "Social Security and Private Saving: International Evidence in an Extended Life Cycle," Discussion Paper 361 (Cambridge, Mass.: Harvard Institute of Economic Research, 1974); Martin Feldstein, "Social Security, Induced Retirement and Aggregate Capital Accumulation," *Journal of Political Economy*, 82, no. 5 (September-October 1974); Alicia H. Munnell, *The Effect of Social Security on Personal Saving* (Cambridge, Mass.: Ballinger Publishing Co., 1974); Alicia Munnell, "Private Pensions and Saving: New Evidence," *Journal of Political Economy*, 84, no. 5 (October 1976); R. J. Barro, "Social Security and Private Saving: New Evidence from the U.S. Time Series," University of Rochester, Rochester, N.Y., 1977; R. J. Barro and G. M. MacDonald, "Social Security and Consumer Spending in an International Cross-Section," University of Rochester, Rochester, N.Y., 1977; J. A. Turner, "Social Security, Saving and Labour Supply," Washington, Social Security Administration, 1978; for a critique of this evidence, see A. Asimakopulos, "The Nature of Public Pension Plans: Intergenerational Equity, Funding, and Saving," a background study prepared for the Economic Council of Canada, 1979.

2 See, for example, Gregory V. Jump, "Interest Rates, Inflation Expectations and Spurious Elements in Measured Real Incomes and Savings Rates," Institute for Policy Analysis, University of Toronto, Toronto, January 1979, mimeo.

3 Government of Ontario, Ministry of Treasury, Economics and Intergovernmental Affairs, "Public Pensions and Personal Saving: Canadian Evidence in the Extended Life Cycle Model," Taxation and Fiscal Policy Branch, Preliminary, revised, March 1978. The study cautions that the results depend on "rough parameter estimates whose magnitudes depend upon model specification. Further, the variables used to estimate the impact of Canada's public pension system on saving are indirect and are undoubtedly imprecise measures of changes in social security wealth perceived by life-cycle savers".

4 P. P. Boyle and J. D. Murray, "Social Security Wealth and Private Saving in Canada," Working Paper 574, University of British Columbia, Vancouver, April 1978.

5 Peter Wrage, "The Effects of the Growth of Private and Public Pension Plans on Saving and Investment in Canada," a background study prepared for the Economic Council of Canada, 1979.

6 Both the method of financing the two public pension programs and the partial funding of the CPP and QPP programs account for their differing effects on personal saving. The OAS program involves a pure income transfer financed from general revenue — i.e. from progressive income taxes. One would therefore expect OAS to have an effect on personal saving. The CPP and QPP programs, however, are financed from contributions that are regressive — i.e. they may force lower-income groups to provide involuntary additional saving, thus reducing any adverse effects in personal saving. In addition, until the CPP and QPP programs have fully matured, the partial funding of these programs would help to offset any reduction in personal saving.

7 Munnell, "Private Pensions and Saving," p. 1031. The net increase in personal saving resulting from the funding of private pension plans was estimated at U.S. $8.1 billion in 1973. This was approximately 7 per cent of total personal saving in the United States in that year.

8 The CPP is not funded in the same sense that private pension plans are funded. While the excess of contributions over benefits has generated funds that are loaned to the provinces, private pension plans must back all their liabilities — i.e. expected pension plan

benefits — with a fund that is invested in financial assets.

9 A more complete discussion is provided in James E. Pesando, "The Canada Pension Plan as a Financial Intermediary," in James E. Pesando and Lawrence B. Smith, *Government in Canadian Capital Markets* (Montreal: C. D. Howe Research Institute, 1978), pp. 78-80.

10 Keith Patterson, "The Effect of Provincial Borrowings from Universal Pension Plans on Provincial and Municipal Government Finance," a background paper prepared for the Economic Council of Canada, 1979.

11 See also Pesando, "The Canada Pension Plan," pp. 88-91. He concludes, on the basis of indirect evidence such as statements by government representatives, that provincial spending generally increased.

12 Richard E. Caves and Grant L. Reuber, *Canadian Economic Policy and the Impact of International Capital Flows*, Private Planning Association of Canada, *Canada in the Atlantic Economy* series, vol. 10 (Toronto: University of Toronto Press, 1969), Chapter 1.

13 J. C. Pattison, *Financial Markets and Foreign Ownership*, Occasional Paper No. 8 (Toronto: Ontario Economic Council, 1978), p. 72.

14 Brian L. Eyford and Bobbi Cain, "Simulations with CANDIDE to the Year 2000," Economic Council of Canada Discussion Paper No. 89, May 1977.

15 A. Tarasofsky and T. G. Roseman, "Ex Post Aggregate Real Rates of Return in Canada, 1947-76," a background study prepared for the Economic Council of Canada, 1979.

16 Part of this section is based on the very useful discussion provided in Selig D. Lesnoy and John C. Hambro, "Social Security, Saving, and Capital Formation," *Social Security Bulletin*, 38, no. 7 (July 1975):3-15.

17 Donald J. Daly, "Canada's Comparative Advantage," a background study prepared for the Economic Council of Canada, 1979. It has been estimated that, on average, Canadian capital output ratios are approximately twice as large as the U.S. ratios; see Ludwig Auer, *Regional Disparities of Productivity and Growth in Canada*, Economic Council of Canada (Ottawa: Supply and Services Canada, 1978).

18 Edward F. Denison, "The Contribution of Capital to the Postwar Growth of Industrial Countries," in *U.S. Economic Growth from 1976 to 1986: Prospects, Problems, and Patterns*, Volume 3 — Capital, Studies Prepared for the Use of the Joint Economic Committee of the Congress of the United States (Washington: U.S. Government Printing Office, 1976), pp. 45-75.

19 L. R. Christiansen, D. Cummings, and D. W. Jorgenson, "Economic Growth, 1947-1973: An International Comparison," Social Systems Research Institute, Workshop Series No. 7621, University of Wisconsin, Madison, December 1976.

CHAPTER 6

1 See also D. Don Ezra, *Understanding Pension Fund Finance and Investment* (Toronto: Pagurian Press, 1979), Chapter 2.

2 Gordon R. Sharwood, "Investment for Innovation," a report to the Minister of Science and Technology, Ottawa, 1977, p. 59.

3 *The Economist*, November 4, 1978: "A Private Corporate State," p. 11; and "20 Billion of Pension Funds in Need of Regulation," p. 109.

4 Peter F. Drucker, *The Unseen Revolution: How Pension Fund Socialism Came to America* (New York: Harper & Row, 1976).

5 Tristram Lett, "Savings or Consumption? The Role of the Public Pension Plan in the National Economy," remarks to the Association of Canadian Pension Management, Vancouver, September 19, 1977.

6 The Toronto Stock Exchange, "Submission to the Royal Commission on the Status of Pensions in Ontario," January 1978.

CHAPTER 7

1 For the distinction between earnings, income, and means tests, see Appendix A.

2 These concepts are discussed in David Hoffman, Marc Laplante, and Nicole Schwartz-Morgan, "Retirement Reconsidered: An Essay in Long-Term Forecasting," a submission to the Special Senate Committee on Retirement Age Policies by the Institute for Research on Public Policy, Montreal, January 1979, p. 12.

3 A. Leslie Robb and John B. Burbidge, "Public Pension Plans and the Incentive to Work," a background study prepared for the Economic Council of Canada, 1978. A retirement test meant that a plan member had to be retired from regular employment to qualify for benefits.

4 The Retirement Survey was conducted by Statistics Canada on behalf of Health and Welfare Canada in February 1975. It collected information from 2,418 individuals aged 55 and over, with respect to their actual or expected age of retirement from full-time employment, their reasons for retirement, their retirement and pre-retirement incomes, and so on. For a discussion of data limitations, see Robb and Burbidge, "Public Pension Plans," p. 67.

5 Robb and Burbidge, "Public Pension Plans," p. 77.

6 Virginia Reno, "Why Men Stop Working at or Before Age 65: Findings from the Survey of New Beneficiaries," *Social Security Bulletin*, 34, no. 6 (June 1971):3-14.

7 Ed Finn, "The Debate Over Mandatory Retirement," *The Labour Gazette*, 78, no. 1 (January 1978):9.

8 Alicia H. Munnell, *The Future of Social Security* (Washington: The Brookings Institution, 1977), pp. 73-76.

9 Joseph A. Pechman, Henry J. Aaron, and Michael K. Taussig, *Social Security: Perspectives for Reform* (Washington: The Brookings Institution, 1968), p. 141.

10 Leroy O. Stone, "Population Aging and Dependency Ratios in Canada," a submission to the Special Senate Committee on Retirement Age Policies, Ottawa, November 30, 1978.

11 See Kenneth Bratthall, "Flexible Retirement and the New Swedish Partial Pension Scheme," *Industrial Gerontology*, 3, no. 3 (Summer 1976), for a general discussion of the Swedish approach to flexible retirement.

12 This conclusion holds for a given earnings pattern. In other words, given their earnings pattern, the more frequently that workers change jobs, the lower will be their retirement benefits. For some workers, job changes may be associated with an upward shift in earnings; for others, the opposite could be true.

13 Raymond Préfontaine and Yves Balcer, "Job Mobility and Its Implications for the Employer-Sponsored Pension System in Canada," a study prepared for the Task Force on Retirement Income Policy, September 1977.

14 Canadian Labour Congress, "Submission to the Royal Commission on the Status of Pensions in Ontario," Toronto, March 23, 1978.

15 The projections do not, however, assume that all workers will work full-time for the whole period between age 20 and age 65.

16 Paterson, Cook Limited, "Pension Plan Simulation Model, Development of Cost Estimates," a study prepared for the Task Force on Retirement Income Policy, May 1978, pp. 20-21.

17 Canadian Life Insurance Association, "Report of the Sub-Committee on a Portable Pension Project," Toronto, 1979. See also Canadian Life Insurance Association, "A Portable Pension System for Canadians," Toronto, June 18, 1979.

18 Canadian Labour Congress, "Submission," p. V-11.

19 Comité d'étude sur le financement du Régime de rentes du Québec et sur les régimes supplémentaires de rentes (COFIRENTES+), *La sécurité financière des personnes âgées au Québec* (Québec: Éditeur officiel du Québec, 1977).

20 The employer may limit his liability to index to 8.5 per cent per annum by paying a premium to the government, which then takes on the responsibility of making up the rest.

CHAPTER 8

1 Frank Blackaby, "Income Policies and Inflation," *National Institute Economic Review*, no. 58 (November 1971), p. 38.

2 The discussion in this and the following sections is based in large part on James E. Pesando, "Private Pension Plans in an Inflationary Climate: Limitations and Policy Alternatives," a background study prepared for the Economic Council of Canada, 1979.

3 James E. Pesando and Samuel A. Rea, Jr., *Public and Private Pensions in Canada: An Economic Analysis*, a research study prepared for the Ontario Economic Council (Toronto: University of Toronto Press, 1977), p. 45. Until December 1975, the Department of National Revenue explicitly precluded pension plans from incorporating into salary projections an allowance for the possible effects of inflation. This rule meant that final-earnings plans would suffer sharp increases in experience deficiencies during periods of accelerating inflation.

4 See also Economic Council of Canada, *Sixteenth Annual Review: Two Cheers for the Eighties* (Ottawa: Supply and Services Canada, 1979), Chapter 3; and Glenn P. Jenkins, *Inflation: Its Financial Impact on Business in Canada*, Economic Council of Canada (Ottawa: Supply and Services Canada, 1978).

5 Pesando and Rea, *Public and Private Pensions*, pp. 40-42.

6 William R. Waters, "Pensions and the Competitive Position of Canadian Firms," a background study prepared for the Economic Council of Canada, 1979.

7 James E. Pesando, *The Impact of Inflation on Financial Markets in Canada* (Montreal: C. D. Howe Research Institute, 1977), Chapters 2 and 3.

8 In other words, at the new higher interest rates, the price of fixed-interest securities carrying lower nominal rates will fall and the sponsor will have to make up this capital loss by additional payments.

9 Much of this section is based on Waters, "Pensions."

10 A. F. Ehrbar, "Those Pension Plans Are Weaker Than You Think," *Fortune* (November 1977), pp. 104-14. See also "Unfunded Pension Liabilities: A Continuing Burden," *Business Week* (August 14, 1978), pp. 60-63.

11 The Royal Bank of Canada, *Econoscope* (October 1978), p. 8.

12 Financial Executives Institute of Canada, "Report on Survey of Pension Plans in Canada," March 1978, p. 26.

13 For all practical purposes, the tax base is the gross national product. Any change in the general price level is matched by a corresponding change in GNP in money terms. Canada's income tax system is, of course, price-indexed. If it were not, tax revenues would increase even more rapidly than prices.

14 Economic Council of Canada, *Sixteenth Annual Review*, Chapter 3.

15 Henry Bartel, Michael J. Daly, and Peter Wrage, "Reverse Mortgages: A New Class of Financial Instruments for the Elderly," a background study prepared for the Economic Council of Canada, 1979.

CHAPTER 10

1 Canadian Labour Congress, "Submission to the Royal Commission on the Status of Pensions in Ontario," March 23, 1978. The CLC summarized its recommendations as follows:

"We recommend that the Old Age Security benefits be amended so that available benefits for an individual would be increased from approximately $1500 per year in 1975 dollars, to approximately $1800 per year, but that the benefit for married couples be kept at $3000 per year. We also recommend that maximum benefits under the GIS be increased from approximately $1050 per year for individuals and approximately $1900 for couples, to $2700 per year and $4200 per year respectively. We further recommend that the rate of reduction of GIS benefits be increased from 50 per cent to 66 2/3 per cent. We also recommend that new benefits under the OAS and GIS be indexed to the average industrial wage, while the benefits in pay remain indexed to the Consumer Price Index.

As far as the Canada Pension Plan is concerned, we recommend the following changes:

1) that the maximum benefit be increased from 25 to 50 per cent of average pensionable earnings;
2) that the surviving spouse of a deceased recipient of a retirement benefit be entitled to 75 per cent of the retirement benefit rather than 60 per cent;
3) that actuarially reduced retirement benefits be available at 60 years of age; and,
4) that the child rearing drop out provision proposed by the federal government be adopted by all provinces.

We recommend that the increase in the maximum benefit payable under the CPP begin to be phased in in 1980 with an immediate increase in the benefit payable from 25 to 35 per cent of pensionable earnings. Then, over the succeeding six years, the maximum benefit payable would increase by 2½ per cent per year so that the 50 per cent benefit would be available by 1986."

2 Jenny Podoluk, "Poverty and Income Adequacy," a paper presented at the Conference on Canadian Incomes, Winnipeg, Manitoba, May 10-12, 1979, p. 16.

3 Updated to 1978, three of these national averages under three calculations are as follows:

	Unattached	Family of two
Statistics Canada	$4,403	$6,384
Canadian Council on Social Development	4,940	8,222
Senate Committee on Poverty	5,533	9,209

4 Canadian Labour Congress, "Submission," pp. II-2 and V-9.

5 This rate, or indeed any of our calculated rates, should be compared with present employer/employee contribution rates for existing funded schemes.

6 A. E. Safarian, "Impediments to the Interprovincial Mobility of Labour in Canada," a paper presented to the Fourth Annual Meeting of the Association of Quebec Economists, Montreal, April 26, 1979.

Appendix A

1 A. Asimakopulos, "The Nature of Public Pension Plans: Intergenerational Equity, Funding, and Saving," a background study prepared for the Economic Council of Canada, 1979.

2 Asimakopulos, "The Nature of Public Pension Plans."

3 See D. Don Ezra, *Understanding Pension Fund Finance and Investment* (Toronto: Pagurian Press, 1979).

Appendix B

1 Much of this appendix is based on Kenneth Bryden, *Old Age Pensions and Policy Making in Canada* (Montreal: McGill-Queen's University Press, 1974).

2 A Dominion Bureau of Statistics survey in 1947 found that more than two-thirds of the plans surveyed had been established after 1939.

3 The objectives of the Canada Pension Plan are set out in Canada Pension Plan Advisory Committee, "Review of the Objectives of the CPP," a Report to the Honourable Monique Bégin, Minister of National Health and Welfare, 1978.

Appendix C

1 Frank Denton, Christine Feaver, and Byron Spencer, "The Future Population and Labour Force of Canada: Projections to the Year 2051," a background study prepared for the Economic Council of Canada, 1979.

NOTES AND SOURCES OF CHARTS AND TABLES

CHAPTER 1

Chart 1-1
The General Model (p. 4)

Chart 1-2
Income Security for Older People: The Options (p. 6)

CHAPTER 2

Chart 2-1
Income Distribution of Older Age Groups, by Major Source, Canada, 1975 (p. 9)

1 Includes wages, salaries, and income from self-employment.
2 Includes OAS/GIS and CPP/QPP.
3 Includes occupational pensions, investment income, and miscellaneous income sources (including RRSPs).

Source Based on unpublished data from Statistics Canada, Survey of Consumer Finances, 1976.

Chart 2-2
Book Value of Pension Fund Assets as a Proportion of GNP, by Type of Plan, Canada, 1962-77 (p. 13)

Source Statistics Canada, *Trusteed Pension Plans, Financial Statistics,* Cat. No. 74-201, various issues. Statistics Canada, *Canadian Statistical Review,* Cat. No. 11-003, various issues. Statistics Canada, *Financial Flow Accounts,* Cat. No. 13-002, various issues. Federal and Provincial *Public Accounts,* various issues. Statistics Canada, *National Income and Expenditure Accounts,* vol. I, Cat. No. 13-531, 1976. Estimates by the Economic Council of Canada.

Chart 2-3
Pension Fund Assets, by Type of Plan, Canada, 1962-77 (p. 14)

Source Same as for Chart 2-2.

Chart 2-4
Growth of Occupational Pension Plans in Canada, 1960 to 1976 (p. 15)

Source Statistics Canada, *Pension Plans in Canada,* Cat. No. 74-401, various issues.

Chart 2-5
Percentage of Paid Workers in the Labour Force Covered by Pension Plans, by Industry, Canada, 1970 and 1976 (p. 16)

Source Same as for Chart 2-4.

Chart 2-6
Pre-Retirement Earnings Replaced by Public Income Security Plans, Selected Countries, 1975 (p. 19)

1 Data are for systems at maturity, except for Norway, Sweden, and Denmark. This chart does not take into account employer-sponsored pensions. These are more important in Canada and the United States than in many European countries.

Source U.S. Department of Health, Education, and Welfare, *Social Security Bulletin,* January 1978, p. 4. Data for Canada are estimates by the Economic Council of Canada.

Table 2-1
Canada's Retirement Income Programs, 1977 (p. 10)

1 Fiscal year 1977-78.

Source Statistics Canada, *Trusteed Pension Plans, Financial Statistics,* Cat. No. 74-201, various issues. Federal and Provincial *Public Accounts,* various issues. Statistics Canada, *Pension Plans in Canada,* Cat. No. 74-401, various issues. Revenue Canada, Taxation, *Taxation Statistics,* 1979. Health and Welfare Canada, *Canada Pension Plan Statistical Bulletin,* various issues. Estimates by the Economic Council of Canada.

Table 2-2
Maximum Monthly Benefit Payable to the Disabled Compared with Maximum Old-Age Income Support, by Province, as of 31 March 1979 (p. 12)

1 *Newfoundland* — For single persons, a maximum of $50 monthly may be granted for the aggregate of the Registered Blind Persons' Supplement, arrears in light and power bills, special diets, water and sewage fees, union initiation fees, security deposits, and rent supplements (in single-parent situations). In the case of a couple where both spouses are blind and the $50 special allowance is depleted, an additional amount of up to $50 monthly may be granted.

Nova Scotia — "Disabled" means unemployable by reason of a major physical or mental impairment that is likely to continue for at least 12 months. It is possible for a recipient of the Disabled Persons' Allowance or Blind Persons' Allowance to receive $75 a month from that allowance, a $192 supplement under the Family Benefits Program (social assistance), and a further supplement of $100 for special needs. Only the blind, deaf, and paraplegics, however, qualify for the $100 supplement, which is paid to all those who fall within the definition and is not needs-tested.

New Brunswick — The disability category includes all persons in receipt of the Blind Persons' Allowance or Disabled Persons' Allowance prior to April 1, 1974, and all new cases where disability or blindness is certified in accordance with established guidelines.

Ontario — A blind or disabled recipient receives a grant in addition to the regular allowances under family benefits to bring them to a guaranteed annual income level, as indicated in the table, or $456 for a couple where only one spouse is blind or disabled. If both are only unemployable, the rates are less.

Saskatchewan — Disabled recipients may be granted a special allowance (to pay for tasks they are unable to perform) in an amount of up to $25 per month per person.

Alberta — The amount of $522 payable to a couple consists of a $212 basic allowance plus $310 for shelter (excluding the 50 per cent coverage allowed for shelter needs in excess of $310).

British Columbia — The amounts indicated represent the guaranteed minimum monthly income for a disabled person under the "GAIN for Seniors and Handicapped" program.

Finally, with respect to Quebec, Manitoba, Saskatchewan and Alberta, although no specific provisions for special disability allowances are contained in the legislation, the cost of disability-related items would, in general, be covered under special needs.

Source Federal and Provincial *Public Accounts*, various issues. Revenue Canada, Taxation, *Taxation Statistics*, 1979. Health and Welfare Canada, "A Comparison of Provincial Social Assistance Programs," Welfare Information Systems Branch, Ottawa, February 15, 1979.

Table 2-3
Pre-Retirement Preservation of Pension Credits against Inflation, by Type of Pension Plan (p. 17)

1 Other plans account for 1.9 per cent.

Source Statistics Canada, *Pension Plans in Canada, 1976*, Cat. No. 74-401, 1978.

Table 2-4
Distribution of Members Covered by Major Types of Public- and Private-Sector Occupational Pension Plans, Canada, 1960, 1970, and 1976 (p. 18)

Source Statistics Canada, *Pension Plans in Canada*, Cat. No. 74-401, various issues.

Table 2-5
Average Income Before Tax of Persons Aged 65 to 74 Years before and after Retirement, by Income Quintile, Canada, 1975 (p. 20)

1 The average income of persons in the 55-64 age group in 1965, multiplied by 1.72, which is the ratio of the 1975 CPI (138.5) to its 1965 level (80.5).

Source Statistics Canada, *Income Distribution by Size in Canada*, Cat. No. 13-528 for 1965, and Cat. No. 13-207 for 1975. *Bank of Canada Review*, various issues.

CHAPTER 3

Chart 3-1
Distribution of Older Population, by Major Age Group, Canada, 1976 to 2051 (p. 24)

Source Frank Denton, Christine Feaver, and Byron Spencer, "The Future Population and Labour Force of Canada: Projections to the Year 2051," a background study prepared for the Economic Council of Canada, 1979.

Chart 3-2
Distribution of Older Population, by Age Group and by Sex, Canada, 1976 to 2051 (p. 24)

Source Same as for Chart 3-1.

Chart 3-3
Population Aged 65 and over per 1,000 Persons Aged 20 to 64, Canada, 1976 to 2051 (p. 24)

Source Same as for Chart 3-1.

Chart 3-4
Population Aged 60 and over per 1,000 Persons Aged 20 to 59, Canada, 1976 to 2051 (p. 25)

Source Same as for Chart 3-1.

Chart 3-5
Population Aged 19 and under per 1,000 Persons Aged 20 to 64, Canada, 1976 to 2051 (p. 25)

Source Same as for Chart 3-1.

Chart 3-6
Inactive as a Proportion of Active Population, Canada, 1976 to 2051 (p. 26)

1 The active population comprises those actually in the labour force.
2 High, medium, and low population projections combined with medium labour force participation projection.

Source Same as for Chart 3-1.

Chart 3-7
Population Aged 65 and over as a Proportion of Total Population, Selected Countries in 1975 and Canada from 1976 to 2031 (p. 27)

1 Canadian figures are based on the Economic Council of Canada's medium population projections.

Source Based on data from the International Labour Office, *Labour Force Estimates and Projections, 1950-2000* (Geneva: ILO, 1977), vols. I and IV, Table 5.
Canadian figures were derived from Source to Chart 3-1.

Chart 3-8
Expenditures on Public Retirement Income Programs as a Proportion of GNP, Canada, 1976 to 2051 (p. 27)

1 Includes CPP/QPP and OAS/GIS. The projections assume the present target level of income replacement provided by the CPP and QPP and that OAS payments will continue to bear the same relationship to the average industrial wage as in 1978.

Source Estimates by the Economic Council of Canada are based on population projections from Denton, Feaver, and Spencer, "The Future Population and Labour Force of Canada."

Chart 3-9
Expenditures on Public Retirement Income Programs as a Proportion of GNP, under Various Demographic Growth Assumptions and by Age of Eligibility for Benefits, Canada, 2031 (p. 28)

1 Same as Note 1 for Chart 3-8.
2 High, medium, and low population projections combined with medium labour force participation projection.

Source Same as for Chart 3-8.

Chart 3-10
Expenditures on Public Retirement Income Programs as a Proportion of GNP, under Various Demographic Growth Assumptions and by Income-Replacement Ratio and Age of Eligibility for Benefits, Canada, 2031 (p. 28)

1 Same as Note 1 for Chart 3-8.
2 Same as Note 2 for Chart 3-9.

Source Same as for Chart 3-8.

Chart 3-11
Public Expenditures on Major Programs for the Younger and Older Age Groups as a Proportion of GNP, under Various Demographic Growth and Productivity Assumptions, Canada, 1981 to 2051 (p. 30)

1 Includes education, health, welfare, and pensions.
2 The level of social assistance payments, excluding pensions, is assumed to increase in line with real wages.
3 The level of social assistance payments, excluding pensions, is assumed to be indexed to prices only.

Source Same as for Chart 3-8.

Chart 3-12
Average Annual Increase in Labour Force, by Decade, Canada, 1961 to 2051 (p. 31)

Source Statistics Canada, *The Labour Force*, Cat. No. 71-001, December 1975. Estimates by the Economic Council of Canada are based on population projections from Denton, Feaver, and Spencer, "The Future Population and Labour Force of Canada."

Chart 3-13
Median Years of Schooling, by Major Age Group, Canada, 1976 to 2051 (p. 31)
Source Statistics Canada, *1976 Census of Canada*, Cat. No. 92-827. Estimates by the Economic Council of Canada are based on population projections from Denton, Feaver, and Spencer, "The Future Population and Labour Force of Canada."

Table 3-1
International Comparison of Age Composition and Public Old Age Benefits, 1970-71 (p. 29)
1 As noted in the original OECD source, these comparisons must be treated with great caution, even after allowance for demographic differences.
Source Organisation for Economic Co-operation and Development, *Old Age Pension Schemes* (Paris: OECD, 1977), Tables 6 and 7. Senate of Canada, *Proceedings of the Special Senate Committee on Retirement Age Policies*, Issue No. 12, Ottawa, January 25, 1979, Table 11, p. 12A:16.

CHAPTER 4

Chart 4-1
Net Lifetime Benefits from Public Retirement Income Programs, by Age Cohort, Canada, 1895-99 to 1960-64 (p. 37)
1 An age cohort consists of all individuals born in a given period.
2 Net benefits are present values for an individual in 1966 or the year in which he/she attains age 18, whichever is later. For CPP and QPP, the net benefit is the present value of benefits less taxes on those benefits, minus the present value of contributions. For OAS and GIS, the net benefit is the present value of benefits less taxes on those benefits, minus the present value of taxes used to finance the program. It was assumed that OAS and GIS are financed from the personal income tax and that taxes would be lower without the two programs. Unless otherwise specified, CPP and QPP contributions are assumed to be 3.6 per cent to 2006 and on a pay-as-you-go basis thereafter. The calculations assume too that employees bear the entire burden of contributions.
Source Samuel A. Rea, Jr., "Redistributive Effects of Canada's Public Pension Programs," a background study prepared for the Economic Council of Canada, 1979.

Chart 4-2
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1 Same as Note 1 for Chart 4-1.
2 Same as Note 2 for Chart 4-1.
Source Same as for Chart 4-1.

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1 Same as Note 1 for Chart 4-1.
2 Net lifetime benefits are present values for individuals at age 18 of benefits less taxes on those benefits, minus the present value of contributions. Contributions are assumed to be 3.6 per cent to 2006 and on a pay-as-you-go basis thereafter. The calculations assume too that employees bear the entire burden of contributions.
Source Same as for Chart 4-1.

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2 Same as Note 2 for Chart 4-3.
Source Same as for Chart 4-1.

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Source Same as for Chart 4-1.

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Source Estimates by the Economic Council of Canada are based on population projections from Denton, Feaver, and Spencer, "The Future Population and Labour Force of Canada."

CHAPTER 5

Chart 5-1
Life-Cycle Pattern of Income, Consumption, Saving, and Wealth (p. 45)
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Personal Saving as a Proportion of Personal Disposable Income, Canada, 1954-78 (p. 46)
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Chart 5-3
Growth of Real Output per Worker and Proportion of GNP Invested, Selected Countries, 1950-62 (p. 50)
Source Edward F. Denison, *Why Growth Rates Differ* (Washington: The Brookings Institution, 1967). U.S. Bureau of Economic Analysis, *Long-Term Economic Growth, 1860-1970* (Washington: U.S. Government Printing Office, 1973).

Chart 5-4
Average Annual Growth in Real National Income, by Major Source, Selected Countries and Time Periods (p. 51)
1 Includes advances in knowledge, improved resource allocation, and economies of scale.
Source Based on Edward F. Denison and William K. Chung, "Economic Growth and Its Sources," in Hugh Patrick and Henry Rosovsky, *Asia's New Giant* (Washington: The Brookings Institution, 1976).

Table 5-1
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1 Includes capital consumption allowances but excludes foreign saving.
2 Includes capital consumption allowances and foreign saving.
3 May not add up to 100 per cent because of rounding and omission of residual error.
4 Personal pension saving consists of the flow of funds into the trusteed and insured plans of the private and public sectors. Saving by way of life insurance, which is considerable in Canada, is included in "other" personal saving.
5 Government pension saving consists of the flow of funds into the government consolidated-revenue fund pension plans and CPP/QPP.
6 For 1960-62, figures are based on 1962 only. The Canada and Quebec Pension Plans were introduced in 1966.
Source Statistics Canada, *Trusteed Pension Plans, Financial Statistics*, Cat. No. 74-201, various issues. Statistics Canada, *Canadian Statistical Review*, Cat. No. 11-003, various issues. Statistics Canada, *Financial Flow Accounts*, Cat. No. 13-002, various issues. Federal and Provincial *Public Accounts*, various issues. Statistics Canada, *National Income and Expenditure Accounts*, vol. 1, Cat. No. 13-531, 1976. Estimates by the Economic Council of Canada.

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CHAPTER 6

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Source Statistics Canada, *Trusteed Pension Plans, Financial Statistics*, Cat. No. 74-201, various issues. Statistics Canada, *Financial Flow Accounts*, Cat. No. 13-002, various issues.

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Source Estimates by the Economic Council of Canada are based on population projections from Denton, Feaver, and Spencer, "The Future Population and Labour Force of Canada."

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Source Same as for Chart 6-1.

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1 The QPP accounts for approximately 95 per cent of general fund assets.
2 Includes direct and guaranteed bonds of the Government of Quebec.
3 Includes Government of Canada, guaranteed by provincial grants, municipal, school, and corporate bonds.
Source Based on data from the Caisse de dépôt et placement du Québec, *Annual Reports*, 1976 and 1978.

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1 Includes foreign government bonds.
Source Statistics Canada, *Trusteed Pension Plans, Financial Statistics*, Cat. No. 74-201, various issues.

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2 Includes foreign government bonds.
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CHAPTER 7

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1 Participation rates for 1975 and subsequent years are based on the 1976 Revision of the Labour Force Survey (revisions were necessitated by the changeover to the 1976 Census as the base for labour force population projections). For the purpose of consistency, participation rates prior to 1975 were converted to the 1976 Revision by adjusting separately the population and labour force series, using the 1975 revised figures as a base.
Source Based on data from Statistics Canada, Labour Force Survey Division, and on estimates by the Economic Council of Canada.

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Chart 7-3
Percentage of Men that Left the Labour Force, by Age, Canada, 1961 and 1976 (p. 67)
1 The percentages of men leaving the labour force are calculated by subtracting the labour force participation rate corresponding to each age from that of the immediately preceding age.
Source Frank T. Denton and Sylvia Ostry, *Working-Life Tables for Canadian Males,* Dominion Bureau of Statistics, 1961 Census Monograph (Ottawa: Queen's Printer, 1967). Denton, Feaver, and Spencer, "The Future Population and Labour Force of Canada."

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Distribution of Full-Time Employees Aged 55 and over in Relation to Mandatory Retirement, Canada, 1975 (p. 69)
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Source Based on tabulations produced by the Economic Council of Canada from the micro data of the 1975 Retirement Survey conducted by Statistics Canada on behalf of Health and Welfare Canada.

Chart 7-5
Labour Force Participation Rates of Men Aged 66 to 70, by Level of Education, Canada, 1975 (p. 69)
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Source Based on data from Statistics Canada, Survey of Consumer Finances, 1975 (census family micro data tape).

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Chart 7-7
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Source Statistics Canada, *Pension Plans in Canada,* Cat. No. 74-401, various issues.

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Source Based on tabulations produced by the Economic Council of Canada from the micro data of the 1975 Retirement Survey conducted by Statistics Canada on behalf of Health and Welfare Canada.

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2 Includes community, business, and personal service industries.
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1 The sample consists of men aged 55 and over who have not retired from full-time employment and are not self-employed. The sample includes only those whose longest-term employer is the current one. The reason for this exclusion is that some of the information in the survey relates to their job with their longest-term employer, while other information relates to the current job. This exclusion resulted in a 28 per cent reduction of the sample.

Source Same as for Table 7-2.

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Source Estimates by the Economic Council of Canada.

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Source Revenue Canada, Taxation, *Taxation Statistics,* 1978.

Chart 8-4
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Source Estimates by the Economic Council of Canada, based on unpublished data from Statistics Canada, Survey of Consumer Finances (economic family series), 1976.

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1 As measured by the consumer price index.

Source Statistics Canada, *Trusteed Pension Plans, Financial Statistics,* Cat. No. 74-201, various issues. Estimates by the Economic Council of Canada.

CHAPTER 10

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Expenditures on Selected Retirement Income Policy Alternatives as Percentages of GNP and Contributory Earnings, under Various Demographic Scenarios, Canada, 1981 and 2031 (p. 98)

1 Figures in parentheses are percentages of contributory earnings — i.e. pay-as-you-go contribution rates. These are relevant only for the income-replacement options; basic-income options are financed from general tax revenues. It should be noted too that increasing CPP/QPP benefits beyond present levels would in fact slightly reduce the requirements for the income-tested portion of the basic-income packages. For practical purposes, however, this can be ignored, and the two sets of options can be treated as additive.

2 For details of the Canadian Labour Congress proposals, see Note 1 for Chapter 10.

3 This figure is the actual contribution rate at the present time rather than the pay-as-you-go rate.

Source Estimates by the Economic Council of Canada.

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