

ECONOMIC COUNCIL OF CANADA



Eighth Annual Review • September 1971

Design for Decision-Making

An Application to
Human Resources Policies

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Eighth Annual Review

DESIGN FOR DECISION-MAKING

An Application to Human Resources Policies

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Introduction

THIS REVIEW is about government decision-making. It is not so much concerned with the *outcomes*, but rather with the *processes*, of such decision-making. Nor does it dwell at any length on the rapidly growing role of governments, although this is obviously a major factor inducing increased concern about government decision-making.

Government activities have been growing rapidly in scale and scope. All Canadians are becoming increasingly aware of the impact of government decisions—federal, provincial, and municipal—on their daily lives. Along with this awareness has come a spreading recognition that government decisions now have greater consequences for good or ill than was true in earlier days when governments played much more limited roles. These developments are not unique to Canada; they are taking place on a worldwide basis. In this context, of course, it is worth noting the importance of decision-making in the private sector and the fact that decisions here, too, have pervasive effects.

A rising need for better decision-making is, in part, a consequence of success. Affluence has had a prismatic effect on the aspirations of our society, producing a widening spectrum of wants. To govern is to choose; and to choose among multiplying, shifting, and conflicting goals is to govern under difficult conditions. Affluence is, of course, the result of change. The heightened pace of change—itself a source of unease—has coincided with growing awareness in recent years of the complexities of modern society and, together, these appear to be producing a wide array of discontents. This, perhaps more than any other single factor, has produced a focus for public concern about developing

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greater innovation in both government and private decision-making processes.

Any such innovation demands a wider and deeper understanding of these processes. In this Review, we select key elements in government decision-making processes as a basis for asking questions. These are simple questions: What are the objectives of this or that policy? Why was this policy chosen rather than some other alternative? Are the programs working well? How may they be improved?

Simple questions—deceptively simple, for there are no simple answers. This we have tried to emphasize as well. To ask pertinent questions is a beginning, but it is clearly not enough. Other avenues are also explored in an effort to make constructive suggestions for improving the process of government decision-making. They involve improved information and analysis, training of the “actors” in the process, and enriching public understanding of the system.

The Council has, of course, previously examined a number of basic economic and social goals in the Canadian context, relating to employment, growth, prices, external balance, and income distribution. The attempt to clarify and, to some degree, quantify these goals and their interrelationships, in order to provide a better basis for public discussion, has been a major concern of all of our Reviews. In this Review, we emphasize the need for a more comprehensive framework, covering a broader range of goals and their interrelationships, within which policy objectives can be considered and appropriate priorities chosen.

This is a logical development of our earlier work, which discussed not only the importance of establishing *achievement goals* for Canadians and of setting priorities among them, but also the crucial role of better information, analysis, and more-informed public discussion in this process. However, as we stressed in the *Sixth Annual Review* and re-emphasize here, “in a democratic system...it is not the role of professional experts or advisers to make basic decisions... about . . . priorities. Such decisions are properly made by governments, business firms, labour unions, consumers and other decision-makers operating within the broad framework of our political, economic and social system—and ultimately subject to the ratification or rejection by the Canadian public in their dual role as consumers and voters.”

In the first part of this Review, Chapter 2 discusses briefly the increasing role of government. Chapters 3 through 5 are devoted to an examination of the major aspects of government decision-making processes and to possible means for their improvement. Chapters 6, 7, and 8 seek to *illustrate* this theme with reference to the main programs

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of federal manpower policy: training; mobility; job placement. Chapter 9 treats a major policy area in the provincial sphere of jurisdiction—education. Chapter 10 sets out a few conclusions relating to the main theme of this Review.

What we say here will not come as news to many people who are already making decisions in government. We recognize and describe the progress made by governments in grappling with the problem. We also see the distance yet to be travelled. Government decision-making faces increasing complexity and uncertainty. Decisions must continue to be made, often under pressure and on the basis of incomplete knowledge. More knowledge will not, of course, always make decisions easier; indeed, in some cases, decisions may become more difficult. No one, least of all the Council, believes there are any mystical, magical “solutions”. We are seeking to point out avenues for exploration—avenues which we believe are not dead ends, but which are also not highways to heaven.

The Increasing Role of Government

THE EXPANSION of government activities in Canada as in other western countries is not something new. It has been going on for decades, though not always at the same pace. To keep track of it is not easy; there is no single or simple measure of the importance of government that can be used to monitor the change. Moreover, the expansion is a complex process that defies simple explanation in economic terms. When all is said and done, the explanation must be traced through a series of influences emanating from many parts of a society, coupled with the decisions and actions—past and present—of politicians, administrators, and others.

THE SIZE AND COMPOSITION OF GOVERNMENT EXPENDITURES IN CANADA

Government expenditures are frequently used as an indicator of the impact government has on our economy and society. Actually, of course, they represent only an imperfect and partial indicator of total government activities, and in a later section we look briefly at regulatory and other nonexpenditure roles of governments.

Even for expenditures, the readily available measures tend to underestimate the importance of government. For one thing, when economists speak of the "government sector" of the economy, they are usually referring to that sector as it is defined in the national accounts. This is not the only possible definition. For some purposes, it would be useful to have information on expenditures on the basis of a wider definition—perhaps labeled the "public sector"—that would also include the revenues and expenditures of a wide variety of government-

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owned enterprises, like the Canadian National Railways, the Canadian Broadcasting Corporation, Quebec Hydro, and British Columbia Ferries.¹ In total, such enterprises have a large influence on economic, social, cultural, and other aspects of Canadian life. Unfortunately, the data that would permit their inclusion in the following measures of government expenditures are not readily available. Consequently, the discussion here is based on the narrower definition which, by and large, includes only the activities of government departments (including their expenditures on such institutions as hospitals, schools, and other public institutions).

Moreover, even within the area of departmental activities, the expenditure figures do not directly tell the whole story. There is, of course, the fact that many government expenditures—for example, on regulatory or policy activities—do not really reflect their far-reaching impact on society (see below). There is also the fact that many expenditures will have a multiplied effect as they work their way through the economic system. In addition, there are very important complementary relationships between spending in the private and government sectors. Governments must frequently respond to private decisions; one has only to think of the public investment in schools, roads, sewage systems, and so on, in some recently developed mining communities. Conversely, government expenditures of many types—for example, on new airport or harbour facilities, or on new road or highway construction—evoke a complementary response by private decision-makers.

Recent Trends and Shifts in Government Expenditures

Table 2-1, which sets out expenditures of all governments by functional classifications based on the purposes of programs, shows the rapid expansion of spending on human resource programs—particularly in the fields of health, education and, to a lesser extent, social assistance. Unfortunately, complete figures on this basis are not available for more recent years, but partial evidence suggests that these trends have continued, with health expenditures continuing to show the most rapid growth as a result of the introduction of medicare.

On a national accounts basis, an irregular upward trend in government expenditures as a percentage of Gross National Product has been in evidence for many years in Canada. Over the period from 1961 to 1970, *total* government expenditures grew at a rate of about 10 per cent

¹For national accounts purposes these enterprises are included with the business sector of the economy.

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TABLE 2-1—EXPENDITURE OF ALL GOVERNMENTS, BY FUNCTION

	Total Expenditures		Percentage of Total Government Expenditure		Percentage of Gross National Product		Average Annual Rate of Growth
	1957	1968	1957	1968	1957	1968	
	(\$ billion)						(Per cent)
Health.....	0.45	2.59	5.1	10.9	1.4	3.6	17.2
Social assistance (including veterans' pensions).....	1.54	4.10	17.7	17.2	4.7	5.7	9.3
Education.....	1.11	4.81	12.8	20.2	3.4	6.7	14.3
Subtotal.....	3.09	11.50	35.6	48.3	9.4	16.1	12.7
Defence.....	1.71	1.80	19.6	7.6	5.2	2.5	0.5
Transportation.....	1.17	2.34	13.4	9.8	3.5	3.3	6.5
Net debt charges ¹	0.64	1.78	7.4	7.5	2.0	2.5	9.7
All other ²	2.08	6.39	24.0	26.8	6.3	9.0	10.7
Total.....	8.69	23.81	100.0	100.0	26.4	33.4	9.6

¹Interest on the public debt less interest revenues on government investments.

²Includes sanitation and waste removal, natural resources, general government, protection, recreation and cultural activities, and other.

SOURCE: The figures in this table are based on the Dominion Bureau of Statistics financial management accounts series of government expenditures, by function. This framework differs somewhat from that used in the national accounts; for example, the financial management series exclude transactions of the Canada and Quebec Pension Plans, government employee pension funds, and some government trust funds.

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a year, rising from 31½ per cent to 35½ per cent of Gross National Product. Transfer payments (which essentially constitute a redistribution of income in the economy) rose slightly more rapidly than total government expenditures on goods and services.

TABLE 2-2—TRANSFER PAYMENTS TO PERSONS AND NONPROFIT INSTITUTIONS BY ALL LEVELS OF GOVERNMENT¹
(National accounts basis)

	1961	1970	Increase 1961 to 1970	Increase as Percentage of Total Increase	Average Annual Growth Rate
	(Millions of dollars)		(Per cent)		
Direct relief	109	423	314	8	16
Old age security	597	1,862	1,265	31	13
Grants to postsecondary educational institutions	139	1,017	878	21	25
Grants to benevolent associations	134	479	345	8	15
All others ²	1,730	3,023	1,293	32	6
Total	2,709	6,804	4,095	100	11

¹Excluding interest on the public debt.

²Including family and youth allowances, unemployment insurance benefits, veterans' pensions and allowances, workmen's compensation benefits, adult occupational training payments, pensions to government employees and a variety of other categories of assistance to persons.

SOURCE: Based on data from Dominion Bureau of Statistics.

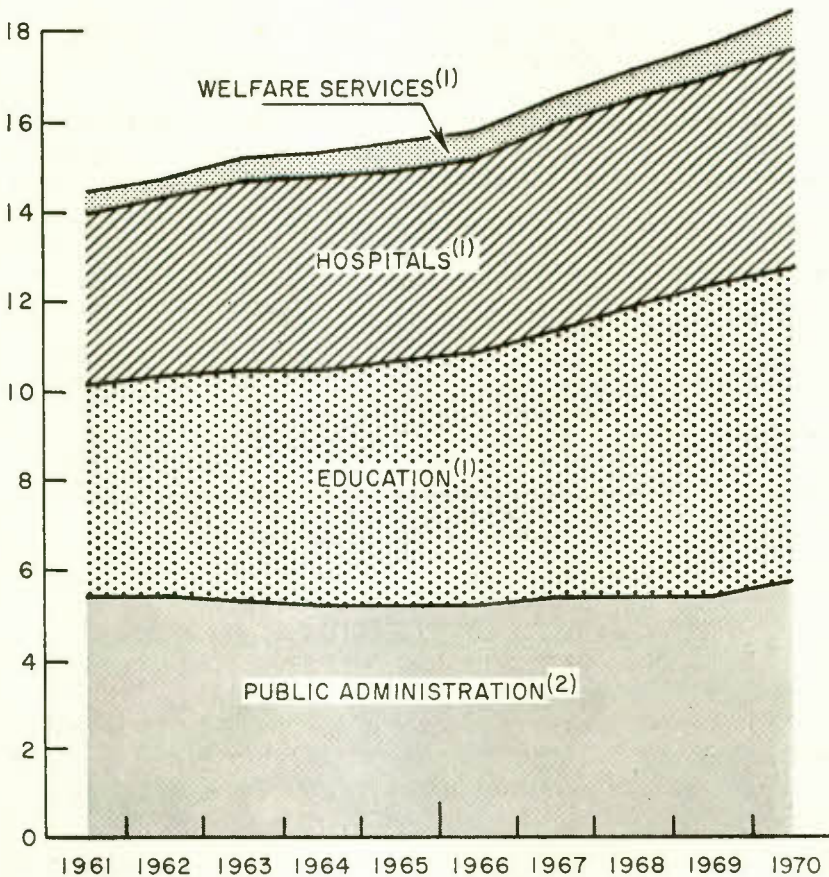
Over half of the increase in transfer payments during the past decade was attributable, as indicated in Table 2-2, to two categories of spending—payments for old age security and grants to postsecondary educational institutions.

Within the goods and services component, government gross capital formation rose by 8 per cent a year, on average, somewhat less than the growth in Gross National Product. Capital expenditures by municipalities were the most significant component of this increase. Expenditures on current goods and services grew much faster—by almost 11 per cent a year. This more rapid growth was largely explained by sharp increases in total wage and salary payments, particularly for personnel in hospitals, education, social assistance, and municipal services. Such payments have constituted a rising share of total civilian wages and salaries; this, in turn, largely reflects shifts

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in employment. While civilian employment in general public administration remained stable at slightly over 5 per cent of total civilian employment, employment in hospital and education services rose significantly in the 1960's (Chart 2-1).

CHART 2-1
EMPLOYMENT IN PUBLIC ADMINISTRATION AND MAJOR
COMMUNITY SERVICES AS PERCENTAGE
OF TOTAL CIVILIAN EMPLOYMENT



⁽¹⁾Includes a small number of private employees.

⁽²⁾Excludes military personnel.

Source: Based on data from Dominion Bureau of Statistics.

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Not surprisingly, as the *composition* of government expenditure changed, so too did the *division* of expenditure between the federal government, on the one hand, and provincial and municipal governments, on the other. For a variety of reasons, the functions under provincial jurisdiction have expanded with particular speed and vigour, and this has been facilitated by increased fiscal transfers from the federal to provincial governments. Table 2-3 shows that since the mid-1950's the federal share of total expenditures has declined substantially from the levels of the war and early postwar years to something closely resembling that of the 1920's.

TABLE 2-3—PERCENTAGE DISTRIBUTION OF GOVERNMENT
EXPENDITURES, BY LEVEL OF GOVERNMENT
(National accounts basis)

	Federal	Provincial	Municipal
1926.....	38	20	42
1930.....	33	25	42
1935.....	35	34	32
1940.....	57	22	21
1945.....	82	9	8
1950.....	52	26	22
1955.....	58	20	22
1960.....	51	25	25
1965.....	43	31	26
1970 ¹	40	35	25

¹Canada and Quebec Pension Plan payments of \$104 million excluded.

SOURCE: Based on data from Dominion Bureau of Statistics.

THE GROWTH OF THE PUBLIC SECTOR IN INTERNATIONAL PERSPECTIVE

The increasing relative importance of the public sector is neither new nor uniquely Canadian. The phenomenon was observed for major industrial countries more than 100 years ago, and it is still evident today.

International comparisons in this field must be treated with great caution, but available evidence from various sources suggests that government sector expenditures continued to increase as a percentage of Gross National Product in many, if not most, industrial nations during the 1960's. There does not, however, appear to be any sort of

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generally applicable law that would associate a particular level of government expenditure across a variety of countries with any particular level of per capita income or Gross National Product. Even though some of the differences in the government expenditure patterns of various countries may be explained by differences in per capita income, demographic trends, and so on, policy emphasis and ideological factors obviously play an important role.

Table 2-4 illustrates this point with reference to Canada and the United States. For example, defence expenditures were comparatively more important in the United States than in Canada in both 1961 and 1967, whereas the reverse was true for expenditures on health and education. Although both health and education expenditures grew rapidly in both countries over this period, their growth in Canada was even more pronounced than in the United States. In contrast, social assistance expenditures did not represent as high a proportion of Gross National Product in Canada as in the United States in these years, although they grew somewhat more rapidly than in the United States.

TABLE 2-4—EXPENDITURES OF ALL GOVERNMENTS,
BY FUNCTION, CANADA AND UNITED STATES

	United States			Canada		
	Percentage of GNP		Average Annual Rate of Growth	Percentage of GNP		Average Annual Rate of Growth
	1961	1967	1961-1967	1961	1967	1961-1967
Defence.....	9.4	9.4	7.3	4.2	2.7	1.3
General government..	1.5	1.8	10.2	1.5	1.6	10.6
Education.....	4.0	5.1	11.7	4.5	6.4	15.7
Health.....	1.0	1.1	10.0	2.6	3.5	14.1
Social assistance ¹	5.7	6.0	8.4	5.3	5.5	9.8
Others ²	7.0	7.2	7.5	13.4	13.0	8.5
Total.....	28.6	30.6	8.5	31.5	32.7	9.7

¹Includes veterans' benefits.

²The higher proportion of Gross National Product accounted for by this category in Canada is a result of relatively higher expenditures on transportation and communications, natural resources, net interest on the public debt, protection to persons and property, and sanitation and waste removal. These outweigh relatively higher expenditures in the United States on such things as space research and technology. Also, in 1961, 1.4 percentage points of the Canada-U.S. disparity is attributable to a statistical adjustment to equate functional and national accounts totals.

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

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Table 2-5 provides somewhat more extensive international comparisons in respect of social assistance expenditures. Obviously, the relative emphasis placed by Canada on such things as old age, survivor, unemployment, and disability benefits differs considerably from the other countries shown. These differences cannot be adequately explained without examining the myriad of decisions behind these various programs.

TABLE 2-5—PERCENTAGE DISTRIBUTION OF SOCIAL ASSISTANCE EXPENDITURES, BY TYPE OF BENEFIT, SELECTED COUNTRIES, 1966-1967

Type of Benefit	Canada	Australia	New Zealand	Britain	United States
Old age benefits.....	21.4	26.0	28.8	33.9	35.3
Survivors' benefits.....	0.9	3.3	2.6	3.3	14.3
Family allowances.....	11.7	11.6	17.1	3.6	—
Unemployment benefits...	11.4	0.6	0.1	2.7	4.7
Disability benefits.....	1.0	4.6	2.2	7.4	5.7
Workmen's compensation.	3.0	5.6	1.7	2.5	2.5
Maternity benefits.....	—	0.4	0.3	0.9	—
Health services.....	37.7	33.7	37.5	33.1	20.6
Veterans' pensions and allowances.....	5.7	12.0	7.1	2.7	7.7
Other.....	7.2	2.2	2.6	9.9	9.2
Total.....	100.0	100.0	100.0	100.0	100.0

SOURCE: Department of National Health and Welfare.

REGULATORY AND OTHER NONEXPENDITURE ROLES

As noted earlier, the importance of government may well be increasing more rapidly than the growth rate of public expenditure alone would suggest. Obviously, governments' roles in our society extend far beyond simple considerations of expenditure on various programs of government departments.

For a start, governments, perhaps most particularly central governments, now engage deliberately in *aggregative regulation of economic activity* through fiscal policy (changes in taxes and expenditures), monetary policy, balance-of-payments and exchange-rate policy.

Governments engage in a variety of *financial activities*. A number of government agencies act as *financial intermediaries*, often channeling funds into areas that might otherwise suffer from imperfections in

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capital markets. Examples in Canada include Central Mortgage and Housing Corporation, the Industrial Development Bank, the Farm Credit Corporation, the Ontario Housing Authority, Industrial Estates Limited (Nova Scotia), the Alberta Municipal Financing Corporation, La Caisse de dépôt et placement du Québec, to name only a few. Many of these organizations have appeared on the scene only since the Second World War.

Government agencies in Canada also engage in a number of *commercial* activities. These include the provision of transportation services (such as CNR, Air Canada, various federal and provincial ferries, and harbour and airport facilities), communications services (such as the telephone services provided by various provincial governments), and other public utilities such as hydro commissions and municipal waterworks. Two provinces—Ontario and Alberta—provide some services similar to those of banks or trust companies. Other government-owned business enterprises produce products ranging from synthetic rubber and uranium to bricks and tiles.

Perhaps far more important in this country than direct ventures into commercial activities, however, are the various ways in which governments at all levels influence or control a variety of economic and social activities, and act through legislation and regulations to set the institutional framework of society.

Controls and legislation with significant economic dimensions cover a wide range of activities. Regulations governing the use and production of natural resources, including restrictions on the use of land, conservation requirements related to forest management, water use rights, and petroleum production could be mentioned. More and more, too, governments have been moving to legislate in respect of the general management of the environment, including the control of waste products. There is legislation in the areas of wages and working conditions, including such measures as minimum wage laws, establishment of maximum hours of work, and regulations on health and safety. Governments exercise control over some prices, including those of transportation and communication services; and they regulate such diverse activities as broadcasting, air and marine navigation, and urban traffic. They affect the location and nature of business and private dwellings through zoning regulations and building codes. They also set specifications and standards relating to some goods and services, operate certain inspection services, and license a wide range of activities.

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Legislation provides the institutional framework affecting contracts, labour-management negotiations, corporate structure, and the financial responsibility of business. It provides the basis for competition policy and for policies affecting intellectual and industrial property. Beyond all the above are many other areas of both civil and criminal law affecting a multitude of other activities in Canadian society.

The list is almost endless. What is significant, however, is that these activities, like the expenditure activities of government, continue to expand and become more complex in response to the problems of our society, such as those related to our urban areas, our environment, and the continued development and deployment of our human resources. And again, as for expenditure activities, effective operation in these areas will increasingly call for improved decision-making.

FACTORS BEHIND THE RISING IMPORTANCE OF THE GOVERNMENT SECTOR

Illustrating this great expansion in government activity is one thing. Explaining it is something else again. Some government programs must grow as population expands. Many are affected by the fact that the prices of public services tend to rise more rapidly than those of goods produced in the private sector, partly because of the high labour-intensity of such services as welfare, health, and education. Rising government expenditures have also been *associated* with rising per capita income. But when all of these factors have been taken into account, there remain considerable gaps in the explanation:

The various theories and hypotheses purporting to explain the growth and pattern of government expenditure over time that have been discussed up to this point have been repeatedly characterized as defective in one crucial respect: their analysis of the "political" factors determining public expenditure. Indeed, many of these theories leave one with the impression that the level of government spending is set, as it were, in a vacuum—that impersonal, objective needs "must" be satisfied, that adverse productivity shifts "must" be offset, or that the desire of individuals to consume public services of a certain type and amount means that these services will automatically be made available. None of these inferences is necessarily true, of course. In reality, the level of public expenditure in any country at any point in time is the result of an interlocking series of decisions and actions, past and present. These decisions are made mainly by those who play the roles of "politicians" and "civil servants" in the society.¹

The import of this statement is that, in the last analysis, the explanation of rising government expenditures lies within a complex decision-

¹Richard M. Bird, *The Growth of Government Spending in Canada* (Toronto: The Canadian Tax Foundation, 1970), p. 123.

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making process. Improved decision-making by governments is, of course, no guarantee of a limit to rising expenditures. Indeed, better government in the sense of better program evaluation and better decision-making in general could just as easily lead to bigger government. But it will mean that we will get more for our money and that more alternatives—including the possibility of turning some activities back to the private sector—will be explored in a systematic and continuing way.

3

Decision-Making— A Review of New Approaches

THE NATURE of government is such that ad hoc responses to crises, and incremental changes in policy will always be facts of life. It is not possible to plan ahead for every contingency nor is it always possible, or even entirely desirable in the interests of political consensus, to avoid the trial and error process of moving ahead by small changes. Yet in our increasingly complex, interdependent society, short-range and ad hoc responses to the problems of growth and change seem increasingly inappropriate in many instances.

The conviction that there must be better ways of making decisions has led to the exploration of a variety of innovative approaches. None of these is a cure-all but they provide additional perspectives by looking at society's problems in more systematic and comprehensive ways.

Work on these new aids to decision-making has gone on in a number of countries. This chapter reviews some of these approaches under the following headings:

- goals and priorities,
- social reporting,
- futurism,
- systems analysis, and
- policy science.

GOALS AND PRIORITIES

The unease generated by rapid social change often leads to a concern with national goals and priorities. Perhaps this concern is best illustrated by the experience of the United States.

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In 1929, President Hoover constituted the Research Committee on Social Trends to examine and report on the directions of change in society and "supply a basis for the formulation of large national policies looking to the next phase in the nation's development". Many of its findings—for example, on the role of women, and the need to cope with accelerating rates of technological change—are as relevant today as when they were written. The report represents the first modern attempt to evaluate the totality of social issues as a guide to the formulation of public policy. Its conclusions are remarkably perceptive:

Effective coordination of the factors of our evolving society means, where possible and desirable, slowing up the changes which occur too rapidly and speeding up the changes which lag. The Committee does not believe in a moratorium upon research in physical science and invention, such as has sometimes been proposed. On the contrary, it holds that social invention has to be stimulated to keep pace with mechanical invention. What seem a welter of confusion may thus be brought more closely into relationship with the other parts of our national structure, with whatever implications this may hold for ideals and institutions.¹

Unfortunately, the Depression and the Second World War diverted attention from these issues for a time. Then, in a climate of international tensions in the late 1950's, President Eisenhower created a Commission on National Goals. The report of the Commission identified goals and set forth programs to "preserve and enlarge our own liberties, to meet a deadly menace, and to extend the area of freedom throughout the world...."² It dealt with 15 goal areas, largely in broad and general terms, with a special emphasis on government, democracy, foreign policy, defence of the free world, disarmament, and international institutions, as well as selected domestic goals such as job formation, investment incentives, and larger health services.

In 1966, the National Planning Association, a private research organization, published *Goals, Priorities and Dollars: The Next Decade*.³ The study was concerned with estimating the increase in resources that would be required to meet certain specified targets formulated primarily from the report of President Eisenhower's Commission on National Goals. It was also concerned with the need to make priority choices, given the resource limits provided by prospective growth. The goals discourse was thus moved to a different level. Economics, with its emphasis on competing claims for real and finan-

¹The President's Research Committee on Social Trends, *Recent Social Trends in the United States* (New York: McGraw-Hill, 1933), vol. 1, p. xv.

²The President's Commission on National Goals, *Goals for Americans* (New York: Prentice-Hall, 1960), p. 2.

³Leonard A. Lecht, *Goals, Priorities, and Dollars: The Next Decade* (New York: The Free Press, 1966).

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cial resources, was introduced as a link between goals and priorities, thereby exposing the gap between the desirable and the possible. Two of the principal findings were that: (1) hard choices had to be made among competing alternatives; and (2) those choices could be more difficult if economic growth were not well maintained.¹

The study recognized that goals do not exist "out there" in some fossilized form, waiting to be detected and dug up. In fact, one of the study's other major conclusions was that national goals could not become a subject of research before there had arisen a consciousness about them and a recognition that decision-makers need help in the clarification of goals and of the consequences of decisions made about them.

Meanwhile, the U.S. government took another initiative in the search for a better understanding of the social process. *Toward a Social Report*, published by the Department of Health, Education, and Welfare in 1969, reflected a dual responsibility "to search for ways to improve the Nation's ability to chart its social progress", and in particular "to develop the necessary social statistics and indicators to... measure the distance we have come and plan for the way ahead".²

The main emphasis in the report was on "social indicators"—a system of information for decision-making. The report emphasized the ability of social indicators to satisfy concern about "how well we are doing" in some generally accepted goal areas;³ to improve public policy-making through a better understanding of the problems; and to provide a basis for evaluation of the accomplishments of various programs and policies.

In 1969, President Nixon created a National Goals Research Staff to study some of the key choices open to the United States. In 1970, it produced a report, *Toward Balanced Growth: Quantity with Quality*. "Designed not as a listing of specific goals to be sought, but as a springboard for discussion and an aid to decision... it defines the

¹A subsequent study by Leonard A. Lecht, *Manpower Needs for National Goals in the 1970's* (New York: Frederick A. Praeger, 1969), provided estimates of the quantity, quality, and structure of manpower needed to achieve the targets discussed in the earlier document. A comparison of manpower supply projections with estimated demands indicated a potential shortfall, as well as particular labour shortages that would create distortions throughout the economy and jeopardize the achievement of national goals. The analysis went on to evolve priorities and policies directed towards a fuller, more efficient use of manpower that would bring the desired goals within reach.

²U.S. Department of Health, Education, and Welfare, *Toward a Social Report* (Washington: U.S. Government Printing Office, 1969), p. iii.

³In health and illness; social mobility; physical environment; income and poverty; public order and safety; learning, science and art; participation and alienation.

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questions, analyzes the debates and examines the alternative sets of consequences."¹ The areas chosen for elaboration—population, the environment, education, basic natural science, technological assessment, and consumerism—were those which have a significant impact on the achievement of a balanced growth policy. It is a signpost document, pointing both ways—back to the need for an information base of social indicators suggested in the earlier *Social Report*, and forward to the need for a public debate about goal choices based on this information system. The report concluded that "we must begin now to define what we wish to have as our national goals, and to develop in both our public and private institutions the specific policies and programs which will move us toward those goals".

The interest of the National Planning Association in goals and priorities continues. A study in process, by Nestor Terleckyj, uses an "input/output" framework to relate expenditures ("inputs") on goal-oriented activities to results ("outputs").² The effect of expenditure on a particular program or activity is explored over the whole range of its results, illuminating the unintended or "spillover" effects as well as the intended uses. These so-called "externalities" may reinforce or offset the purpose of other programs. Particular program expenditures become visibly more useful as they effect desirable changes in more than one goal area and less useful as they conflict with other activities.

The framework may also be reversed to suggest alternative ways of effecting changes in a particular goal area. For example, the framework shows how the incidence of violent crime could be affected by a reduction in youth unemployment, an improved enforcement system, more and different services for the poor and for children, or changed behavioural patterns with respect to such things as drugs, alcohol, and smoking. This approach is particularly suited to revealing the complexity of the interrelationships between expenditures and their results, and the variety of alternatives in selecting activities to achieve or support particular national goals.

The various attempts over the past 40 years in the United States to establish a framework for national goals have differed in approach and are uneven in quality and relevance. Nevertheless, they have

¹ National Goals Research Staff, *Toward Balanced Growth: Quantity with Quality* (Washington: U.S. Government Printing Office, 1970), p. 23.

² Nestor E. Terleckyj, "Measuring Possibilities of Social Change", *Looking Ahead*, vol. 18, no. 6 (Washington: National Planning Association, August 1970), p. 1; and "The Role of Efficiency in Achieving National Goals", paper for the Annual Meeting of the American Association for the Advancement of Science, Chicago, December 29, 1970, mimeo.

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made important contributions to the *understanding of the nature of goals, the economics of priorities, and the role of information in the formation of public policy.*

SOCIAL REPORTING

As these perceptions about the goals of policy were being developed, it became increasingly apparent that in many areas there was little reliable information on where society was, or where it had been, let alone where it was going. This lack of information gave rise to questions about the suitability of available data and to demands for clearer, more relevant policy signals. As one writer expressed it, "*For many of the important topics on which social critics blithely pass judgment, and on which policies are made, there are no yardsticks by which to know if things are getting better or worse.*"¹

Economic Accounts

Gross National Product, the most widely used measure of national output and growth, has become a target of attack in recent years. A disaffection with the state of the world and its socio-economic processes has arisen as society has become aware of the seriousness and complexity of its problems. One result of this disaffection is the growing suspicion in some quarters that the central framework of statistics which comprises the national accounts, and from which the Gross National Product is drawn, has been at least indirectly responsible for having misled society as to the real state of affairs. While some criticisms of the national accounts are not without substance, it is naive to blame the accounts for the limitations and failures of public and private policy.

The system of national accounts was developed, largely in the 1940's, as an analytical tool that would provide a perspective on the total output of goods and services and on the related question of how income is earned and expended. The interest of policy-makers in the national accounts centres on the basis they provide for measuring changes in the overall level and composition of economic activity for the purposes of assessing policies related to economic growth and stabilization. Moreover, for the general public, Gross National Product has gradually emerged as an indicator of the state of the economy.

Over the past 30 years, the system of national accounts has been

¹Raymond A. Bauer, "Detection and Anticipation of Impact: The Nature of the Task", *Social Indicators* (Cambridge: Massachusetts Institute of Technology Press, 1966), p. 20.

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elaborated and extended, and the conceptual framework has been modified in response to changing relationships and circumstances. But the basic strengths and weaknesses of the system remain largely unaltered. The growing interest in the processes of growth in recent years has focused more attention on the limitations of the national accounts and led to intensified discussion about the need for reassessing their conceptual and statistical basis.

Here are some of the reasons why critics suggest that the level and rates of change of Gross National Product are misleading:

- Inadequate account is taken of some quantity and quality changes in goods and services and of shifts between market and non-market activities.
- Various benefits associated with increased per capita output and income—including increased leisure and a wider range of choices in consumption, occupation, and residential location—are not fully reflected in these measurements.
- Intermediate costs of production, such as environmental degradation, are not taken into account.
- Gross and net additions to output are not differentiated.¹

Economists and statisticians have been aware of these defects for many years. Now, however, the limitations are becoming increasingly critical and the general public, too, is becoming increasingly aware of them.

Admitting to limitations in the system of national accounts is not to suggest that it should, or could, be replaced by a single, highly aggregated estimate of the level of human welfare. The design of the accounts, in covering primarily commercial transactions, sets definite

¹There are some areas in which modification of the national accounts could add to their usefulness. The first concerns the production of an additional statistical series—namely, the *volume* of net national income. This datum is available for Canada in current prices but not in “deflated” or constant price terms. Net product, as opposed to gross, excludes assets used, destroyed, or damaged in the production process. It is therefore widely, if not universally, recognized as a more appropriate basis for measuring economic growth. It is not a simple or easily measured concept. The estimates currently in use provide for the depreciation of traditional assets such as buildings, and machinery and equipment, but they do not take account of deterioration in the natural environment.

This point leads to the second suggested change. Environmental assets such as air and water are neither so free nor unlimited as theory and practice once assumed. They are now viewed as *assets* that change in quality or quantity and can be improved or destroyed. The next few years will, undoubtedly, see a significant increase in expenditure by the public and private sectors to undo past ecological harm and to limit its increase. There are several ways in which this use of resources could be reflected in the national accounts. Under existing procedures, investment expenditures by governments and business to maintain or restore the environment would result in an *increase* in the real rate of growth of Gross National Product. A clarification of this contradiction as soon as possible is highly desirable.

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limits on their relevance as a measure of welfare. In so far as welfare depends on the availability of goods and services bought and sold in the market, GNP growth is a useful proxy. But in so far as a wider view of welfare—a level of well-being or standard of living—is concerned with conditions of life, such as the environment, the amount and use of leisure, or greater choice, which are not included in national output or which cannot as yet be satisfactorily valued in monetary terms, the national accounts are a poor proxy. Nevertheless, the accounts are a valuable tool for appraising particular and important aspects of our economic system. Efforts to improve their conceptual and statistical precision should be directed primarily to increasing their usefulness in this respect.¹

Social Indicators

Stimulated by the need for measurements of human welfare, interest in "social indicators" has been spreading rapidly. Agencies of government, research institutions, welfare organizations and community action groups have all become involved. In this situation, it is not surprising that popularity of the term has grown to the point where its meaning is obscured. The term "social indicators" has been applied to at least four different kinds of social intelligence: compilations of social statistics; an index designed to serve as a measure of the level of human welfare; systems of social and demographic accounts; and aggregative indexes of particular and strategic social phenomena.

An awareness of the importance of, and need for, social data is far from new. Indeed the report of the Hoover Committee on Social Trends, referred to earlier in this chapter, indicated a deep concern for developing the data necessary for good national policy formulation. But, by 1933, the Great Depression had created an urgent need for *economic* data, which led to impressive developments in economic statistics. As a result of the pressing priorities of that decade, *social* statistics did not receive anything like a similar emphasis. As a consequence of this bias towards economic statistics, which has continued to the present, not only is there a lack of information relating to many

¹The National Bureau of Economic Research perceives the possibility of an economic and social accounting system, based on the national accounts, that would satisfy the demand for a generalized social welfare measure and at the same time provide a framework of interrelated systems for purposes of analysis. See F. Thomas Juster, "On the Measurement of Economic and Social Performance", *50th Annual Report* (New York: National Bureau of Economic Research, September 1970). For another view of this matter, see Edward F. Denison, "Welfare Measurement and the GNP", *Survey of Current Business*, U.S. Department of Commerce (Washington: U.S. Government Printing Office, January 1971).

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aspects of the social and behavioural systems, but data that do exist are scattered and partial.

Although the base of social data may be thin relative to need, statistical agencies and institutions could, at least as a first step, pull available data together in a convenient and systematic way. To some extent, this process has already begun in public and private institutions in several countries. Last year, for example, the Central Statistical Office of the United Kingdom issued a publication entitled *Social Trends*, which set out and assessed a wide range of the social data that are available in that country.¹ In the United States, certain private institutions, such as the Russell Sage Foundation, have undertaken the compilation of social data in specific subject matter areas.²

The search for a unique all-inclusive measure or index of human well-being does not seem very promising except in the longest of long runs. The conceptual and statistical difficulties of such a measure are formidable. We do not know how to measure individual satisfaction or dissatisfaction, and we know even less about how such measures, if they could be made, could be aggregated for the population as a whole. Some attempts have been made (particularly by international organizations) to develop standard- or level-of-living indexes, especially for the less developed countries. The limited success of even this partial approach to the measurement of human well-being tends to reinforce the conclusion that the diversity and complexity of social issues render reliance on a single indicator of dubious value.³

A third area of social reporting concerns systems of social and demographic statistics. The United Nations, in co-operation with Professor Richard Stone of Cambridge (one of the pioneers in the development of the national accounts system), has been working for a number of years on the development of such a system. It is a long-term project, similar in breadth to the national accounts system, and beyond the scope of this brief discussion, which could not do justice to its comprehensiveness or complexity.

The fourth variant of social indicators, and one that we shall be concerned with later in this Review, focuses on the compilation of

¹Central Statistical Office, *Social Trends*, no. 1, 1970 (London: Her Majesty's Stationery Office, 1970).

²Abbott L. Ferriss, *Indicators of Trends in American Education*, and *Indicators of Change in the American Family* (New York: Russell Sage Foundation, 1969 and 1970 respectively).

³Amitai Etzioni and Edward W. Lehman, "Some Dangers in 'Valid' Social Measurement", *Social Goals and Indicators for American Society*, edited by Bertram M. Gross, vol. 2, *The Annals of the American Academy of Political and Social Science*, vol. 373, September 1967, p. 4.

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aggregative and strategic measures of particular aspects of the social scene, such as mortality rates or education levels.

In France, the Commissariat Général du Plan has been interested for a number of years in social indicators and their role in planning. At a conference in 1968, the results of a study conducted at the École nationale d'administration, under the general direction of the Commissariat, were presented.¹ The papers set out some 400 social indicators in 21 subject matter areas, including conventional ones like life expectancy, health protection, and the role of education, as well as more complex ones, such as the evolution of the family, adaptation to change, social mobility, receptivity of society to the outside world, and the growth of solidarity.

International organizations, such as the Organisation for Economic Co-operation and Development, and the United Nations, have now initiated programs for the development of social indicators and related social statistics.

In the United States, there have been a number of initiatives in the area of social indicators and related data requirements. For example, in the previously mentioned document, *Toward a Social Report*, social indicators were proposed as a basis for evaluating social trends. In the more recent report of the President's National Goals Research Staff, the case for social indicators relating to government accountability was made in the introduction by D. P. Moynihan:

There is no serious way for the Nation to know whether the options chosen by the governmental process are in fact attained unless there is a steady, readily accessible, and understandable flow of information as to the *actual results*, which is to say the *outputs*, of government programs.²

In the U.S. Office of Management and Budget, the statistical policy staff is currently preparing a report on social statistics as a basis for guiding social policy. To provide this focus, a number of "social goal areas" are being explored.³ At the same time, longer-term studies of a more conceptual and technical nature are also under way.

¹Jacques Delors et collaborateurs, *Les Indicateurs Sociaux* (Paris: Futuribles, S.E.D.E.I.S., 1971); and Government of France, "French Experience in Respect of Social Indicators", Seventh Meeting of Senior Economic Advisers to ECE Governments (Geneva: United Nations, Economic Commission for Europe, November 17-22, 1969), mimeo.

²National Goals Research Staff, *op. cit.*, "Counsellor's Statement" by Daniel P. Moynihan, p. 9 (emphasis added).

³Income, employment, education, health, public safety and legal justice, housing, travel and transportation, environment and recreation.

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In Canada, there has as yet been no major or large-scale collection, evaluation, and publication of social statistics. The Dominion Bureau of Statistics has several committees involved in preparatory work in a number of areas. In Alberta, the Human Resources Research Council¹ is working on a report on social trends in that province, using a number of commissioned research papers on health, education, and other subjects.

This emphasis on data development to monitor social change and provide for analysis of society's well-being reflects the need to know about the past and the present. But we must also have a view of the future. This need for a perspective on tomorrow has given rise to a number of interesting and imaginative approaches, variously called future science, futurology, futurism, futures, or futuribles.

FUTURISM

The prophets of the Old Testament were not forecasters but vehicles of the Word. Unfortunately, most forecasts of the present day tend to be viewed in the same light. The use of scientific "forecasting" models must of course be regarded, as the professionals generally regard them, with a healthy scepticism about their relation to the real world. This does not, however, diminish the usefulness of predictions within their specified limits. But too frequently in the public mind the notion of a model built according to solvable, and therefore limited, specifications has been confused with science fiction or the literary tradition of Bergerac and Verne of spinning yarns or revealing visions.

The new multidisciplinary approach to studies of the future explicitly tries to preserve the intuitive elements of creativity (which, however mysterious, are well established as essential even to the most disciplined sciences) and, at the same time, to develop techniques to analyse and evaluate future situations and events. The futurists aim to influence society through organized knowledge of possible or probable futures.

By 1967, interest and expertise in this field had generated the first International Future Research Conference in Oslo. Three years later, at the time of the second Conference in Kyoto, 30 different organizations had 50 projects in hand, and an international periodical, *Futures*,

¹The Alberta Human Resources Research Council was established in 1967 as a Crown corporation of the provincial government. The Council includes private and government members, with responsibilities "to undertake educational, social, economic and other research relating to and affecting the development and conservation of human resources in Alberta".

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had been created. Academies or institutes are prominent in a number of countries.¹ Much of the scholarship now classed as "futures research" arose in institutions in the United States, such as The Rand Corporation and the Hudson Institute, which came into existence years before the phrase "futurism" became entirely respectable.

Futurism aids the decision-making process mainly through the elaboration and mapping of alternative possible futures. It attempts to provide policy-makers, both in industry and government, with some basis for contrasting probable developments, given anticipated trends and problems, with feasible alternatives based on future possibilities and potentials. It does not relieve anyone of the burden of making decisions; if anything, it increases the load of responsibility by forcing people to consider unpleasant, as well as pleasant, consequences of particular choices. Not infrequently, they are forced to realize that deferring a decision, just letting things run on under their own momentum, also constitutes a choice.

Some indication of the scope and range of interest of the futurists is provided by *Plan Europe 2000*, one of the most ambitious and imaginative research projects to be undertaken thus far. The objective of the Plan, which was instituted by the European Cultural Foundation, "is to endeavour, by systematic thinking, to conceive of society as it will be in the 21st century and the type of man capable of regulating it". The studies will investigate, quantitatively and qualitatively, the social, economic, political and technological aspects of European society into the next century. The intention is to integrate subject matter reports by authorities in many countries into a consistent overall framework, and to expose this to discussion by, and criticism from, other experts and interested parties, such as labour, management, and religious, social, and political groups.²

In Canada, too, there has been some activity in this area, and interesting "previews" of the future of Canada have been produced. A report published by the Alberta Human Resources Research Council canvassed views of experts as a basis for a study entitled *Social*

¹For example: The U.S. Institute for the Future, U.K. Society for Long-Range Planning, Danish Academy for Research on the Future, Israeli Association for Futurology and Philosophy of Technics and Science, Japan Association of Futurology, German Association for Future Research, Futurological Society of Czechoslovakia, Athens Centre of Ekistics, Hague International Future Institute, the U.S.-based World Future Society, and L'Association Internationale Futuribles based in France.

²*Futures*, The Journal of Forecasting and Planning, published by Iliffe Science and Technology Publications Ltd., U.K., in co-operation with the Institute for the Future, U.S.A., vol. 2, no. 2, June 1970, pp. 163-169.

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Futures Alberta 1970 2005.¹ The Systems Research Group in Toronto prepared a four-volume report, *Canada 2000*, containing economic, population, transportation, and family, household and housing projections. The Institute of Chartered Accountants commissioned "Task Force 2000" to "examine the future roles of the accounting profession and to formulate and recommend appropriate strategies for its development".² Last winter the federal Public Service Commission, assisted by the Institute for the Future, held a series of seminars to explore the role of futurist techniques in public service management training. Although, relative to many other countries, Canadian involvement in futurism has been limited and scattered, activity and interest in this area are growing, and will continue to grow, as its usefulness as a tool in decision-making is tested and developed.

Thus far in this chapter we have summarized a number of approaches that are being used to answer three important questions: Where are we? Where have we been? Where do we go from here? In many social and economic areas, governments have a responsibility to initiate discussion about the options that are open, to organize information, and finally to implement decisions. These functions are crucial and difficult. Inevitably there have been a number of systematic efforts to improve the process; two of these are discussed next.

SYSTEMS ANALYSIS

The idea of a "system" seems only recently to have spilled out of a scientific context into everyday use; yet the word was abroad in the seventeenth century. As well as the "planetary system" we now speak of the social system, education system, transit system, nervous system, and many others. In spite of considerable use, it is not an easy word to define. The basic idea is clearly that of a unity formed of many diverse parts subject to a common plan or serving a common purpose; or, alternatively, components that work together for the overall objective of the whole.

A system does not necessarily stand alone or move in isolation. In fact, they usually exist in hierarchies that touch, overlap, or are mutually interdependent. For example, the recent concern about environmental conditions has sharpened our awareness of the inter-

¹Harold J. Dyck, *Social Futures Alberta 1970 2005* (Edmonton: Human Resources Research Council of Alberta, 1970).

²Task Force 2000, *Report to the Executive Committee and Council of the Canadian Institute of Chartered Accountants*, 1970, p. 2.

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relatedness of natural life forms, just as earlier psychoanalytic studies elaborated the physical-mental-emotional interactions in man.

The essence of *systems analysis* as it relates to decision-making and control is deceptively simple. It consists of an assumed, if preliminary, objective; the derivation of alternative paths towards achieving this objective, which may itself change as the options are enumerated; the estimation of performance and cost/effectiveness measures to ensure that the chosen objective is being met by an efficient use of inputs in relation to outputs; and finally a closing of the circle through feedback mechanisms that review actual performance in the light of objectives. This process is usually dynamic—that is, on-going and repetitive—involving a continuous re-evaluation of alternatives, objectives, and results.

One important effect of the systems way of thinking about decisions is to stress *interrelatedness*. Indeed, a key ingredient in all views of the systems approach to decisions is interrelatedness, which leads in theory to a consideration of the *whole* system and all the factors that bear on it. This approach is greatly appealing, but it is patently impossible to consider and quantify everything. The illusion that everything is, or can be, taken into account in decision-making may be misleading. Nevertheless, the systems way of looking at a problem and of attempting to identify the pieces provides the basis for recognizing, at least in part, what is and what is not accounted for.

Unfortunately, the very word “system” has an aura about it that frequently leads to misunderstanding. It seems to suggest certainty, control, and predictability, but a system may be none of these. Many of the relationships that make up the system are contained in “black boxes”, which have come to symbolize the uncertain and the unknown. Not all systems are equally afflicted by uncertainty. In general the “hard” sciences give rise to hard systems, and “soft” sciences, to soft systems. Social systems are more like the latter than the former, with many black boxes standing proxy for the unknowns, such as the behavioural relationships and responses of individuals and society. As a result, social policy is tentative and exploratory, depending crucially for its success on the dynamic elements in the system, such as the feedback of information and learning.

Since its early trials and successes in defence and space programs in the United States, systems analysis has found a wide variety of applications. One adaptation of systems analysis to public decision-making that has received a good deal of emphasis in the last few years is Program, Planning and Budgeting Systems (see Chapter 4).

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Not surprisingly, systems analysis and its most distinguished offspring, PPBS, seem recently to have lost some lustre. An instinctive need for a quick and easy approach to resolving difficult and complicated social problems has often led to excesses of enthusiasm, and to "oversell". Nevertheless, it is likely that when the fad has disappeared, the idea of systems analysis and its related applications to decision-making will have survived both exaggerated claims and misguided and half-hearted implementation. Its most successful exponents have grasped and interpreted the systems concept, not as a magic wand, but as an improved way of looking at things.

While giving an important new dimension to the complex process of decision-making, systems analysis did not meet, nor could it be expected to meet, every need. On the one hand, the real world of policy-making is far too complex to fit neatly within a systems framework. On the other hand, systems analysis and PPBS were not designed to deal with issues that stand outside their organized analytical frameworks. And there are many such key elements in the political decision process:¹ the value judgment content of political decisions; the existence of political realities, such as the need for compromise and technically "second best" solutions; the use of institutional or structural change to improve the policy-making or policy-implementing systems; and all the unquantifiable elements of policy-making.

Current trends in the application of systems analysis are in the direction of adapting to some of these complexities, but progress is slow and haphazard. The proponents of a "policy science" approach to decision-making have attempted to construct a wider framework that would explicitly take more of these issues into account.

POLICY SCIENCE

There is at present a running controversy about the process of public decision-making. One camp favours a "disjointed, partisan, incremental, consensus" view; the other, a "systematic, analytical, scientific, efficiency-oriented" view of what public policy-making is all about.² Policy science³ attempts to bridge these opposing views by providing

¹See, for example, Yehezkel Dror, "Prolegomena to Policy Sciences", P-4283 (Santa Monica, Calif.: The Rand Corporation, January 1970), mimeo.

²Henry S. Rowen, "Assessing the Role of Systematic Decision Making in the Public Sector", *The Analysis of Public Output*, edited by Julius Margolis, Universities—National Bureau Conference Series, no. 23 (New York: National Bureau of Economic Research, 1970), pp. 219-220.

³See, for example, Yehezkel Dror, *Public Policymaking Reexamined* (San Francisco: Chandler, 1968); and Harold D. Lasswell, "Policy Sciences", *International Encyclopedia of the Social Sciences*, vol. 12, pp. 181-189.

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a framework that takes account of the apparent conflict between the rational and intuitive, the incremental and planned, the consensus and systematic approaches. Its knowledge base is "management science combined with social science and...systems analysis combined with political science, applied to the public-policy-making system".¹

The major emphasis thus far has been on developing the *principles* of policy-making. The aim is to elaborate and apply these principles to real policy-making situations, and to consider how they can be used to achieve better policy. The very complexity of public decision-making provides a large number of intervention points where the application of policy-making knowledge can improve the policy outcome. One may act on the *process* of policy design and implementation, the *structure* and organization of groups involved in policy-making, or the *information* and *knowledge* content of policy.

Thus policy science is concerned with all aspects of public decision-making. It is wide in scope, incorporating elements of behavioural, economic, political and decision science in an attempt to bring improved methods and knowledge to the process and structure of policy-making systems. For almost a quarter of a century it has been an active field of study, as various threads have been added to the fabric.

A wider view of the whole policy-making process takes account of the following dimensions:

- Political reality has to accommodate many values and interests, and negotiation among them must determine social objectives.
- In order to bring policy to the point of implementation, politicians frequently need to obtain support inside or outside the legislature by consensus or coalitions; this may require the selection of less efficient or effective policies and programs. This bending to reality is part and parcel of the system. If a policy that is "technically best" is politically unacceptable, it is irrelevant and some other must be sought.
- Many problems and policies need a long-term view, but the time horizon of legislative bodies is, by and large, relatively short.
- Today's policy design is directed towards the future, but social change is proceeding at a rate that threatens to render obsolete the traditional and mechanistic methods of anticipating what that future will be.

¹Dror, *Public Policymaking Reexamined*, p. 243.

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- An extensive reliance on policy analysis and technique may have a highly centralizing tendency by focusing power in the analytical department. This would undermine the influence of other policy participants unless explicit (and frequently opposing) processes and structures were provided on their behalf.
- Systematic and rational analysis, with a major emphasis on quantitative issues, may not provide sufficiently for creative, innovative characteristics or intuitive knowledge. Nor does it provide adequately for the risks inherent in every action, or for values that are not amenable to quantification.
- Experience has shown that public expenditures can become self-justifying, that is, instead of assessing their results in the light of previously established objectives and intended results, the objective is inferred from the actual results. To forestall this type of rationalization requires pre-policy dialogue about the objectives, as well as public knowledge of the issues, the alternatives, and the effects of public policies and programs.

One of the most important aspects or phases of the policy-making process is *strategy*, which sets guidelines and assumptions for policy-making that reflect a type of "grand plan" clearly distinguishable from the lower and tactical levels of decision-making. The dimensions of strategy cover broad and general questions such as: the problem of choosing single or multiple strategies; the degree of policy change—marginal and incremental or total and innovative; the time horizon of policy—short- or long-term; the time preference which, contrary to normal practice, may, in some instances, value the future above the present; the use of alternative strategies to take account of problems of uncertainty and risk; and the use of a "best attainable" solution when a "technically best" solution is not feasible.

Following the application of strategic principles to particular policy issues, the process of policy-making moves to analysis. Policy analysis places a large emphasis on the use of evaluation techniques to compare actual or anticipated results, measure them against objectives, and provide feedback control to the strategy phase. This dimension is essentially systems analysis, but policy analysis adds to it a consideration of political issues and the development of alternative means of implementing policy, which take account of problems of consensus and coalition in and out of parliament.

Another emphasis of policy science is *structure*—the network of organizations, institutions, and individuals that contribute to or have

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an input into policy-making. This includes formal institutional structures, such as the legislature, government departments, agencies and the courts, as well as individuals, public servants, politicians, and interest groups. The characteristics, role, and contribution of these component parts of the policy-making structure largely determine the quality of government decision-making.

There is no ideal or optimal structure for policy-making. Decisions may be simple or complex, hierarchical or dispersed, and each has a different mix of processes and participants. A "good" structure that provides for many types of decision inputs and modes would take account of some of the following factors:

- While it might be infinitely simpler, public decisions should not arise "phoenix-like" from a single monolithic hierarchy. They should be generated by exchanges among interested and responsible participants reflecting the need for policy formation to contain different values, interests, and disciplines.
- In the interest of objectivity, separate evaluation units should be established in each department.
- Shared interests and responsibility among departments and the central authority will give rise to some duplication of functions. This overlap is not waste but a necessary safeguard, providing important checks and balances within the system. When decision-making inputs are drawn from many sources, there must be a co-ordinating agency to gather and integrate them. Nevertheless, responsible countervailing power is one of the strongest defences against the limitations of a bureaucratic and hierarchical system.
- Decision-makers and policy advisers must have a channel for receiving explicitly, and at an early stage, the views and interests of the public and of private policy analysts and researchers.

In emphasizing structure, the policy scientists warn that organizational change as a substitute for change in substance is a typical disease of bureaucracies. The multiplication of structural units, the nice elaboration of organizational charts and the conferring of imposing names and titles, may produce little or nothing in the way of improved policy. Structure provides a skeleton, but changes in other components are essential to realize the benefits of structural change.

Policy science places a major emphasis on extending and improving the role of individuals in the process of decision-making. The critical capacity of decision-makers and the public about the principles and issues of policy-making may be increased through education and the

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expansion of data and analytical information. In 1969, speaking to the Canadian Senate Committee on Science Policy, Sir Geoffrey Vickers commented on the role of public information:

...not only government but also the critics of government policy and the proponents of rival policies should have access to the information, the methods and the skills which are available to government. Failing this, both halves of the dialogue will be weakened. The policy makers will ignore the criticisms of a public which they deem to be uninformed and the public will be unconvinced by pronouncements which they cannot verify.¹

Policy science will not relieve citizens or policy-makers of the burden of making up their minds. Moreover, taking a "policy science approach" is not a matter of converting every policy organ of government to a standardized new set of rules, but of embarking on an imaginative quest for those particular structures and processes which could give rise to better policy.

In this chapter we have presented a broad view of some of the new approaches to decision-making that are being explored in many parts of the world. We now turn in Chapter 4 to a more detailed examination of developments in systematic analysis in the governments of the United States and Canada.

¹Senate of Canada, *Proceedings of the Special Committee on Science Policy*, no. 39, First Session, Twenty-eighth Parliament 1968-69, Saturday, March 29, 1969 (Ottawa: Queen's Printer, 1969), pp. 4787-4788.

The Evolution of Systematic Analysis in Governments

THE PREVIOUS chapter noted that one of the best known applications of a systems approach in recent years has been the Planning, Programming, Budgeting System (PPBS) adopted by a number of governments. PPB systems have now been shorn of a great deal of their mystique and are coming to be recognized simply as efforts—or to be more precise, a significant stage in a continuing effort—to become more systematic and explicit about government decisions than in the past.

The adoption of PPBS by the federal governments of the United States and Canada in the 1960's illustrates this trend. Many other national governments, as well as state, provincial and local governments, are also moving in the same direction though sometimes using different terminology. But whatever the terminology used, the essential elements of the approach are the same:

- making objectives explicit,
- weighing the consequences of alternatives carefully,
- setting up a systematic process for decision-making and review.

This approach was designed to avert some of the problems arising from such features of the budget-making process as:

- Incrementalism*: The easiest way to make up a budget is to start with last year's budget and add funds where necessary and appropriate. As a result, a budget almost invariably looks a great deal like that of the preceding year. In other words, there is a tendency for virtually all programs to be continued without serious examination to determine whether they are still useful, or whether major or even minor reallocation of resources among programs would not lead to a better result.

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- The squeaky wheel*: Another characteristic of the budget process has been the tendency to allocate more funds to the bureaucrats or pressure groups that are most articulate or vociferous in promoting or defending their programs, whether or not these programs can claim to be effective. If subjected to serious scrutiny and evaluated in relation to alternative programs, the squeaky wheel might be found less deserving of oil than some of the quiet ones.
- Ignorance of the effects of public programs*: Until recently, few attempts had been made to identify the results of public spending or determine who benefited and to what extent. The effects were generally thought to be diffuse and unmeasurable. Following individuals affected by government programs long enough to assess what happened to them is difficult and sometimes expensive. As a result, decisions are often made in ignorance of the effectiveness of programs currently operational or projected.
- Cross-purposes*: Where programs are not subjected to systematic scrutiny and weighed against each other carefully, activities generated in various parts of the government may duplicate or even nullify each other. This can lead to substantial waste of public resources.
- Locking-in*: Even small budget decisions in one year may lead to large future costs that eat up resources available for alternative uses; those who make the initial decision may not realize the financial or resource implications. Advance multi-year planning can reduce this hazard.

This chapter first traces the evolution of PPB in the federal governments of the United States and Canada and then looks briefly at the trend towards systematic decision-making in Canada's provincial and municipal governments. But the major purpose of the chapter is to discuss techniques of systematic analysis that provide guidance to decision-makers.¹

One caution is in order. A PPB system should be thought of as having two major components—the organizational and the analytical.² The organizational component involves the classification of government activities by objectives or functions, showing financial in-

¹For a discussion of these issues, see Alice M. Rivlin, *New Approaches to Public Decision-Making*, Economic Council of Canada Special Study No. 18 (Ottawa: Information Canada, forthcoming).

²See J. Cutt, "Efficiency and Effectiveness in Public Sector Spending: The Programme Budgeting Approach", *Canadian Public Administration*, vol. 13, no. 4, Winter 1970, p. 398.

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puts and program outputs on a multi-year basis. The analytical component evaluates the cost and effectiveness of various alternative ways of attaining objectives. The organizational component is helpful to the decision-making process, but the analytical component is even more essential. It may frequently be difficult to say whether a full-fledged PPB system—with both of these components—is actually operating in a particular government. There are certainly cases where the form is present but little more.

THE EVOLUTION OF PLANNING, PROGRAMMING, BUDGETING IN THE UNITED STATES AND CANADA

From some accounts, one might infer that the “road to PPB” in the United States and Canadian federal governments bore a close relationship to the events on the road to Damascus. In fact, however, although there have been some notable milestones in both countries, progress towards PPB has been marked by few blinding flashes of light. Instead, in both countries, although the timing has differed, the process has been one of gradual transition.

The Budget as a Framework for Decision-Making

The budgetary process is, of course, not the only framework within which government decision-making can take place. Indeed, many of the larger decisions of the Canadian and U.S. governments in recent years have been made outside the budgetary framework, at least in the first instance.

The fact remains, however, that much of the recent progress towards systematic decision-making in government has been related closely to the budgetary process. The reasons are simple. Annual budgets have, at least ultimately, been the main instrument by which governments effect the allocation of resources among programs. Moreover, despite its faults, the budget framework forces the decision-maker to appreciate the fact that a government's total resources are not unlimited and that adding one program may be at the expense of dropping something else. It may be useful, therefore, to review briefly the functions of budgeting before looking at the process of budget reform in Canada and the United States.

A budget system may serve three functions: planning, management, and control. These have been described as follows:

A *planning* orientation focuses on the broadest range of issues: What are the long-range goals and policies of the government and how are these related to particular expenditure choices? What criteria should be

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used in appraising the requests of the agencies? Which programs should be initiated or terminated, and which expanded or curtailed? A *management* orientation deals with less fundamental issues: What is the best way to organize for the accomplishment of a prescribed task? Which of several staffing alternatives achieves the most effective relationship between the central and field offices? Of the various grants and projects proposed, which should be approved? A *control* orientation deals with a relatively narrow range of concerns: How can agencies be held to the expenditure ceilings established by the legislature and chief executive? What reporting procedures should be used to enforce propriety in expenditures? What limits should be placed on agency spending for personnel and equipment?¹

The fact is that every budget system contains a mix of planning, management and control features. Conceptually, PPB is the first budgetary system that has been *designed* to make planning, and indeed decision-making in the broadest sense, the main focus.

The Road to PPB in the United States

President Johnson directed in October 1965 that a program budgeting system should be extended to all U.S. federal departments and agencies. This directive followed research at The Rand Corporation on techniques of systematic analysis, the use of these techniques in the Department of Defense in the early 1960's, and the work of the Bureau of the Budget in the same period. However, the directive was in a sense only one more step in a rather lengthy evolutionary process going back as far as the period before the First World War.

By and large, however, the three major stages of budget reform date from the early 1920's. From roughly 1920 to 1935 the central focus of the U.S. federal budget was *control*. Budgets were set out on the basis of detailed objects of expenditure, with the primary emphasis on *accountability*.

During the New Deal years of the 1930's and the 1940's, the emphasis tended to shift from control to a management orientation, a shift that was further advocated by the Hoover Commission in reports published in 1949 and again in 1955. The shift came about because of the great expansion in activities and expenditures of government, and also because both the general upgrading of the public service and the development of new statutes and regulations curbed the abuses that had earlier given rise to pressure for accountability. This management orientation reached its peak in the 1950's

¹Allen Schick, "The Road to PPB: The Stages of Budget Reform", *Public Administration Review*, vol. 26, no. 4, December 1966, p. 244. The discussion on budget reform in the United States draws heavily on this article.

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in the movement for performance budgeting, which attempted specifically to relate expenditures on programs to their results.

But even while the management emphasis was rising, there were a number of further developments that paved the way for the more planning-oriented PPB approach. These included the development of more advanced economic analysis and models, the evolution and application of economic techniques for appraising competing public projects, and the generation of new techniques for handling information relevant to decision-making.

The Periodic Review Process in the United States

The many problems involved in implementing the PPB directive in the United States government are discussed in considerable detail elsewhere.¹ Major emphasis, however, was placed on making information usable and digestible and especially on establishing regular periodic review procedures.

As PPB evolved in the U.S. government, at least three tools for assembling and displaying information were developed—the *program and financial plan*, the *program memorandum*, and the *special analysis*. Specifications differed somewhat over time and were variously interpreted by individual agencies, but the general notions are not hard to describe.

Each government department or agency was required to develop a program and financial plan showing how it proposed to use its resources over a five-year period. (Since the total future resources available could not be known, several alternative plans were usually developed, based on different assumptions about the total level of resources.) The plan was to be reviewed and revised each year and the revisions reflected in the annual budget.

Here are some of the more notable features of the program and financial plan:

- The fact that it was a five-year plan made it necessary to spell out future costs of current decisions, and it forced many public officials to think more clearly, to articulate, and to debate, perhaps for the first time, how their programs were expected to develop in the future.
- Since the program and financial plan was organized by program objectives, not by the specific administrative unit that carried out the programs, it was possible, at least within a major depart-

¹Allen Schick, "From Analysis to Evaluation", *The Annals of the American Academy of Political and Social Science*, March 1971.

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ment, to look at all the resources devoted to a particular objective, such as improving the health of the aged. This type of presentation was more meaningful to decision-makers than the older form, which might, for example, show projected expenditures on hospitals or medical personnel by a particular department without indicating the objectives of those expenditures.

—Finally, the program and financial plan was supposed to show not only financial data like planned expenditures by program, but also measures of the *results* of the program. However, in most programs, it has been necessary, so far, to settle for proxy indicators of results (like numbers of doctors trained or classrooms built).

The program and financial plan summarized the agency's preferred five-year plan. The program memorandum, addressed to the President or the Bureau of the Budget, was supposed to focus on major changes in the allocation of resources, to discuss alternatives considered and rejected, and to explain the basis for choosing the proposed course of action. In practice, the program memorandum's main contribution has been the clarification of issues within departments.

Special analyses were supposed to contain supporting details, special studies, and additional data. They were essentially appendices to program memoranda, designed for those who had a special reason to go more deeply into the details of a particular decision.

PPB set up a year-long decision cycle culminating in the budget decisions themselves. The cycle began soon after the last budget was sent to Congress with the identification of major issues likely to arise in the preparation of the next budget. Analytical work was to be organized around these issues for the purpose of laying out options and exploring the consequences of alternative courses of action. In the light of these studies, the five-year plan was to be reviewed and altered, after which the implications of the new plan would be translated into specific budget proposals. Program memoranda and special studies would then be put in final shape to explain the basis for the decision in the proposed budget. The whole package—budget, program and financial plan, program memoranda, and special studies—was supposed to arrive at the Bureau of the Budget in time for discussion and interaction before final budget decisions were made.

That was the theory. In practice, there were many problems, and the timing of the decision cycle never worked out as planned. Sometimes needed data were simply not available, or analytical work took too long. Moreover, discussion of the budget often dragged on

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in Congress for most of the year, so that the next year's budget had to be formulated before final decisions were made on the budget for the current year.

Despite shortcomings and difficulties, however, PPB introduced new dimensions into the decision process of the U.S. government. More searching questions were asked, and some were answered; more analysis was done of alternatives; more justification was felt necessary for political decisions which flew in the face of analysis; and far more explanation was offered for what was done. Analysis does not provide any unique "correct" answers, but it does provide the decision-maker with information to help him decide which courses he prefers.

PPB in the Government of Canada¹

The progress of budgetary reform in Canada is best followed by examining the presentation of the annual Estimates and the procedures that lie behind their preparation. Such an examination suggests that the timing and implementation of budgetary reform differed somewhat from the United States. The control orientation lasted longer; there was really no comparable management stage; and the application of the PPB system proceeded first by way of pilot studies in a successively increasing number of departments, rather than by broad directives affecting all government departments and agencies at once.

It was not till 1937 that any standard principle of organization seems to have been applied to the Estimates of the federal government. In the main, from then until the Report of the Royal Commission on Government Organization (Glassco Commission) in 1962, the regular budgetary process appears to have been largely control-oriented.

Perhaps it might be useful to set out the organization of the Estimates as they existed at the time when the Glassco Commission undertook its investigations. First of all, the government's spending plans were set out by departments. Parliament was asked to approve each department's spending plans by subdivisions called votes, of which there were roughly 500 in the 1961-62 Main Estimates. Each "vote" was classified into "standard objects of expenditure" (33 in all, in the early 1960's) such as: civil salaries and wages; travelling and removal expenses; postage; and office stationery, supplies, equipment, and furnishings. For purposes of Treasury Board control of departmental

¹For a discussion of this subject, see Donald Gow, *The Progress of Budgetary Reform in the Government of Canada*, Economic Council of Canada Special Study No. 17 (Ottawa: Information Canada, forthcoming).

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expenditures, "votes" were also classified into "allotments" that, for the most part, corresponded with the "standard objects of expenditure".

This presentation was the product of a long series of steps to improve the accountability or control function. As far back as the 1938-39 fiscal year, for example, all votes under the control of one minister were displayed in one place, and a system of "commitment control" was required by the Financial Administration Act. In the early 1950's, the "standard object of expenditure" classification was introduced. And, all through this period, auditing and control procedures were brought to a high degree of efficiency throughout the government.

By and large, however, there is little indication that departments generally, or the Treasury Board, made regular use of the Estimates or budgetary process over this lengthy period for either more effective management or strategic planning. But there were some interesting exceptions—exceptions that were forerunners of the more rapid progress in the 1960's:

- The Auditor General made proposals for replacing the detail of the Estimates with a narrative along activity lines and some consolidation of votes. The Public Accounts Committee of the House of Commons did not agree. Indeed, the Committee decided it needed more, rather than less, detail—a clear indication of a basic interest in control rather than planning.
- There were a few departments in which the Estimates Review by the Deputy Minister did come to constitute an annual review of policy in the 1950's. Moreover, in the Department of National Defence, although the Estimates themselves were not prepared on a program basis, and program decisions were not always tied in with the budgetary cycle, there were statements of financial requirements expressed in program terms and covering a three-year period ahead.
- An Establishment Review procedure was developed. Departments were encouraged to use workload statistics to justify staff changes. Moreover, the Establishment Review took place several months in advance of the Main Estimates Review, thus affording Treasury Board better opportunities to consider proposed policy changes in a more timely way.

The appointment of the Glassco Commission in September 1960 eventually led to significant changes in the budgetary process. In its report the Commission recommended such things as:

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- revising the form of the Estimates,
- reducing the number of votes in the Estimates,
- preparing votes on the basis of programs and program objectives, not by standard objects of expenditure.

In some ways, the Report of the Glassco Commission corresponded with the Hoover Commission reports in the United States, particularly in its essentially management-oriented theme. But perhaps the fundamental contribution of the Glassco Commission was the creation of a climate for change. A series of developments ensued culminating in the 1970-71 Estimates—the first in which *all* departments submitted their budgetary proposals to Parliament in terms of programs directed towards achieving *specified objectives*.

These developments included a number of organizational changes to implement the Glassco Commission recommendations: setting up a committee of officials, then a special Cabinet committee and a responsible minister, and the establishment of the Bureau of Government Organization (February 1963). In May 1964, the Bureau was transferred from the Privy Council Office to the Treasury Board.

The Treasury Board initiated pilot surveys in four departments to test the validity, and examine the practical problems, of implementing the financial management recommendations of the Glassco Commission. These studies eventually resulted in a "Management Improvement Policy Directive" (April 1966) and the issuing of a "Guide for Financial Management" (October 1966) that set out the policy of moving towards program budgeting. The procedures to be used by departments for budgetary proposals, as well as the form of program forecast and estimates documents, were set out in a "Program Forecast and Estimates Manual" (March 1967). Beginning in 1966, all departments were required to provide Treasury Board with a program review submission, setting out a five-year forecast of programs and activities. Finally, a PPB Guide, describing program budgeting for senior managers and setting out the main lines of the developing system, was published in July 1968 (and revised in September 1969).

In some ways, of course, these many steps should be viewed only as the creation of an environment within which PPB could work. They involved changes in the form of the government's accounts to focus attention on programs and activities (outputs) rather than on objects of expenditure (inputs) and they promoted the identification of program objectives. In other words, they set out what was

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earlier referred to as the organizational component of a program budgeting system.

Impetus to the analytical component came in 1969 when the Treasury Board eliminated the "Management Improvement Branch" and created, instead, its "Planning Branch". This branch is now "responsible for developing and applying the techniques of PPB, for communicating them to other departments as they are developed, and for installing them as the basis for future expenditure budget evaluation".¹ This took place in the context of greater emphasis on planning in the late 1960's as reflected in the establishment of a Cabinet Committee on Priorities and Planning, a number of other "functional" committees of Cabinet concerned with economic, social, external, defence, and other policy fields, and a planning staff within the Privy Council Office.

To provide an adequate description of the present budgetary process in Canada is not an easy task. The simple fact of the matter is that the process is very much in a state of evolution.² However, like the federal government in the United States, the Government of Canada has developed regular, periodic review procedures in the budgetary and estimates process. As noted earlier, there was considerable pressure in the United States to tie the analysis in the new system more completely into the annual budgetary cycle. For whatever the reason—recognition of the practical difficulties encountered in Washington, or just shortage of personnel—there was less emphasis on this aspect of the process in Canada from the start.

The formulation of the expenditure budget in Canada at present pivots around three components: the "A" budget, which is the amount required to provide the same services at the same level as the preceding year; the "B" budget, which is the amount required to provide the new or improved services which a department deems to be of high priority; and the "X" budget, which reflects what a department would cut from its budget if the government found it necessary to restrict or economize on even desirable programs in favour of other goals. The "A" and "X" budgets are to be submitted to Treasury Board at the end of January each year for the following

¹A. W. Johnson, "PPB and Decision-Making in the Government of Canada", *Cost and Management*, March-April 1971, p. 18.

²For an up-to-date and comprehensive discussion of this process, see A. W. Johnson, "The Treasury Board and the Machinery of Government of the 1970's", *Canadian Journal of Political Science*, September 1971.

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fiscal year (that is, the January 1971 submission would relate to fiscal year 1972-73); and the "B" budget in May.¹

As part of each of these budgets, departments are asked to prepare *program forecast* submissions. These submissions, which cover the new fiscal year and the two fiscal years following for the "A", "B" and "X" budgets (new fiscal year plus four for the capital budget) are designed to assist in the development of longer-term plans and priorities and to force departments to take account of future developments and problems.

In addition to program forecasts, departments must also submit a *program memorandum* on each program. This states the program's objectives, describes the activities within the program, noting in particular how they are designed to attain the program's objectives, and summarizes major current issues for the program and how the department proposes to deal with them.

The A-B-X budget approach, of itself, "would be contrary to PPB objectives if it were left at that, for it assumes that most of what is, is good, and should remain".² In other words, it is "incremental decision-making". However, the procedure does provide a vehicle for a regular review process. Much more important is the introduction of continuing studies of an increasingly sophisticated nature, and growing efforts to use such studies as an input in the decision-making process. Both individual departments and the Treasury Board secretariat may be involved in the preparation of such studies.

Decision-Making in Canadian Provinces and Municipalities

Any significant improvement in government decision-making processes in this country demands advances at provincial and municipal levels just as much as at the federal level of government. Unfortunately, a study that would be comprehensive enough to do justice to the decision-making process at all levels of government would be a very large task—too large for the time and resources available for this Review. But we have been able, through interviews with a reasonably large number of elected and appointed officials in these governments, to select what we believe to be some useful impressions.

The provincial and municipal governments face many of the pressures to improve their decision-making processes that were described

¹A separate capital budget is also required when program expenditures include at least one capital project costing \$250,000 or more. Projects falling into the "A" and "B" budgets are identified in the capital budget.

²Johnson, "PPB and Decision-Making in the Government of Canada", p. 18.

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earlier, notably expanded programs in complex areas bearing directly on people, like health, education, and social assistance. Not surprisingly, however, progress has been rather uneven and it is marked—as indeed it is in the federal government—by “pockets of sophistication”.

To a rather greater extent than the federal government, the provinces and municipalities have responsibility for a number of continuing expenditure functions of a construction or engineering nature that necessarily involve advanced planning—streets and highways are perhaps the best though not the only examples. Capital expenditures have been planned on a multi-year basis with alternative projects being evaluated for both efficiency and effectiveness.

The pace of federal-provincial negotiations over the last decade has also added to pressures for improved decision-making. Federal-provincial fiscal negotiations have promoted interest in multi-year budgeting for purposes of planning and discussion. In addition, these negotiations have accelerated the development of staffs, perhaps particularly in treasury boards and finance departments, with greater analytical capability. In some instances these organizations now provide *countervailing sources of analysis and information* to their opposite numbers in the federal government. Such countervailing centres are important because they may encourage the examination of a wider range of relevant alternatives.

The capabilities developed and the experience gained in the engineering activities of provincial and municipal governments, as well as the advances in the fiscal area, have not, by and large, been matched as yet in the human resource areas. Here too, “pockets of sophistication” stand out, and some interesting evaluations have been done in a number of provinces and larger cities. However, the widespread use of analytical and evaluation techniques in these expenditure areas is certainly not a reality as yet.

There are, of course, some good reasons for this situation. Particularly in the smaller jurisdictions, shortages of resources, both financial and personnel, have been important. To attract the skilled people required for this type of work may also be more than a matter of salary; their work, by its nature, requires a good deal of discussion with fellow professionals, and this may not be available where the analytical units are small. Moreover, both provinces and municipalities—in this case, particularly the latter—have felt that, in many instances, objectives were set by a senior government—through shared-cost programs or perhaps even by regulation—and there was little they could do. In the areas in which they exercise more of their

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own responsibility, some municipalities have gone much further in examining objectives.

In summary, a very noticeable shift towards more systematic decision-making is now evident in the provincial and, perhaps to a lesser extent, municipal governments. Certain provinces stand out in this respect, but improvements in the machinery of decision-making are now becoming fairly general. We hope that this trend will be accelerated and we are aware that this hope is shared by many people within these governments.

Although the PPB systems developed in the United States and Canada are far from perfect—and indeed continue to evolve—they are an advance on the earlier practice of “muddling through”. PPB can be helpful, and steps could be taken to make it even more helpful. This would involve a wider appreciation of both the limitations and advantages of the techniques involved. However, PPB is still only a set of procedures for getting budgetary decisions made. What is more important is the adoption of a particular way of looking at decisions—the use of systematic analysis. We turn now to this broader question.

HOW CAN SYSTEMATIC ANALYSIS HELP?

Here are some of the questions to which systematic analysis has recently been directed:

- (1) What are the problems and how are they distributed? For example, who are the poor, sick or inadequately educated?
- (2) What programs would do the most good? How do the benefits and costs of different kinds of programs compare?
- (3) Who would be helped by specific programs and to what extent? Who pays for these programs?
- (4) How can particular kinds of social services be produced most effectively?

In what follows we look at how the techniques of systematic analysis may contribute to answering these broad questions. What becomes very obvious is that analysis does *not* provide any unique correct answers. However, it can be helpful in organizing and presenting useful information for improving the decision-makers' perception of problems and assisting them to identify alternative solutions systematically. But its usefulness tends to be greatest when comparing closely competing programs with similar objectives.

The emphasis here, and in the remainder of this chapter, is largely on what might be termed “social policies and programs”. But, of

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course, the application of systematic analysis has relevance to many other areas, although we do not direct our attention to these explicitly.

What Are the Problems?

The understanding of social problems and their distribution has been greatly improved in recent years by two important developments: the greater sophistication and wider use of sample survey techniques, and the great increase in the data storage, processing, and retrieval capacity of computers.

Until recently, the survey information that was available was often of limited usefulness since data were displayed in tables revealing only two or three characteristics at once. Now we have examples of sample survey data that can yield a great deal more information about social problems because such data can be handled by computers.

In the United States, for example, it has been stated:

One can now literally punch a button and find out how many of the poor, by any appropriate definition, are black or aged or have six children or work full-time or live in cities. This does not solve the problem of poverty, but it certainly helps in establishing what and where the problem is.¹

In Canada, survey data from the 1961 Census and later work by the Dominion Bureau of Statistics established the fact that although the *incidence* of poverty may be higher in the Atlantic Provinces or in rural districts, most poor people, in fact, live in cities from Montreal to Vancouver. Another survey—the Department of Manpower's Career Decision Project—may help to define better the dimensions of the problem of inadequate education in Canada (see Chapter 9). In Chapter 8 we illustrate the use of survey information in connection with job markets in Canada.

Survey data must, of course, be used with considerable caution. Often the accuracy leaves something to be desired. But the biggest problems in this area have to do with organizing our collection, storage and retrieval of information, and designing surveys and experiments that will produce the data policy-makers need without endangering individual privacy.

We do not wish to leave the impression that we are calling for an immense proliferation of surveys. A great deal of information is already collected by governments for administrative purposes. With the increase in computer capacity, significant opportunities now

¹Alice M. Rivlin, *Systematic Thinking for Social Action* (Washington: The Brookings Institution, 1971), pp. 10-11.

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exist for linking some of this information for policy analysis in ways that were not possible even a few years ago. For example, data collected by the Unemployment Insurance Commission were linked in a simulation model with income data collected by the Department of National Revenue so that the cost of an unemployment insurance program could be estimated under a variety of assumptions about benefits and contributions, eligibility requirements, and economic conditions.

A good deal of useful information on social problems has come out of the analysts' attempts to answer questions about specific programs. However, sitting back waiting for the force of events to generate the right questions is simply not adequate in a complex, changing society. What is needed is a comprehensive and systematic development of measures to monitor conditions of society and permit the anticipation of problems well before they reach crisis proportions. We discuss such measures in Chapter 5.

What Programs Do the Most Good?

When businessmen make investment decisions, they may have a good deal of market information to help them and eventually to confirm or reject the wisdom of their past decisions. Governments, on the other hand, are not often able to call on much, if any, market information, so another technique—benefit-cost analysis—has been developed to help them to compare alternative programs.

Historically, benefit-cost analysis was applied almost exclusively to physical investments. Over the last two decades, for example, serious attempts have been made—with increasing sophistication—to value the costs and benefits of water resource projects in dollar terms, so that decision-makers have estimates of whether a particular project would be worthwhile and how alternative projects compare in terms of total profitability. More recently, the basic idea of benefit-cost analysis has been transferred from physical investments, such as river developments, to investments in human resources, such as manpower training, education, or health. These are generally areas of somewhat greater complexity for the analyst, as well as the decision-maker himself. The complexities do not imply, by any means, that analysis is useless—far from it—but they do imply that one must be discriminating about how and when to use the various tools.

Perhaps an example might help to illustrate the use of the technique. One kind of decision problem in the human investment area is how to apply health resources most effectively among various

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disease control programs. Diseases have different incidence. Some are widespread; some are rare. They attack at different ages. Some kill; some cripple or put people out of action for long or short periods. With limited public resources to be spent on disease control, it seems sensible to make an effort to see that these resources are being channeled into the most efficient use. In general, the choice is not between controlling disease A and letting disease B run rampant. Rather, the decision is at the margin. It involves the question of whether additional special and specific measures to control disease A may have greater or less payoff per dollar spent than additional measures to control disease B.

It may also be necessary to decide whether to spend additional resources on controlling the disease at present levels of medical knowledge or to invest resources in research to find a cure for the disease in question.¹ Considering the research option introduces a new element of uncertainty. One cannot be sure that the research will be successful or, even if it is, how much the success will cost and how long it will take. It would be useful, however, to get some idea of how sensitive the benefit-cost relationship is to the probability of success if medical research is undertaken.

No matter what set of programs is being considered, several common problems have to be resolved before benefit-cost analysis can be carried out:

What benefits should be counted?—In a business decision, it is generally clear whose profits are to be counted. Government decisions, however, are somewhat different. It is not always clear what to count or how to measure it. It is not usually appropriate to focus on the benefits to the government itself, although in some cases this may make sense (for example, adding more tax collectors may produce enough increase in tax collections to cover the costs). In general, it is appropriate to compare the benefits to the community as a whole with the costs. The benefits may be reflected in increased productivity of the economy, or increased satisfaction of individuals, or reduction of costs that would otherwise have occurred (such as costs of crime or floods prevented).

However, this is not as simple as it may first appear. For one thing, government programs may provide both public and private benefits. The private ones are those that can be appropriated by individuals.

¹A particularly good example of the use of benefit-cost techniques to examine a problem of this nature is provided in Burton A. Weisbrod, "Costs and Benefits of Medical Research: A Case Study of Poliomyelitis", *Journal of Political Economy*, vol. 79, no. 3, May/June 1971.

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A public investment like higher education may increase individual incomes or add to their personal resources. Clearly, these private benefits count; however, there may be some justification in requiring the individual who benefits to pay part or all of the cost.

Public benefits are those that cannot be appropriated by individuals. Particular individuals are better off because of the public investment in *other* people or the community at large. Individuals benefit from their education, for example, but they also benefit from living in a community where others are educated.

A second problem in measuring benefits arises because some of the benefits of a program may accrue to people outside the jurisdiction of a particular government. A relatively small governmental jurisdiction—a city or a province—would tend to count as benefits only those that accrue to its own residents or within its own borders and would not give much weight to benefits flowing outside. For example, it would not count as future benefits the increased incomes of those likely to leave the area. It is not likely to give high priority to cleaning up a river when the downstream area lies mostly in other jurisdictions, or to support scientific research, the benefits of which would be mostly appropriable by non-residents.

If the benefit-cost analysis is done by a larger unit, like the whole country—or in the international sphere, by a group of countries—these *spillover* benefits will count, and programs for migrant labour or water pollution or scientific research will appear to have a higher value relative to their costs. The presence of such spillovers can, of course, provide some economic justification for, say, federal grants to, or cost-sharing arrangements with, other levels of government, or possibly for the transfer of a program to the government with wider jurisdiction.

Whose costs?—Similar problems arise in making estimates of the costs of public programs. In principle, the cost estimate to be set against the benefits ought to be an estimate of the value or benefits that all of the resources to be used in this particular public program would provide in alternative uses. For example, the forgone earnings of students at university, and of capital and land used by universities, are important components of the costs of higher education.

Outlays necessary to carry out the project may be good enough measures of costs in this sense, since the price of labour and materials used reflects their value in other uses. But there may also be hidden costs. A power plant, for example, may cause pollution which is costly but does not show up in the conventional expenditures for

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building and running the plant. An analysis done for a larger jurisdiction will count more of these spillover effects than one done for a smaller jurisdiction.

How should the costs and benefits be valued?—In order to compare the profitability of different investments, public or private, it is necessary to measure all the costs and benefits in the same units, usually money. But it may be difficult to derive monetary values for some of the components. Benefits that show up in increased income of individuals are automatically measured in dollars. Those that increase the quantity of some item normally bought and sold in the market place are also easy enough to measure in dollars, since the market price reflects consumer evaluation of this item or at least approximates it in a reasonably competitive economy.

However, items not normally sold—for example, the benefits of a national park or clean air or a low crime rate in a city—are far more difficult to value. In some cases, it may be possible to construct plausible “shadow” prices that give an indication of what the market price of the item would have been if it had been normally traded. Differences in property values between otherwise similar high-crime and low-crime areas may give some indication of the value that is attached to a relatively crime-free environment. The price consumers are willing to pay for access to a recreational facility may give some hint as to the value of a similar facility in another place. Nevertheless, for many intangible items—like freedom from fear of a disease—there may be no plausible way to find a shadow price. These intangible benefits may have to be given very arbitrary weights in the benefit-cost analysis or left out altogether. The danger is that the decision-makers will choose projects whose benefits can be measured in dollars over those with less tangible, but equally important, advantages.

How should the present be valued in relation to the future?—An immediate benefit is usually considered to be worth more than the same benefit a year or more from now. But how much more? Different individuals clearly have different rates of discounting future benefits. To some extent, these rates may be related to those at which an individual can borrow or can earn interest on money lent (an individual who can easily borrow at 6 per cent may be indifferent between an offer of \$100 now and that of \$106 a year from now).

In valuing costs and benefits of a public investment, the higher the discount rate used, the greater weight is given to present as against

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future benefits. But what is the appropriate discount rate for a government?

There has been considerable argument over this question and different rates have been used. Some benefit-cost analyses have used the government borrowing rate. Others have used the rate of return prevailing in the private sector since this may be a more appropriate measure of what the resources could be producing in the context of wider options for deployment. Whichever is used, there is one overriding requirement: the *same* discount rate must be used to compare all of the government's projects. If different government departments use different rates, comparisons among departments become impossible.

What about risk and uncertainty?—Both benefits and costs may be drastically altered by changes in economic conditions, behaviour patterns of individuals, or forces beyond the control of the government making the decision. Benefit-cost analysis will be most useful if a strong effort is made to identify the factors that might alter the estimates and to show how sensitive the results would be to changes in these factors. Moreover, the building into a program of flexibility and adaptability—the capacity to deal with uncertainty—should itself be considered a positive benefit.

Advantages of Benefit-Cost Analysis

The purpose of benefit-cost analysis is to provide guidance for choice among alternative expenditures. It tries to bring out into the open the implications of spending additional resources in different ways. Obviously it would be useful to provide decision-makers with some idea as to whether the excess of benefits over cost may be greater for additional water resource projects or for additional training projects, or whether additional higher education has a higher payoff than more disease control. For reasons discussed below, however, the technique is likely to be most useful in providing guidance to a somewhat narrower range of questions. But even for broader questions—comparing a variety of projects in different fields or deciding what resources should be allocated to large expenditure areas like health or education or transportation—it does have some value. It does provide an *appropriate framework for thinking* about the problems and it may provide some useful information.

Even the most ardent enthusiasts of benefit-cost analysis, of course, do not advocate that decisions be made on these grounds alone or that projects or programs with the highest benefit-cost ratios

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automatically be chosen. Rather, the case for benefit-cost analysis rests on the importance of having before the decision-makers the kind of information that will give them a better appreciation of the economic implications of their choice. If they choose a lower benefit-cost ratio, they should do it consciously and know what they are giving up in the process.

The Limitations of Benefit-Cost Analysis

Benefit-cost analysis is most clearly useful and appropriate when the alternative expenditures being considered (a) are primarily designed to increase future income rather than to produce intangible benefits like freedom from fear of crime or disease, and (b) relate to a common goal or are primarily directed at closely competing objectives.

Although proxies and shadow prices can be developed for the less tangible (or less marketable) benefits, these shadow prices may not correspond to true values. Moreover, the effort involved in refining them may not add much to the intuition of those involved in the political decision process.

There are other problems too. When benefit-cost analysis is confined to somewhat narrow questions—particularly, perhaps, questions of physical resource development, such as the best site for a dam—it is not without difficulties, but it will be relatively easy to set out the benefits and costs. Even for large *physical* projects, however, like the building of a whole highway system, the process becomes much more difficult, if not impossible, because the project itself may change the whole environment and there may be a considerable amount of uncertainty about its ultimate impact.

In large social programs, even less may be known about the relationships between programs and their ultimate results, and the whole problem of spillover effects and uncertainty may be greater. This does not rule out the use of these techniques entirely, but it does imply that they must be treated with much more caution.

Perhaps the more serious limitation of benefit-cost analysis, however, is that it does not help decision-makers with distributional and broad value questions. Suppose that analysis did indicate that the payoff from additional higher education is greater than that from control of tuberculosis, or that mass transit projects have higher benefit-cost ratios than rural roads. It is still true that the beneficiaries of higher education are not the same people who have tuberculosis, and the beneficiaries of mass transit are not those who need

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rural roads, and even if these programs did bear on the same groups, the question of differing preferences would remain. These broad decisions can only be made by the political process.

Who Benefits? Who Pays?¹

In Chapter 5, we lay considerable emphasis on the need for summary measures of economic, social, and human conditions, as well as supplementary indicators to show how the aggregative conditions are shared among regions, income groups, and others. In systems terms, we want to look at how the "output" of the "health system" or the "education system" is distributed.

Frequently we may know very little about the links between these output measures, such as infant mortality or longevity, and the "inputs" of various health services. But if we assume, as people generally do, that there is some positive association between them, then we are also interested in another aspect of distribution: who benefits from these services and who pays for them.

What this boils down to is that it is not sufficient to have some idea of the "profitability" of alternative programs that we may get from orthodox benefit-cost analysis. Choice among programs depends in part upon knowing who would benefit from a particular program and who would pay for it. Ultimately, this choice must depend upon the political process, but advances in techniques—particularly in computer technology and "program simulation"—in recent years have made a substantial contribution to setting out the dimensions of these distribution problems.

Orthodox benefit-cost analysis starts from the premise that, in selecting projects, it does not matter who the beneficiaries of a program are or what group pays the costs. An additional dollar of income to a poor man is valued the same as an additional dollar for a rich man, or benefits that accrue in the Atlantic Provinces are valued in the same manner as benefits realized in the wealthier provinces.

The reason for this approach is not a simple disregard for the importance of income distribution. Rather it stems from an assumption made by some economists that projects should be chosen according to efficiency criteria alone and that distribution policy can then be

¹This section draws in part on Walter Hettich, *Why Distribution Is Important: An Examination of Equity and Efficiency Criteria in Benefit-Cost Analysis*, Economic Council of Canada Special Study No. 19 (Ottawa: Information Canada, forthcoming).

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carried out according to established standards of justice or equity by means of taxes or money transfer payments.

This distinction has, however, been under strong attack in recent years both on theoretical grounds and, perhaps more importantly, on practical grounds. Governments typically want to pursue objectives of both efficiency and equity at the same time, and most programs have distribution effects built into them in any event, whether deliberately or as by-products. The simple fact is that if the analyst is to be useful, he must respond to the needs of the decision-makers.

One very useful, though quite modest, step in this direction is for the analyst to show how the benefits and costs of a project may be divided among various groups in the population. This could be done in many ways: by income, age, ethnic group, sex, region, family size, religion, and educational level, to name only some. In a federal state like Canada, regional considerations, including the regional incidence of benefits (and costs) of federal programs, are, of course, particularly important for government policy and public discussion.

Considerable advances have, in fact, been made in recent years in estimating the distributional effects of changes in public programs. Most progress, of course, has been made on what may be the least difficult problem—estimating the initial effects of changes in tax rates or cash benefit programs on the distribution of income.

It is now possible to take a sample of actual tax returns and enter the relevant information on computer tape. The computer can then be programmed to recompute the tax for each individual under a variety of alternative rules. It can then reaggregate the information by age or income or family type to see how different groups would be affected by various tax changes.

Both the Canadian and the U.S. governments have developed capacities for simulating tax changes on computers. Indeed, an interesting example of the use of this technique involved simulating the recommendations of the Canadian Royal Commission on Taxation (Carter Commission) to see what distributional effects these recommendations would have if applied in the United States.¹ In Canada, the tax simulation models have been used by both the federal and provincial governments as a basis for discussing changes in tax structure.

¹Joseph A. Pechman and Benjamin A. Okner, "Simulation of the Carter Commission Tax Proposals for the United States", *National Tax Journal*, vol. 22, no. 1, March 1969.

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In Canada, work has been under way for some time on a simulation model of the Canadian Manpower Training Program. This model is designed to estimate the extent to which the flows of people into various manpower training program activities would vary with changes in allowances or eligibility criteria.

Useful as these simulation models are, however, they are still very primitive tools. For example, the simulation procedures used for estimating the effective tax changes assume that the changes will *not* affect the way in which the population divides its time between work and leisure. This assumption may not be unrealistic for small tax changes in the short run. However, major alterations in the structure or rate of taxation could be expected to change incentives for work or education.

For these reasons, policy-makers need a model of the population that incorporates what is known about the effects of tax changes on the behaviour of the population. If such a model were available, it would be possible to simulate the effects of a variety of tax changes and to obtain estimates of the costs and income distribution effects of these changes, including the probable effects on incentives. Some progress towards constructing such models has been made, although the information available for estimating the behavioural responses of individuals to changes and incentives is extremely inadequate.

How Can Particular Kinds of Government Services Be Produced More Effectively?

Many important public decisions call for neither evaluation of benefits in dollar terms nor the distribution of benefits among different groups of the population. They are questions of how to achieve a given objective for the same people at least cost or how to get the most effect from a given set of resources (for example, a fixed budget). *Cost-effectiveness analysis* is useful in answering such questions.

Some kind of cost-effectiveness analysis is involved in any resource-using decision, like the construction of a road, bridge, or school. The physical characteristics are specified, and an attempt is made to find the least expensive way of satisfying these specifications. Often the specifications have to be adjusted to fit into the budget, and the question becomes: What is the best bridge (or road or school) that can be built for the money allotted? Usually some aspects of the project can be modified at a given budget level. Higher speed of construction may mean less durability; greater elegance of design may

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sacrifice certain safety features; and so forth. It is important to know what is being traded and at what cost.

Cost-effectiveness analysis is just an extension of these basic ideas into other, sometimes more complex, public decision problems. It is simply an attempt to specify what can be done to examine alternatives more systematically.

Cost-effectiveness analysis has been developed to a high point of sophistication in military decision-making. Its extension into civilian programs is relatively new, although it seems logical and not, at first glance, impossibly difficult. Perhaps the health field, which absorbs large resources in most modern countries, could serve here to illustrate the use of this type of analysis. Health care delivery absorbs major resources in most modern countries, and it is certainly possible to specify certain desirable characteristics of a health system. Patients with complaints should get diagnosis. Patients with diagnosed conditions should receive treatment. Those who need intensive care should receive it, and those who need only bed rest should get it. Emergencies arising from accidents or other causes should receive attention as rapidly as possible (for example, within x minutes y per cent of the time).¹

For any specified level of care, there are various ways in which it can be delivered. Options include changing the location and size of hospitals, or the availability of out-patient care, nursing homes, convalescent care, or home nursing. They involve the distribution of doctors or ratio of doctors to nurses and other health personnel. The nature of their respective duties and responsibilities may also be changed. Moreover, the payment mechanism used by the patient to reimburse suppliers of medical care may alter the effectiveness of care received. If only treatment costs are covered by insurance, for example, the result may be a much higher ratio of treatment to preventive care.

In view of these alternative ways of producing the specified care level, careful analysis seems warranted. The results might indicate that present delivery systems are unnecessarily costly and that equally effective care could be produced in less expensive ways.

Some of these questions come up in the field of education and are illustrated in Chapter 9 with Canadian data on secondary schooling. Among the major difficulties of cost-effectiveness analysis are those

¹We are not talking here about the state of the art of medicine or the effectiveness of care in curing disease, just about the delivery of the care itself.

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of identifying and measuring all of the *real* outputs of public programs.

Improving Information for Decision-Making

A few years ago many thought that the problems faced by our governments, particularly in the area of human resource development, could largely be solved *simply* by spending more money. But our health, education, and social assistance services have now been greatly expanded and this position is no longer tenable. Concern with the quality of these services is obviously greater than ever before, partly because society's aspirations have risen further. Wider access to services also created problems of effective delivery and revealed deficiencies to more people. Unfortunately, even in the face of this concern, systematic analysis cannot tell the decision-maker anything like what he needs to know to produce better services.

The problem is that the analyst, despite his technical sophistication, really does not have satisfactory data to analyse. Most of the studies of the effectiveness of schools, for example, have been based on cross-sections of pupils—showing the relationship between school variables in one year and performance of pupils in that same year. But the impact of education is likely to be strongly cumulative. What is required is “longitudinal information” that keeps track of individual children in a school system over time. In Canada, an important longitudinal survey of immigrants has been instituted by the Department of Manpower and Immigration for purposes of understanding their problems of adjusting to life in this country. Longitudinal information could also be very useful in looking at the effectiveness of such things as health services or the system of criminal justice.

But even this type of information, useful as it could be, would be based largely on the results of *existing* systems of producing health, education, social assistance services and so on. Even more important—if we are to obtain answers on effectiveness (including the question of how people react to policy changes)—is the need to examine the effects of more radical changes in our systems for delivering these services. Obviously, it would be both difficult and dangerous to make very large-scale changes all at once. In the physical sciences, of course, controlled experiments are used to determine in advance the results of changing the inputs into a system. So, too, in the areas of human resource programs there is now a great need for a strategy of *systematic experimentation*.

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In social areas, systematic experimentation is, to say the least, tricky and complicated. It does involve some technical problems of experimental design, but the far more difficult problems are those of organizing to obtain the information required and gaining the co-operation of the people most directly affected. Co-operation is unlikely to be secured if any groups affected by experiments feel that they are being harmed or discriminated against. There are examples of such experiments now—the income maintenance experiment in New Jersey, which is trying out several variants of a negative income tax, is perhaps the best known—but they are few in number. We make a recommendation for a pilot project in Chapter 8 in connection with labour market information. However, such types of experimentation must become much more widespread if the needed results are to be obtained.

SOME CONCLUDING OBSERVATIONS

Some fear has been expressed that more systematic approaches will transform decision-making to a science—will automate or computerize decisions and eliminate the role of judgment. This view is erroneous. Major objectives of public policy—such as improved health, more education, and a cleaner environment—cannot be reduced to quantities comparable to each other, because different people value the objectives differently. National priorities can only be set by the political process. For these reasons, we place considerable emphasis in Chapter 5 on the development of techniques that may be of assistance in formulating judgments on broader questions—on policy objectives and strategies. Nor is it possible to reduce the role of judgment in choosing among alternative ways of reaching even more narrowly defined objectives. Such choices are also essentially of a political nature in the broad sense of this term. It is always necessary to guess about future uncertainties, to weigh risks, and to invoke the best possible judgment of the situation.

It cannot be claimed that the new techniques always make decisions easier. In many cases, new knowledge and more systematic exploration of alternatives serve only to reveal how difficult the decisions really are.

Despite their limitations, the techniques of systematic analysis can, we feel, provide a great deal of useful information and guidance for those concerned with public policy decisions. But no matter how good that information is, the way it is used will be affected by the institutional framework within which decisions are made—the division of

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governments into departments, the divisions within departments themselves, and perhaps even more important in a federal country, the division of responsibilities among governments.

In the following chapter we place considerable emphasis on the presence of "spillover" effects and interdependencies in areas of public policy. In some ways, these would seem to argue for more centralization of decision-making both within governments and even among the various levels of government. There is nothing in systematic analysis that requires such centralization, although some people have suggested that such a shift may be necessary if systematic analysis is to have its most beneficial impact. In fact, however, centralization may also entail substantial costs arising from the possibility that fewer alternatives will be examined.

Society is becoming so complex that it is impossible to operate a system of the old "command-control" type in which all that is required is good decisions on the part of a few key people. On the contrary, we live in a pluralistic society which requires good decisions on the part of many decision-makers.

5

A Framework for Government Decision-Making

THERE IS a compelling need to deal more effectively with the problems of contemporary society. We have already indicated in the two preceding chapters that this need is spurring the development of new approaches to government decision-making. Drawing partly on our earlier discussion, this chapter attempts to set out a framework for such decision-making.

The suggested framework places considerable emphasis on three basic elements: decision-making is essentially a process of choosing among alternatives; in order to make appropriate choices, it is essential to use the widest possible basis of relevant information and to apply the best possible analytical techniques; and the process must be one that avoids the dangers of bureaucratic and technocratic dominance by providing increased "openness" in government decision-making.

We have found it useful to view the core of this framework in terms of a highly oversimplified decision-making system, with *choices of alternatives* at these levels: policy objectives or priorities; policy or strategy; and programs or tactics. In what follows, we illustrate the alternatives faced at each level of decision-making, with particular emphasis on these basic requirements:

- the development of a monitoring system to facilitate the establishment and continued public review of policy objectives;
- the use of "feedback" mechanisms that provide for "learning by experience" and for continued reassessment and realignment of objectives, policies, and programs;

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- the wider distribution of knowledge about the process and principles of decision-making, as well as the content of particular decisions;
- greater openness of government decision-making to promote increasing public understanding and involvement.

The previous chapter suggests that a good deal of effort in recent years has gone into making improvements at the *program* or *tactical* level of decision-making. More attention now needs to be devoted to the *higher* levels, as well as to the evolution of a more systematic approach to the whole decision-making process.

We emphasize in the strongest possible terms that progress towards improved government decision-making is *not* simply a matter of developing better information and adopting new and more sophisticated techniques. Increasingly sophisticated as they may become, better information and techniques are only aids for improving judgment. Decision-making is essentially a judgmental process. What really matters is the approach to thinking about the choices that need to be made—a continuous, conscious and deliberate weighing of alternative actions on the broadest possible basis of knowledge and participation.

There are innumerable ways in which such a process could be fostered and promoted in the context of Canadian conditions and circumstances. Although we make some suggestions along these lines, we have not attempted to address ourselves in any comprehensive way in this Review to the complex institutional questions that could be raised.

A SYSTEM OF DECISION-MAKING

Chart 5-1 sets out a very simplified system or flow diagram of a central part of the decision-making process. It is a highly condensed and selective view of this system. It makes no attempt to incorporate all of the elements or the complexity of the flows. Moreover, in practice, decisions are only rarely made in the sequential fashion shown here. The three levels of decision-making are not really discrete; rather, they shade into each other.

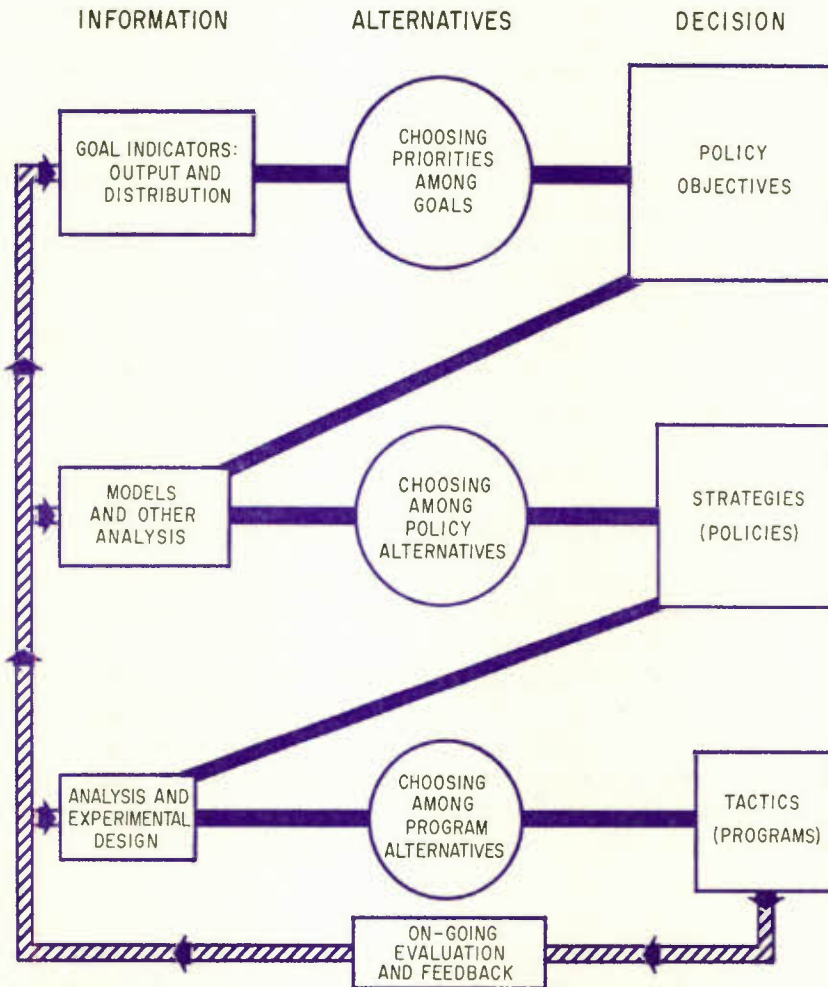
In order to emphasize the role of analytical information in the process of choice, many other important inputs have not been shown explicitly. A complete system for the federal government, for example, would provide for inflows of information relating to the objectives, policies, and programs of provincial and municipal governments, and of foreign governments and organizations. It would also provide for

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good access to information from private groups—from individuals, from private organizations, and through well-functioning channels designed explicitly for consultative purposes.

CHART 5-1

SELECTED INFORMATION INPUTS TO A DECISION-MAKING PROCESS



More generally, in a country like Canada, policy information must flow in all directions among levels of government, and between the public and private sectors. Provincial and municipal governments, as well as private organizations, can be vitally affected by decisions,

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policies, and programs of the federal government; and care must be taken to provide for consultation and co-ordination. The Council recognizes, and has in the past emphasized, the importance of this aspect of decision-making, although this Review does not discuss these crucial points.

The chart is designed to focus on certain key features of a government decision-making system. First, governments are faced with the *choice of alternatives* at the levels of *objectives, policies or strategies* and *programs or tactics*. Second, analytical information is important at each level to sharpen judgments about these alternatives. Third, there is a need for on-going evaluation of programs and a continuous *feedback* of information into the decision-making process so that objectives, policies and programs can be reassessed and, if necessary, realigned in the light of *actual* results.

Finally, it is important to ensure that changes due to the impact of programs themselves on individuals and society will be systematically monitored in the decision-making process. We emphasize again that it is vitally important at all levels of "information inputs" to take account not merely of technical and analytical information, but of information in the broadest sense, including the interests of individuals and concerned groups.

SETTING POLICY OBJECTIVES

At the highest level of decision-making, the system set out in Chart 5-1 calls for choosing alternatives and establishing priorities from a wide variety of public concerns—to arrive at policy objectives. These objectives are *general* statements of intent directed towards achievement in particular goal areas. But to be operationally relevant, they must be more specific than the goal perceptions that prompted them. By and large, discussion about goals tends to be too vague and philosophical to provide a solid basis for identifying policy objectives.

Goals

Abstract goals such as freedom, equity, and justice have been articulated in many constitutions, charters, and treaties throughout history, and have reflected some of man's most noble and civilized aspirations. But while such broad generalizations may achieve wide acceptance as principles, they do not provide operational guidelines for policy formation.

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The Canadian Charter of Human Rights, for example, sets out certain political, legal, and linguistic rights. This declaration is, in most respects, equivalent to an elaboration of goals. But rights, like goals, may remain only words. They do not *automatically* lead to policies that ensure their realization by all sectors of the population.

In a different area, the 1970 White Paper on *Foreign Policy for Canadians* contains a brief chapter on National Aims, which notes that "for the majority, the aim appears to be to attain the highest level of prosperity consistent with Canada's political preservation as an independent state".¹ This statement was not necessarily intended to reflect *the goal* of foreign policy, but if it were, it would pose difficult problems of interpretation. For example, is the success of a foreign aid policy measured by its contribution to *our* prosperity, and is it our present or our future prosperity? Is cultural independence a component of political independence? Is there a trade-off between less growth or income and more political independence?

These illustrations are set out here only to suggest the complexity and limitations of goal-setting. Goals that seem reasonable, desirable, and universally acceptable are almost invariably too general to provide an adequate basis for policy. As the specification of general goals into detailed objectives begins, the controversy about interpretation arises. The conflict of interest that is at the heart of the political system extends beyond the problem of elaborating the goal to everyone's or no one's satisfaction; it involves choosing among alternative goals and establishing priorities and time preferences.

...there is no unit of measure that will establish the relative benefits of education against those of health or national security.... Choices at this high level of aggregation must be developed on the basis of public preferences that largely find their expression in the political process.²

The formulation of a grand design of national goals and priorities is beyond the responsibility of any single level of government. Nevertheless, highly abstract goals—in the sense of broad focal points of society's concerns—have often provided rallying points for public action. What is needed is a systematic way of channeling the energy they generate, and the aspirations they represent, into guidelines for policy.

¹Department of External Affairs, *Foreign Policy for Canadians* (Ottawa: Queen's Printer, 1970), p. 10.

²U.S. Joint Economic Committee, *The Analysis and Evaluation of Public Expenditures: The PPB System*, a compendium of papers submitted to the Subcommittee of Economy in Government, 91st Congress, 1st Session (Washington: U.S. Government Printing Office, 1969), vol. 3, p. 939.

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Goal Areas

Public concern is usually focused on a limited number of issues at any one point in time. Yet the process of government decision-making stretches potentially across the whole spectrum of public interest and welfare. Chart 5-2 illustrates the breadth of our political, economic, and social concerns, and provides a simple and admittedly arbitrary arrangement of goal areas. It is designed to include all present and future policy concerns. However, to indicate that the framework is *open-ended*—that is, to provide for concerns not yet perceived—it is deliberately entitled “Illustrative Goal Areas”.

The various goal areas in the chart are intended to be readily identifiable and self-contained, although inevitably there are strong interrelationships among them. It is highly important that these *interrelationship* be recognized; they create a major hazard for the best policy intentions. One very good example is provided by the U.S. Interstate and Defense Highway System, which

...the twenty-first century will almost certainly judge to have had more influence on the shape and development of American cities, the distribution of population within metropolitan areas and across the nation as a whole, the location of industry and various kinds of employment opportunities (and, through all these, immense influence on race relations and the welfare of black Americans) than any initiative of the middle third of the twentieth century.... It has been, it is, the largest public works program in history. Activities such as urban renewal, public housing, community development, and the like are reduced to mere digressions when compared to the extraordinary impact of the highway program.

...Highways have never been a subject of any very great interest among persons given to writing or speculating about government. Certainly they have rarely been associated with social welfare issues, save in the early days of “getting the farmer out of the mud”....

Surely it is possible to hope for something more. Government must seek out its hidden policies, raising them to a level of consciousness and acceptance—or rejection—and acknowledge the extraordinary range of contradictions that are typically encountered. (To the frequent question “Why don’t government programs work?” it is often a truthful answer that they do work. It is just that so frequently the effect of a “hidden” program cancels out the avowed one.) Surely also it is possible to hope for a career civil service that is not only encouraged but required to see their activities in the largest possible scope...but for many a long decade the word from the political world on high was to stick to building roads and to see that not too much sand was used in the concrete.¹

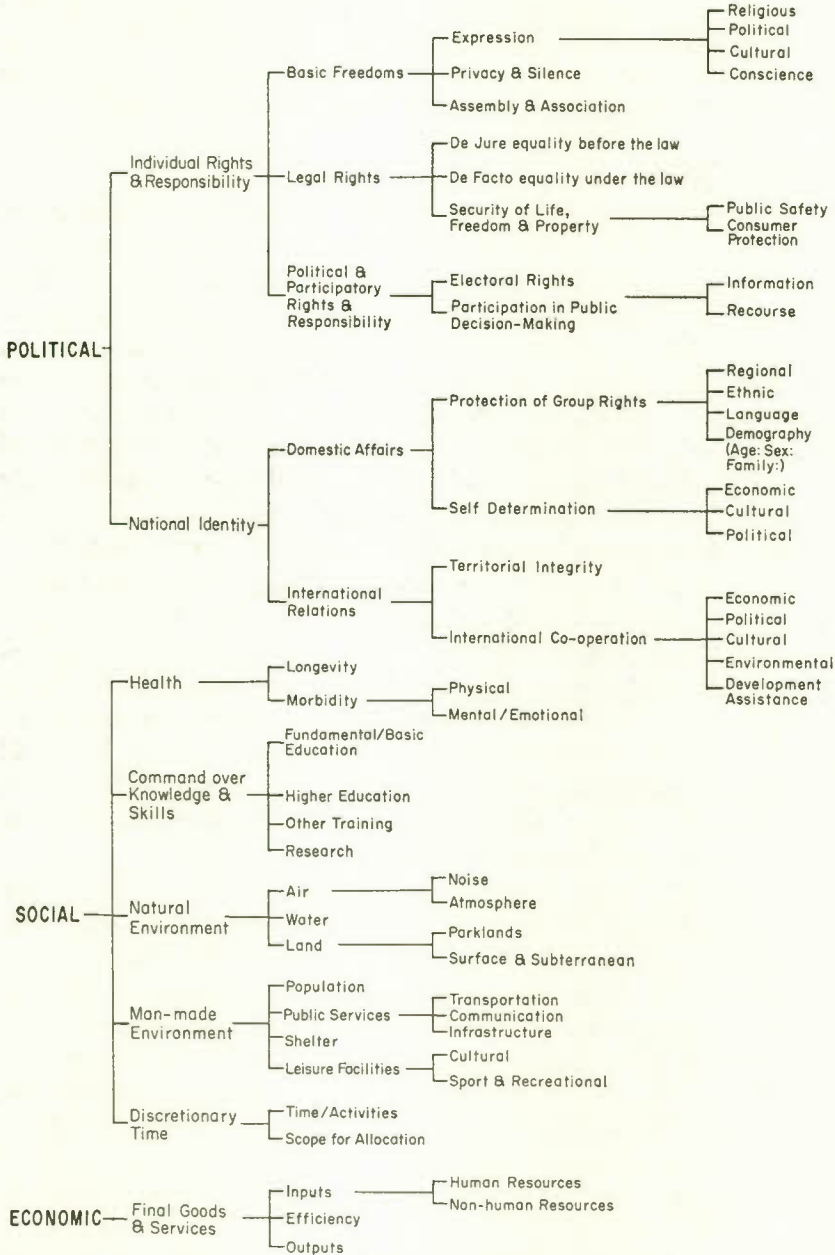
These interrelationships, which may be complex and very powerful, are not shown by the classification used in Chart 5-2. A systems

¹Daniel P. Moynihan, “Policy vs. Program in the ‘70’s”, *The Public Interest*, no. 20, Summer 1970, pp. 94-95.

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CHART 5-2

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framework that delineated the linkages among goal areas would in theory be preferable but, by and large, the models and data essential for such an approach have not yet been developed. The categories shown in Chart 5-2 are elaborated merely to provide a starting point for organizing the knowledge required for the development of measures—which we will refer to as *Goal Indicators*—to serve as links between abstract goals and operational policy objectives.

Goal Indicators

During the Great Depression, Canada had widespread unemployment and a drastic decline in national production. At that time there were no comprehensive statistics of either unemployment or Gross National Product. In the absence of reliable and aggregated measures of the “slack” in the economy or the course of overall economic trends, the development of national economic policies to alleviate the severe problems of the 1930’s was handicapped. It was not until after the Second World War that the national accounts were first published and comprehensive labour force and unemployment figures were regularly available in Canada. Now, of course, it would be unthinkable to develop national economic policy without reference to such measures.

The concerns of our society have greatly broadened in recent years. Economic growth and stabilization are still important but, as we have noted earlier, a variety of other issues have come to demand increasing attention. Unfortunately, the choice of objectives from almost unlimited possible goal areas requires far more than assessment by governments of electoral preferences. That kind of evaluation could be made by public opinion polls. The Gordian knot at this level of decision-making is a tangle of priorities and complex ramifications of choosing certain objectives over others.

Today’s choice and ranking of alternative objectives are largely based on information about yesterday, but they will affect tomorrow. There are lags in perceiving problems, in responding to them, and in creating change. Time is a critical variable in the decision equation. While the real world situation frequently demands instant action, many of the issues facing decision-makers are here today and *not* gone tomorrow. The choice of policy objectives and success in meeting them require a longer-range view—a perspective that can only be attained by continuous monitoring of social change.

The goal areas include interests and concerns of both individuals and governments. In Canada, private decisions still govern a large share of total activity. For private industry, the market mechanism,

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even with its imperfections, provides some insight into "revealed" preferences, as well as guidance for resource allocation. The government sector, on the other hand, enjoys no comparable self-regulatory machinery. What is needed are more and better signposts along the route that society is following.

The Council, therefore, strongly recommends the development of a comprehensive set of statistical measures to monitor the changing conditions of our society over a broad spectrum of concerns. We have purposely rejected the term "social indicators" for these measures because of the wide variety of interpretations of that term and the increasing semantic confusion which has arisen. Instead, we call these *Goal Indicators*. We define *Goal Indicators* as quantitative-qualitative information that can be collected on a time series basis to measure a relevant and significant dimension of a specified goal area—for example, health, education, or public safety.

In a sense, we are advocating the development of an array of statistical indicators for social and political activities that would parallel some of the frequently used and widely understood measures of economic concern, such as Gross National Product and the unemployment rate. The information that now exists in many goal areas is inadequate to answer some of the simplest but most fundamental questions. How much have children learned? How many people have been lifted out of poverty? How healthy is the population? The answers to these questions will not be found in statistics about the numbers of teachers or doctors or about the expenditures of welfare agencies.

Major policy changes in the past have frequently come about only in response to some dramatic event like the launching of a Sputnik or to mounting evidence of such things as environmental degradation. A situation may need to develop critical proportions before it looms large enough to obtain the level of "visibility" that commands public attention. A continuous monitoring system would promote such "high visibility", help to generate concern, and lay the basis for appropriate and timely action before problems reach crisis dimensions.

For each goal area, there should be indicators of two types:

- (1) *Goal Output Indicators*—to give a broad, summary view of levels of, and changes in, output;
- (2) *Goal Distribution Indicators*—to show distributions of the aggregate output indicators among regions, income groups, ethnic groups, and so forth.

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For example, Chart 5-2 indicates that the goal area "health" (which is too broad for any summary measures—at least at our present level of knowledge) consists of two rather different specific concerns: length of life, and number of days free of illness or disability. The latter in turn might be further subdivided into physical disability and mental disability. At this degree of disaggregation, the possibilities for monitoring these particular features of society become more clear. Here are some examples of *Goal Output Indicators* that might be relevant in the three subcategories of the goal area "health":

Longevity	Infant mortality rate Live birth rate Death rate from: Accidents Degenerate diseases of old age Acute/chronic diseases
Days free of physical illness or disability	Days hospitalized or abed Days off work/school Level of nutrition Level of fitness
Days free of mental/emotional illness or disability	Days in psychiatric institutions Number of defective/retarded children Suicide rate

In choosing *Goal Output Indicators* the emphasis is on measuring the "outputs" of our health and social system—infant mortality, for example, rather than expenditures on prenatal care or the number of obstetricians and pediatricians; the level of nutrition, rather than expenditures on food.

However, these summary measures are not by themselves sufficient in a highly diverse and pluralist nation. If an objective of public policy is to promote the well-being of people, one still must ask: Which people?

In general, this concern for distribution has been inadequately served by both policy and data. In the economic sphere, for example, emphasis on broad measures like Gross National Product may hide far more than it reveals. It permits, and possibly encourages, the illusion that rising income is equitably shared by all income classes, regions, or ethnic groups. More and better data are increasingly available on the subject of income distribution in Canada but, in a variety of other important public policy areas, the distributional implications are virtually unexplored.

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There will be difficulties in this type of analysis, but clearly we cannot expect to achieve a higher degree of social equity in Canada without some very concentrated efforts to explore these aspects of policy. There is a real need for more and better information directing attention to inadequate housing, health, and education among minority groups; to equality of political rights; and to greater opportunities for the upward movement of disadvantaged people on the social and economic ladders.

Moreover, for many important government programs there has been little attempt to explore what is called fiscal equity in government programs—the net balance of two vital questions: Who pays? Who benefits? For this reason we lay particular emphasis in later chapters on the examination of at least some distributive aspects of manpower and education policy.

The Council urges that those goal areas in which distribution is a key concern should be monitored by *Goal Distribution Indicators*. For each *Goal Output Indicator* there are many possible distributional dimensions. Income class would be relevant for all goal areas; others, such as region and ethnicity, are of special interest to Canadians. But in particular instances, age or sex may be highly relevant. Chart 5-3 illustrates some of the possible distributional dimensions for a number of *Goal Output Indicators*.

Some of these indicators show that not all Canadians share in national achievements, or even have the *opportunity* to share. All public programs and policies have some distributional impact and, in some measure, have contributed to the existing pattern. Governments may attempt to alter this allocation by fiscal measures—through the selective use of revenue and expenditure powers. The income tax schedule is used not only to raise revenue, but to change the distribution of income. Public expenditures that concentrate on particular groups or sections of the population—for example, through veterans' hospitals, youth services, and legal aid programs—have a specific and intended distributional impact.

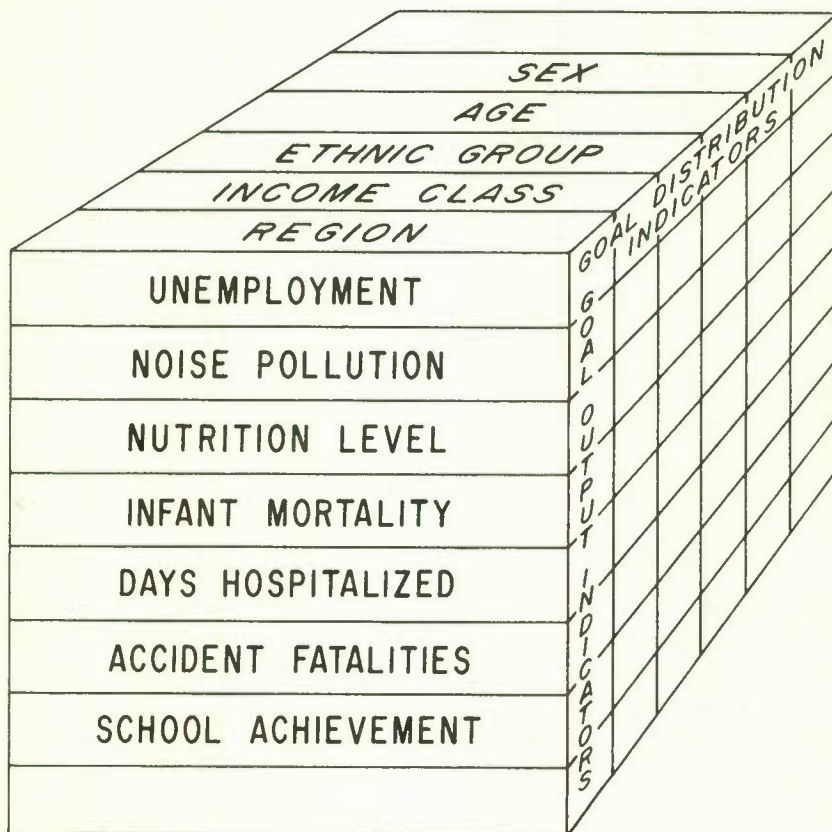
On the other hand, many policies and programs have a distributional impact, which is a side effect of actions intended to accomplish other ends. For example, monetary restraint aimed directly at moderating inflation tends to bear relatively quickly and heavily on residential construction, and more particularly on low-cost housing. Distributional side effects are far from uncommon and they can be large. Clearly, it is important to know more about effects—both intended

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and unintended—at the policy and the program levels of decision-making.

CHART 5-3

ILLUSTRATIVE DISTRIBUTIONAL DIMENSIONS OF GOAL OUTPUT INDICATORS



Some Characteristics of Goal Indicators

Our primary concern here is to urge the adoption of the *principle* of developing *Goal Indicators*. Although a far-ranging discussion is under way among the experts, and there is not as yet a consensus about the specifications of such measures, we would be remiss if we did not set out what we believe should be some of their important characteristics:

- The indicators should be relatively few in number for each goal area, and each should provide a broad, summary picture of the area of concern.

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- They should take the form of statistical time series that would show the state of the goal area at regular time intervals. The time interval would depend largely on the rate of change in the area under observation. A monthly measure of park and recreation facilities is unnecessary; a pollution measure every decennial census would be inadequate.
- Some experts hold that these indicators should be designed in such a way that a change in one direction can always be interpreted as a “good” thing; a change in the other as a “bad” thing. But perception of what is “good” or “bad” may vary among individuals and from one time or place to another. One has only to think of the controversy surrounding the question of population growth in developed and developing countries over the past quarter century or so. We believe simply that *Goal Indicators* should focus on the condition (and change in condition) of society and not be linked to a particular judgment of whether such a change is good or bad.
- The aim should be to measure the *real output* of the system—what the health, education, and environmental “systems” are actually producing; namely, states of health, levels of skill and knowledge, amount of leisure, extent of pollution, the incidence and degree of alienation, and infringement of rights and freedoms. However, in the short run, since there is not as yet even a conceptual framework for measuring real output in many areas, less adequate substitute measures or proxies will have to be developed but used cautiously as a guide to policy decisions.

Perhaps an illustration of the difficulty of choosing an output measure or even an appropriate proxy would be useful. As noted earlier, measures of output of the health system should take into account length of life and physical as well as emotional illness and distress—in other words, both the mortality and morbidity aspects of health. For this purpose, data have been developed on life expectancy free of bed-disability and institutionalization.¹ Such a measure requires some definition of a “bed-disability-free day”, which includes or excludes from the count a day in bed with a cold, a day at home but not in bed, or a day at work with a cold (although equally severe colds may give rise to all three responses by different persons).

¹See, for example, U.S. Department of Health, Education, and Welfare, *Toward a Social Report* (Washington: U.S. Government Printing Office, 1969), pp. 99-100.

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In the attempt to pin down an operational measure that corresponds to the conceptual framework, there will have to be compromises in the interests of feasibility. For example, given the present state of the art, it would be unreasonable to expect that the first or even the twenty-first attempt to measure illness would take account of differences in pain-threshold levels or in the behavioural response of individuals to similar illnesses.

The variety of statistical techniques that might be used to construct *Goal Distribution Indicators* will obviously complicate the task of selecting appropriate criteria. Even after some initial statistical and conceptual hurdles are passed, both the output and distribution measures will need to remain under review to ensure that they continue to be relevant—that is, to measure what needs to be measured and in the best possible way.

Policy Objectives and Priorities

We have argued earlier that the formulation of a grand design of national goals and priorities is beyond the responsibility of any *single* level of government. However, as the decision-making framework shown in Chart 5-1 suggests, at *each* level of government, a systematic effort should be made to identify the objectives of public policy. In a democratic society these choices are made through the political process, not by special interest groups or experts. But we think that the use of *Goal Output Indicators* and *Goal Distribution Indicators* offers significant possibilities for sharpening perceptions of society's needs. A monitoring system that would assist the public and the decision-maker in recognizing the issues and problems would act as an early warning system emphasizing anticipatory *action* rather than belated and often costly *reaction* to changes in society. It should help to provide a much needed bridge between the broad, abstract *goals* and *operational guidelines* for policy.

The employment of *Goal Indicators* will most certainly *not* reduce the role of judgment or compromise in choosing policy objectives and priorities. Priorities are set by the "negotiating" or political process. We hope only to add to the information content of this process. Nor should it be claimed that the use of such indicators will necessarily make judgments about priorities, or the development of consensus about choices of policy objectives, any easier. Indeed there are undoubtedly times when the identification of specific objectives may increase the clash of opinions or even paralyse action. But, in general,

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the risks of not bringing knowledge to bear on the choice of objectives are, we believe, much greater.

The setting of objectives is, at the political level, a question of consensus and compromise. Their selection, which involves the melding of competing claims and interests, is an expression of governments' conception of the public interest and their perception of the public will. It should permit a process of clarification of such objectives.

The reduction of regional income disparities may, for example, be said to be a national goal, but this statement is too general to provide a meaningful basis for the design of policies that can be made operational. In fact, it is clear that there are a number of possible objectives depending on our definition of "region" and "income" disparities. Narrowing regional differences may mean differences between provinces or between smaller regions within each province. It could even relate to urban and rural differences. The narrowing of income disparities could be interpreted as the establishment of some minimum income level for individuals or families, or of similar income distributions in each region. On the other hand, it may be interpreted as a reallocation of productive and income-generating capacity of both capital and labour. These possible interpretations do not necessarily suggest different and discrete objectives; in fact, there is a significant degree of overlap. But at the next level of decision-making, the choice of alternative strategies—the relative importance of income transfer mechanisms, investment and industrial development, manpower training or mobility assistance—depends on a clear understanding of the objectives and the priorities assigned to each.

In actual practice the selection of the policy objectives takes place within the constraint of limited financial and technical resources, and in an environment of uncertainty and change. It requires a view of the problem as it exists, and as it may develop in the future; an assessment of the scope for, and prospective gains from, each additional category of expenditure; and frequently a possible trade-off between short-term and long-term results. One important function of the feedback network at that level (shown in Chart 5-1 and discussed later in this chapter) is to reinforce the tentative nature of objectives by providing for their continued reassessment in the light of increased knowledge and changes in the environment. The realities of uncertainty and change require this responsive dynamic approach at every level of decision-making.

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CHOOSING AMONG POLICY ALTERNATIVES

Choosing a priority among a variety of goals—the first level of decision-making in our simplified system—supplies the *objective* for policy. What policy options or what broad guidelines for action are to be used to implement these objectives? The choice here is illustrated by the following example.

Many Canadians feel that the reduction, if not the elimination, of poverty is, or ought to be, a priority objective of government policy. In our *Fifth Annual Review*, we set out evidence to support the view that the distribution of income in Canada leaves a substantial number of Canadians in poverty. Generally speaking, there are two broad policy alternatives or strategies for reducing poverty—income transfers, and investment in “human” capital accompanied by efforts to open up wider income-earning opportunities for the poor. These are two very different policy options.

Transfers of income via the tax or welfare system can be provided by legislation and have a financial impact on some or all of the poverty population in a relatively short period of time. Regardless of how this redistribution is effected, there will be some side effects on incentives to work, incentives to move, and (through children) on poverty in the next generation. But there may be little direct effect on the education or skills of the labour force. The process of redistribution via income transfers will have to continue and even be increased at regular intervals to maintain the relative position of those who remain without skills and earning capacity.

Investment in human capital is a very different approach—involving the upgrading of skills and opportunities by providing training or mobility or access to improved health and housing facilities. It is concerned with developing qualities and incentives as well as providing opportunities and removing barriers. This would provide routes out of poverty into rewarding and productive employment. It is a selective approach. To succeed, there must be a real possibility that the “target population” can participate in, and gain from entering, the labour force or move to more rewarding occupations. Investment strategies are not necessarily appropriate in every poverty situation, but for those who are affected, these policies reach beyond the financial symptoms into its real causes. And some anti-poverty programs, such as housing and health facilities for the aged or disabled, reflect both transfer and investment elements.

In the short run at least, the budgetary costs of the investment approach are likely to be significantly higher than those of the

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transfer mechanism. Income transfers are quickly implemented, whereas the income effect of investment in human capital is largely realized over the long run.

How does one choose? The decision may depend in whole or in part on a political or value choice. But careful objective analysis can assist judgment in the selection of one or other alternative. Indeed, the first questions to be asked in deciding upon a strategy or combination of strategies are very straightforward. Who is in the poverty group? What are their characteristics? If a large proportion of those in poverty were able to enter the labour force with suitable training, more weight would be given to the investment strategy. Alternatively, if a very high proportion turned out to be in the older age group or disabled in some way, emphasis could be shifted towards the transfer strategy. The actual choice of strategy, in this case, is unlikely to be of an "either/or" variety. Any effective attack on the problem would undoubtedly require some mix of transfers and investment. But the weight placed on each would determine the general thrust or, as we have termed it, the strategy.

In many areas, particularly those relating to behavioural response and motivation, knowledge about the social system, and the impact of alternative strategies on it, is primitive. The development of models and analysis for experimentation, evaluation, and redesign of policy will involve a commitment to extending knowledge and information. The process of social change will not be unraveled easily.

To sum up, in each policy situation there are alternative ways of meeting objectives. Some of these may be politically, technologically or financially impossible, but the essence of policy formation is the selection and combination of strategies aimed at meeting objectives, while considering the widest possible range of alternatives. At some point, the "costs" of searching for alternatives will outweigh the benefits of finding the "best". An important element in these costs is the time factor—the delay in reaching and implementing decisions. This delay gives rise to uncertainties in the private sector which may impede effective decision-making.

Thus, judgment enters at every stage: what alternatives to consider; how far and how long to pursue the analysis of costs and benefits; and what interrelationships to examine. "Final answers" in the shape of formulas—simple or complex—will not replace the crucial element of judgment, nor necessarily generate creative and imaginative alternatives in the decision-making process.

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CHOOSING AND EVALUATING PROGRAMS

The third and final level of decision-making (see Chart 5-1) is tactical and deals with operational questions. What, in fact, is to be done? How is it to be done? What is the likely result? This is the point at which alternative programs should be designed and evaluated, resource requirements estimated, possible outcomes anticipated, and expenditures allocated through the budgetary process.

A poverty strategy, for example, becomes *operational* in the choice among alternative (but closely competing) programs that further the intended objective. The tactical alternatives in a strategy to reduce poverty are numerous, but here are a few selected examples:

- a transfer strategy might include programs like selective guaranteed income, welfare payments, unemployment insurance, and pensions;
- an investment strategy might cover programs like industrial or institutional training and retraining, basic skill upgrading, community development, provision of child care services, and social animation.

The discussion in Chapter 4 elaborated some of the analytical approaches which are appropriate for designing and evaluating project or program alternatives. These techniques are directed to a wider and deeper understanding of particular tactical devices, and they seek to answer questions relating to the real and financial costs and benefits of each program in the context of its policy objective. It is equally important that analysis at this level take account of interrelationships and spillover effects.

Knowledge about interrelationships and spillovers provides a better basis for designing a program network in which these effects reinforce, not impede, progress towards objectives. There is, of course, an important element of judgment here too. At some depth of analysis, almost everything can be seen to relate to everything else; at that point the analysis sinks under its own weight. Long before then, however, many simple but important interrelationships can be identified, anticipated in the design of programs, and accounted for in their evaluation.

Some may suggest that this articulation is impossible or unnecessary. But governments propose acts which, in the absence of such knowledge, must rely on traditional views, hunch or guesswork. In many instances, particularly those relating to social policy, the behavioural relationships and motivations are too complex for intuitive judgments. While the factual content of public policy and

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programs may not be the main or ultimate criterion of many public decisions, it can scarcely be doubted that more knowledge about how the system works would lead to better decisions.

LEARNING FROM EXPERIENCE: FEEDBACK MECHANISMS

The life of a decision-maker would certainly be a great deal easier, though perhaps far less stimulating, if society were static and unchanging. But it is not. Rather, society is constantly changing, partly as a result of decisions made by governments. In these circumstances, there is no guarantee that the anticipated or designated outcome of particular policies or programs will be attained, no matter how well designed they may be. What is required is a systematic way of learning from experience that will bridge the gap between today and tomorrow.

The system shown in Chart 5-1 provides for this. It shows a feedback of information into the decision-making process from on-going evaluation of programs. Where the outcome is not what was expected or wanted, the decision-maker has the opportunity to adapt or revise programs, policies, or objectives.

"Feedback" may also perform a slightly different function. Ideally, *Goal Output Indicators* and *Goal Distribution Indicators* hold, as it were, a mirror to society, and policy objectives are developed in response to perceived needs. On the basis of such objectives, strategies can then be evolved and programs designed. But program initiatives are aimed at changing some aspect of society, and this change will subsequently be reflected in the *Goal Indicators*,¹ stimulating a process of continuous reassessment and, where necessary, realignment of objectives, strategy and programs.

Systematic feedback mechanisms in major policy and program areas significantly increase the prospect of attaining policy objectives. There should therefore be legislative provisions for continuing evaluation, and for regular published reviews of the results of particular programs at stated intervals.

Much of the discussion thus far seems to suggest that we can allocate or reallocate public expenditures from scratch. Actually, in any year, the number of new policy creations is not large, and annual additions to public expenditure programs are only a small share of

¹A *Goal Indicator* that measures the changes taking place in a particular goal area reflects all elements bearing on it, not just public policy. This raises the possibility that public policy may be credited with more or less success in generating change than is actually the case. Part of the task of analysis should, in fact, be to clarify the influences of various factors.

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the total outstanding. If improvements in the decision-making process had to wait for the advent of new programs, any large impact would come only over a long period. A great deal could be done, however, to improve even incremental programs by introducing evaluation and feedback.

THE DISTRIBUTION OF KNOWLEDGE AND INFORMATION

The fact that there are many links in the chain of public decision-making greatly increases its complexity, but also provides an opportunity for effecting improvements in the process *simultaneously* at a number of strategic points. The preceding sections have stressed the need for *expertise* in developing and analysing information to guide and monitor policy decisions. It would be both misleading and dangerous to leave the impression—which was certainly not intended—that all that is required to improve public policy-making is more and better “technocrats”. This section is designed to explore some avenues for improved decision-making by focusing on the need for a wider distribution of knowledge and information among *all* the participants in the decision process.

Training

Strengthening of the critical and evaluative capacity of individuals and groups who contribute to policy formulation is basic to better decision-making. There is a variety of participants or “actors” in this process: politicians, public servants, policy analysts and advisers, the media, and the general public including the range of interest groups that represent them. There are many ways in which these participants could be encouraged and helped to broaden their knowledge about the *process* of government decision-making and the *content* of public policies. This would raise the level of debate about public decisions. The potentials for this kind of educational activity are large. Only a few examples can be covered here.

“The idea of improving politicians is regarded as quite taboo in Western Democratic societies, but this is not justified.”¹ In recent years Canadian parliamentarians have frequently asked for wider participation, for increased powers of policy design by parliamentary committees, and for improved research facilities. This clearly indicates

¹Yehezkel Dror, “Some Normative Implications of a Systems View of Policy-making”, P-3991-1 (Santa Monica, Calif.: The Rand Corporation, February 1969), mimeo., p. 13.

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a desire for more active involvement at strategic points in the policy-making process. In this context, we believe that representatives would welcome "learning opportunities" to increase their individual effectiveness, and that special arrangements should be made to enlarge the analytical perspectives and increase the policy-making knowledge of elected officials at all levels of government.

The most sophisticated policy analysis techniques will not improve policy unless they are available to, understood and used by, senior advisers. Many of these advisers have not had the background or opportunity to make the best use of the analytical tools that are available. The introduction of policy analysis into the decision system may, initially at least, tend to concentrate analytical know-how, and the power and authority associated with it, in a central agency rather than throughout the government in individual departments and agencies. We are inclined to believe that a high degree of centralization is not in the long-run interest of any level of government, and that senior advisers in all departments and agencies should participate actively in the development and evaluation of policy.

Formal training of this relatively small and exceedingly busy group of people involves difficult problems. The people who would most benefit by further, and continuing, training are the very ones who, by and large, do not have time for courses. Finding the time for this important group to keep up to date on the frontiers of new policy analysis will require some special arrangements.

In earlier Reviews we have referred to the role of policy-oriented private research organizations in various countries, and the significant contributions they make to economic analysis. Moreover, in many cases, their activities extend well beyond published analytical studies, and include:

- conferences and seminars on public problems for government officials and executives in business, labour, and the professions;
- facilities that enable leaders in public affairs to exchange ideas and undertake independent study and research.

We continue to be convinced that such *independent* institutes, with clear mandates for objective analysis and concerned with research and education in public policy matters at all levels of government, make a significant contribution to knowledge of, and discussion about, important policy issues.

There are a number of points at which the existing education system could be used to give the growing professional establishment, the media and the general public, knowledge and information about public

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policy issues. Education is currently under fire for its lack of relevance. For education to reinforce a democratic society based on responsibility and involvement, we urge the inclusion of much more "policy content" in teaching and greater accessibility to these courses for people outside the formal schooling system.

In the United States, The Rand Corporation, a pioneer in the development of systematic approaches to decision-making, has established courses for policy training in all sectors—in business, and at all levels of government and the public service. Some universities are now teaching policy science and others are extending schools of business administration into this area. A considerable expansion of training facilities, both public and private, will be required if Canada is to achieve and maintain a momentum of knowledge about the processes and structures of public policy-making systems.¹

In other countries there is a good deal more interchange of personnel among governments, universities, business enterprises, trade unions, the communications media, and other private organizations. Considerably greater mobility of this kind would, we believe, be highly desirable in Canada, and we urge governments to consider effective methods for facilitating such exchanges.

Information and the Public

The strengthening and extension of "policy training" for policy advisers and decision-makers represents only one part of the contribution that knowledge must make to the political process. The acquisition of more information by the public is equally, if not more, important. In a democratic system the views of the electorate are transmitted through representatives or by lobbies or special-interest groups. These latter groups reflect partial views and therefore the particular concerns of labour, business, regions or sections of the economy, and organized citizens' groups.

The evidence, admittedly impressionistic, suggests that involvement of the general public in policy issues is on the increase in Canada. This is undoubtedly associated with the evolution towards a more highly educated population and the development of a more urbanized society in which the production, distribution, and application of knowledge are growing rapidly. In the past few years, many new

¹ One aspect of the processes of policy-making is being covered at the federal level by a training course for analysts in key policy-advisory units of government.

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initiatives have arisen—native people's organizations, consumers' associations, environmental organizations, women's rights movements, and student groups. These organizations, based on some area of common interest or concern, could provide the rudiments of an expanded system of interest groups, reflecting elements of public opinion.

Public policy will be improved by this increase in vocal organized opinion if all these groups are enabled to inform themselves about the issues and to evaluate policy in a critically constructive fashion. At present, public involvement in policy-making suffers under a large handicap. By and large, the general public does not know, even after the fact, the arguments and evaluations on which public decisions are based. Public comment, which cannot be based on information and analysis, may be ill-informed and irrelevant. At worst, it may be a dangerous advocacy of simplistic solutions to complex human problems.

The increased use of "White Papers" by the federal government in recent years has most certainly stimulated a great deal more public discussion on various complex subjects. The federal government's expressed wish for participation must be matched by a high degree of openness at all levels of government about policy-making. One of the central requirements for developing a well-informed electorate is that there must be an increasing willingness and competence on the part of officials and politicians to discuss basic policy issues in the public arena.

A wider dissemination of information and knowledge about public policy issues should provide for: a discussion of policy objectives, and alternative strategies and programs, *before* policy is determined; the rationale for selecting particular objectives and strategies *at the time* policies are announced; and *subsequent* periodic reports on the progress of operating programs. In this context, the Report of the Fulton Committee in Britain observed:

We welcome the trend in recent years towards wider and more open consultation before decisions are taken; and we welcome, too, the increasing provision of the detailed information on which decisions are made. Both should be carried much further; it is healthy for a democracy increasingly to press to be consulted and informed.¹

There are a number of ways for governments to stimulate more meaningful discussion of public policy issues and bring information

¹Great Britain, Treasury, *Report of the Fulton Committee on the Civil Service*, Cmnd. 3638 (London: Her Majesty's Stationery Office, 1968), para. 278.

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and knowledge into the public domain—by a more extensive use of the communications media, official publications,¹ and publicly available working papers.

The information flow between governments and the general public must, of course, be a two-way street. The more systematic use of new policy design and evaluation techniques will generate a demand for more information from the general public. To meet this demand will in turn require the co-operation of the general public in providing information. The emphasis is shifting from simple modes of data collection in censuses and surveys to model-building and systems exploration, with an emphasis on behavioural and anticipatory responses. The public will increasingly be asked to participate in "social experimentation" and sophisticated data-collecting activities. One of the essential elements in moving towards more rational and more informed policy-making is the co-operation of the general public in reasonable attempts by government statistical agencies to collect more and better information.²

This chapter has outlined a framework for a more open, systematic and forward-looking approach to policy-making. This would provide for a broader and deeper exchange of views on objectives and policies between governments and the general public. Such a development may pose problems of many kinds, and may give rise to various strains and conflicts. However, it is our judgment—and ultimately it is a value judgment—that the potential benefits are more than sufficient to warrant the undertaking.

¹In addition to the traditional use of "White Papers", the British government employs what it calls "Green Papers", which "set out for public discussion major Ministerial proposals while they are still at the formative stage". See *Information and the Public Interest*, Cmnd. 4089 (London: Her Majesty's Stationery Office, 1969), p. 5.

²The public must, however, insist on the protection of its interests and privacy by proper systems and controls for the mass of personal and individual data which governments increasingly collect and integrate.

6

Canadian Manpower Policy: Manpower Training

THIS AND the three subsequent chapters provide some concrete examples illustrating many of the elements of the decision-making framework described in Chapters 4 and 5. These chapters are *not* intended to provide comprehensive and detailed reviews or assessments of policy, for such an effort is well beyond the scope of our work. They are, as stated, *illustrative* in nature and are designed to make more meaningful, by treating examples drawn from actual policies and programs, some of the conceptual matters raised in the earlier chapters of the Review.

The selection of manpower policy in this and the following two chapters is based on a number of compelling considerations. The Economic Council, in its *First Annual Review*, stressed the importance of policies "to assist and promote adjustment to change" and placed particular emphasis on "the need for urgent and prompt improvement in the field of labour market policy". This concern was reiterated in the *Second Annual Review* in 1965. In 1966, the federal Department of Manpower and Immigration was established to spur the development of an active manpower policy.

During its five years of operation, which included a period of "austerity" in government expenditure, the scope and range of programs have continued to grow, and federal resources allocated to this area have more than doubled. While some programs predate the establishment of the Department of Manpower and Immigration, manpower policy since 1966 has become one of the most important federal policy areas in this country. Despite its brief history, therefore, a closer look at the development and functioning of the major programs is both timely and of undoubted interest to the Canadian public.

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There is another important reason for selecting this particular policy area for illustrative purposes. The new Department was born in the mid-1960's. It reflects, in both its structure and activity, the environment of that time, charged as it was with new ideas about the importance of research, information, and the use of sophisticated analytical techniques in public policy-making. Thus a major division of the Department—the Program Development Service, headed by an Assistant Deputy Minister—is concerned solely with research, development, evaluation, and labour market information—in other words, with “thinking about what you're doing” as opposed to “doing”. Canada, alone among OECD countries, has reached—indeed exceeded—the “target” suggested by the OECD, that 1 per cent of total manpower expenditures should be devoted to research. This emphasis on systematic evaluation and on information as key inputs to policy formulation and adaptation is far in advance of the activities in many of the older federal departments, although some changes in this direction are certainly under way. Thus manpower policy is a particularly appropriate subject for a Review that is so strongly oriented to analytical and informational elements in the policy-making process.

The present chapter, after a look at manpower policy as a whole, deals with manpower training, the largest program of the Department. Chapters 7 and 8 discuss the assisted mobility program and the role of the Canada Manpower Centres in the labour market. Other programs of the Department, such as the Manpower Consultative Service, the Vocational Rehabilitation of Disabled Persons Program, and the Immigration Service, will not be dealt with in this Review. The most significant omission is the Immigration Service. But, in our view, while immigration is an instrument of manpower policy—one that is used, on a continuing basis, as a labour market adjustment program—it is also far more than that, having widespread and fundamental implications for social and economic development in this country. Any meaningful analysis of Canadian immigration policy was precluded by constraints of time and resources.

Another limitation deserves mention. A number of important *jurisdictional* and *institutional* aspects of manpower policy—relating, for example, to federal-provincial relations, private sector training activities, and the role and functioning of educational and training institutions—are touched on only briefly in this analysis. A full-scale examination of these aspects of manpower policy is also well beyond the scope of this Review.

Manpower Policy: Training

Before proceeding to examine *manpower training*, it is appropriate to consider strategic objectives, alternative strategies, and systematic evaluation for *manpower policy* as a whole.

WHY MANPOWER POLICY?—THE OBJECTIVES

Manpower policy—or, for that matter, many policies of government—may be directed to the achievement of various economic or social objectives: in particular, growth, equity and stabilization. The first of these objectives concerns long-run economic growth. “Equity” includes the goals of reducing poverty and interregional disparities in the distribution of income and is sometimes referred to as a social objective. “Stabilization” concerns the reduction of unemployment and the rate of price increase.

Clearly, *the three objectives are not independent of each other*; any set of manpower programs will, for example, affect some population groups more than others, thereby widening or narrowing income gaps and thus affecting the “equity” goal in some way. Moreover, a training program designed to aid the “matching” of workers with job requirements may not only raise output per man-hour (thereby helping to fulfil the growth objective) but may also lessen cost and price pressures (and thus promote the stabilization objective). Hence, even if a policy is directed towards the achievement of a single goal, there will be “spillovers” into other goal areas. Most policies, in fact, have several objectives, although there is usually a dominant thrust or orientation. This is certainly the case with Canadian manpower policy, as is indicated in the next section.

Further, the selection of a manpower *strategy* is not *independent of other government policies*. On the contrary, manpower strategy, whatever its dominant thrust, is closely linked to a range of other policies at both federal and provincial levels of government, and thus there will be “spillovers” into other strategic areas. For example, one might argue that manpower training should be viewed within the broad context of educational policy. The formulation of an effective strategy for secondary and postsecondary education should involve consideration of alternatives, some of which lie in the area of manpower training, and vice versa. To the extent that two such closely related policies are not considered in some more integrated fashion, the effectiveness of each may be reduced. Again, an equity-oriented manpower strategy should, ideally, be analysed within a framework of the range of “social” policies directed towards reducing poverty. Such policies

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include not only transfer programs but other types of human resource programs, such as health and nutrition. Further, although manpower policy may contribute to the achievement of the stabilization objective, it is important to recognize that other types of stabilization policy, in particular, monetary and fiscal policies, are crucially important to the effective operation of manpower policy.

Calling for better integration of policies and more thorough searching of alternatives is easy enough. Devising analytical methods and institutional arrangements to facilitate such integration is another matter. This and the two following chapters point out some of the problems in this respect. Before turning to Canadian manpower policy, however, it is useful to outline the general rationale for government intervention in the field of manpower policy in terms of the growth, equity, and stabilization objectives cited above.

Growth

The rationale for a government manpower policy to promote growth is twofold. First, it will help to make the labour market operate more effectively as a mechanism for allocating resources more quickly and efficiently; and second, government intervention aimed at achieving more efficient use of manpower resources will yield positive returns.

The magnitude and complexity of the labour market's allocation task are considerable. In a dynamic industrialized economy there are rapid and continuing changes in tastes, in income distribution, and in technology, together with shifts in emphasis from one product to another within firms, from one firm to another within industries, from one industry to another within regions, and from one region (or even country) to another. This, of course, gives rise to a large and continual flow of jobs and workers between occupations, firms, industries, and regions. Workers are laid off or quit, and seek new jobs that fit their skills, location, and wage aspirations. Employers, for their part, seek to hire workers who will meet their job requirements.

The enormous and continuous labour market flows of quits, layoffs, hires, and new entrants to the labour force impose a formidable task of matching men and jobs which requires large amounts of time, information, and money. The task is further complicated by a number of impediments to the allocative process. Geography, culture, and institutional arrangements in the market, such as trade unions, oligopolies and government licensing regulations, may discourage mobility and create wage and price rigidities. To these impediments must be added the artificial barriers between market segments based, for example, on race, sex, and age.

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Since many workers have only a fragmented view of job openings and employers only limited information on the numbers and characteristics of available workers (see Chapter 8), the labour market may be characterized by structural unemployment and bottlenecks which hinder the progress of the economy.

It is not only the labour market that is imperfect, however; so is the capital market. For example, the worker who is trying to match his skills and potential to the requirements of available jobs needs time and money to finance his search; he may need some training, or he may need to move, or both. Some capital is therefore required. But the unemployed worker may have great difficulty in borrowing money on the security of his own potential. Moreover, the uncertainty of his prospects may make him less prepared to incur a debt.

Thus the process of economic growth involves continuing, and sometimes sharp, changes, leading to large and complex adjustments in the labour market. The labour market's inherent ability to perform the task of matching men and jobs is impeded by a number of imperfections.

Some government intervention to augment the market's allocative mechanism may therefore be indicated. By providing for such things as training, assisted mobility, improved labour market information, vocational counselling and placement services, the government can promote a better matching of supply to changing labour demand, thereby reducing the bottlenecks, structural unemployment, and other market pressures and strains that impede and distort the process of economic growth.

The second part of the "growth argument" for a government manpower policy is that such intervention by government will yield a positive return. There is little doubt that manpower policy (in the form of programs of training, mobility, etc.) could, indeed, improve the allocative efficiency of the labour market and that such an improvement would constitute a *benefit* to the economy. Whether or not the growth objective is served depends upon the *costs* of bringing about the allocative improvement, for manpower programs involve real resource costs, such as building training centres, which use resources that might otherwise have been employed in alternative growth-promoting activities. Thus the question of whether manpower policy can promote growth is reduced to the familiar problem of whether the benefits exceed the costs. When a program such as training is economically efficient in benefit-cost terms, it will expand output. An important dimension of the problem, however, is the

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distinction between a once-and-for-all increase in output, on the one hand, and an increase in the growth rate over time, on the other. Raising the growth rate requires the *expansion* of economically efficient programs.

A later section of this chapter will deal with benefit-cost analysis of manpower policy in greater detail. For present purposes we shall simply suggest some of the reasons why government involvement in manpower policy might be expected to show positive returns.

The so-called scale economy argument holds that the average cost of providing a given type of training, of facilitating mobility, or of providing vocational counselling services, will decline as the scale of operations (that is, the number of persons covered) increases. To take training as an example, it would be less costly per trainee to have one instructor explain a process to 10 persons simultaneously than to have the same explanation repeated 10 times. Thus there could exist many small firms, with just a few candidates for training, for whom the average costs would prove prohibitive. If the trainees were brought together and trained by a single organization, costs could be lower.

There is also the argument that the private sector, by itself, may not undertake adequate "matching services". The reason is that the private individual—worker or employer—is typically unable to capture all the benefits that flow from his outlay on such services as training or mobility. To take training as an example, again, an employer may invest funds in the training of a worker, who may subsequently leave to go to another firm or to another location. In such a case the investment in training is lost to the original firm, and the benefits accrue "externally" to it—that is, to the second employer. These external effects—"externalities"—in which some of the benefits of training or mobility accrue to persons other than those who bear the cost, explain the reluctance of the private sector to undertake these activities. Externalities take many and varied forms. When an employer bears the cost of training workers, for example, some of the benefits go to the workers themselves in the form of increased earnings; in addition, there may be a host of other, unmeasurable external effects such as greater job satisfaction for the workers, and a more positive attitude to the value of education, which in turn may be imparted to the workers' families. Such effects are obviously of benefit to society as a whole but can hardly be incorporated in the accounting framework of the *employer*. They may, however, reasonably be incorporated in *governmental* accounting perspectives and thus constitute an argument for a government manpower policy.

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Stabilization

Manpower policy, like any other government expenditure policy, will have *direct* effects upon total demand. However, it is difficult to judge the *net* impact of manpower policy on total demand in the light of such demand-supporting alternatives as tax reductions or increases in some other expenditures. Such conjecture is outside the scope of the present study. Rather, the primary question concerns the way in which a government manpower policy might be expected to affect unemployment and inflation.

Given this orientation, the "stabilization case" for manpower policy turns out to be the same as that for the growth objective. In discussing the latter, it was seen that the imperfections of the labour market tend to produce "mismatching" of workers and jobs. In this situation—that is, when "bottlenecks" coexist with "structural unemployment"—manpower policy may help to reduce both *price pressures* and *unemployment*.

There is a further approach to the role of manpower policy in fulfilling the stabilization objective: the government may control the *timing* rather than the *scale* of expenditure on manpower programs. Given a budgetary allocation for manpower policy, the programs could be geared to a contracyclical, or contraseasonal, operation schedule. For example, the government might undertake an accelerated build-up of training courses during periods of high unemployment and taper them off as the economy approaches full employment. By concentrating training during the slack period, a "platform" of skills is created that may enable the next round of expansion to proceed further than would otherwise be the case without encountering labour-market-induced inflationary pressures. There are other advantages to such timing of expenditures. First, the costs of training are lower during periods of economic slack; many resources may be unemployed or underemployed at such times. Second, there is some political appeal in "absorbing" the unemployed into training programs and removing them from visible, measured unemployment. Third, there may be a preference for training the unemployed rather than providing them with direct income transfers.

Equity

The goal of achieving a more equitable distribution of income could, of course, be pursued by way of a system of transfer payments, such as unemployment insurance, family allowances, or welfare benefits. In many countries, however, manpower programs are seen as a preferable

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way of attaining this goal because, given the work-oriented nature of the industrial society, income from employment is more acceptable to the recipient than income from transfer payments. Moreover, there may be a number of beneficial side effects (externalities) from reducing poverty through the manpower route rather than via transfer payments. Thus, retraining a disadvantaged worker who is a family head, and thereby improving his chances of finding and keeping a job, will have positive effects on his family by raising his self-respect and dignity and changing the aspirations and attitudes of his children. Living on welfare, on the other hand, is more likely to have the opposite effects.

In addition to the poverty aspect just discussed, the equity goal has a further dimension; namely, it may be considered desirable to reduce *regional* disparities in the distribution of income. Again, manpower programs may be used as an alternative (or supplement) to transfer programs for the same reasons suggested above—the greater satisfaction attached to income from work as opposed to “handouts”, and the beneficial side effects of the former compared with the latter. Although these considerations constitute an important part of the “equity case” for manpower policy, the “satisfaction” and “beneficial side effects” are in practice very difficult to measure; they are benefits that cannot be quantified and included in benefit-cost assessments. For this reason the measurable benefits of manpower policy directed to the equity objective may understate the “real” (though unmeasurable) benefits. And since, as indicated earlier, manpower policy for the growth and stabilization objectives boils down to the question of whether the benefits exceed the costs, conflict *could* arise between these objectives and the equity objective.

There are, however, situations in which pursuit of the growth objective may be quite consistent with pursuit of the equity objective. The elimination of growth-impeding bottlenecks in the labour market may, as suggested above, help to further the attainment of growth. It may also help to free lower-level jobs that could be filled by disadvantaged workers. Eliminating skill bottlenecks through training and upgrading workers at the top of the “skill ladder” may release jobs to which workers on the next lowest rung could aspire, and so on down the ladder to the lower rungs where jobs may be freed for disadvantaged workers. The problem frequently faced by the latter is that, even after training, lack of available jobs may condemn them to further unemployment. Either that, or they simply displace other workers on the lower rungs of the ladder who, in turn, must

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face the problems of unemployment and retraining. To the extent that the "ladder effect" of upgrading can be achieved by the elimination of higher-level skill shortages, however, more lower-level jobs become available, and the growth and equity goals are served simultaneously.

Manpower policy is conceived of in Canada largely as a policy affecting the supply side of the labour market. In Sweden, however, "manpower policy" is far more comprehensive in scope in that it controls many expenditure programs affecting the level and location of employment and thus operates on the demand side of the market too.¹ An intermediate position might involve some "smoothing" operations on demand, such as winter works programs to even out seasonal fluctuations in demand, or adjusting regional patterns of government expenditure.

WHY CANADIAN MANPOWER POLICY?—THE OBJECTIVES

We have dated the initiation of an active, comprehensive and integrated federal manpower policy in Canada with the establishment in 1966 of the Department of Manpower and Immigration, which brought together in a single ministry the various manpower programs formerly operated by the Department of Labour, the Immigration Services of the Department of Citizenship and Immigration, and most of the former National Employment Service. But interest in selective manpower programs emerged at the beginning of the 1960's. Before this decade, federal programs directed specifically to improving the allocation or quality of labour supply were few in number and limited in scope. Both federal and provincial government intervention in the labour market was largely confined to industrial relations and labour standards legislation, although some subsidized training under federal-provincial agreements did develop during the 1950's. The only other major federal programs in the manpower field were unemployment insurance and the National Employment Service.

In the late 1950's and early 1960's, the high level of economic slack in North America generated a widespread debate over the sources of unemployment.² What Harry Johnson called "automation mongering"

¹For example, the Swedish Labour Market Board (which includes government, employer, and union members, and operates autonomously as a statutory body) plays a prominent role in industrial location policy and administers an investment fund on the basis of contracyclical government policy.

²See Frank T. Denton and Sylvia Ostry, *An Analysis of Post-War Unemployment*, Economic Council of Canada Staff Study No. 3 (Ottawa: Queen's Printer, 1965).

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convinced many people that structural transformation of the economy lay at the heart of the problem. This "structuralist" view, bolstered by widespread concern over the relatively low levels of education and training of the labour force in Canada (at least relative to the United States) provided an important stimulus to the initiation and expansion of new policy instruments in the manpower sphere. A rapid expansion in expenditure on education coincided with an equally marked build-up of federal-provincial shared-cost training programs under the Technical and Vocational Training Assistance Act of 1960 (see below).

The more recent (post-1966) policy, with which we are largely concerned here, differs from the earlier phase in three major respects: it is entirely directed to adults; it is far more comprehensive in nature; and the federal government plays a much more dominant role in planning.

The preceding section described at some length the economic rationale for manpower policy *per se*. But, of course, our chief interest lies in *Canadian* manpower policy. Why does the federal government allocate public funds to this particular policy area? What, in other words, is the policy intended to accomplish? What are its objectives?

Explicit statements of manpower policy objectives are amply available from both Ministers and senior officials. Here are two examples to illustrate the *major* objective of manpower policy in Canada:

The main objective of the Department [of Manpower and Immigration] is to further the economic growth of Canada by endeavouring to ensure that the supply of manpower matches the demand qualitatively, quantitatively and geographically.¹

and,

The general aim of Canadian manpower policy is to encourage the effective allocation of manpower resources and the development of the labour force supply and characteristics compatible with the maximum sustainable rate of growth in real per capita income.²

A number of similar statements, included in the legislation establishing the major programs, serve to underline the primacy of the growth objective of Canadian manpower policy. Nonetheless, there are elements of both an equity and a stabilization orientation as well.

¹ Hon. Allan J. MacEachen, Minister of Manpower and Immigration, Testimony before the House of Commons Standing Committee on Labour, Manpower and Immigration, 28th Parliament, 2nd Sess., *Minutes of Proceedings and Evidence*, February 11 and March 24, 1970, no. 1, p. 1:10.

² Department of Manpower and Immigration, Planning and Evaluation Branch, Program Development Service, "The Canadian Adult Training and Retraining Program". Paper prepared for OECD, July 1968, p. 1.

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With respect to equity or distributional goals, a ministerial statement noted:

We are constantly striving to bring the policies of the Department within the reach of the underemployed and the working poor. . . . Of 301,000 adults trained last year, some 50 per cent were below the poverty line.¹

Again, in the departmental brief to the Special Senate Committee on Poverty, it was asserted that manpower training funds "were distributed among the geographic regions of Canada on the basis of the size of the labour force in each region as well as their economic need as indicated by their unemployment and poverty rates".² In fact, as Table 6-1 shows, in fiscal year 1969-70 training expenditure per labour force member was well above average in the Atlantic Region and Quebec. Expenditure per unemployed person was above average in the Atlantic Region (except New Brunswick), Ontario and the Prairies, but below average in Quebec and British Columbia.

TABLE 6-1—CANADA MANPOWER TRAINING PROGRAM
EXPENDITURES, FISCAL YEAR 1969-70

Region and Province	Expenditures	
	Per Labour Force Member	Per Unemployed Person
(Dollars)		
Atlantic Region	57.45	767
Newfoundland	74.68	727
Prince Edward Island	81.78	1,553
Nova Scotia	61.76	1,138
New Brunswick	35.99	424
Quebec	39.58	574
Ontario	22.20	708
Prairie Region	25.27	875
Manitoba	24.72	922
Saskatchewan	21.83	695
Alberta and N.W.T.	27.21	949
British Columbia and Yukon	18.42	376
Canada	30.02	641

SOURCE: Department of Manpower and Immigration.

¹*Canadian Welfare*, vol. 46, no. 2, March-April 1970, p. 18.

²*Proceedings of the Special Senate Committee on Poverty*, 28th Parliament, 1st Sess., June 10, 1969, p. 375.

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Further, a senior departmental official, commenting on Canadian policy at a meeting of manpower experts, noted that "it [manpower policy] is not oblivious to the problems of poverty and of the needs of marginal groups in the labour force and, recently, is moving heavily in this direction. . . . Such objectives can be said to be *secondary* to the *primary* objective of facilitating economic growth. . . ."¹

In the same speech, the point was also made that "in recent years, we are beginning to increase our emphasis on manpower policy as a selective instrument of *economic stabilization policy* . . . to assist in absorbing surplus labour in productive activities such as training in periods of recession."² Certainly, the very rapid build-up of training expenditures in the late fall of 1970 and winter of 1971 suggests that the program is being used as a contracyclical instrument, although precise information on this is not available. However, as Chart 6-1 shows, the training program is clearly operated in a contraseasonal manner. Training activity is concentrated in those months when unemployment rates are highest. It is worth noting that in the absence of training programs the unemployment rate would have been even higher in these months, since the program "absorbs" some persons who would otherwise have been looking for work.

The above evidence shows that the Canadian government's strategy in the field of manpower policy is primarily a growth strategy, with the objectives of equity and stabilization clearly being secondary. This strong emphasis on growth and efficiency provides a sharp contrast with the manpower strategy of other countries, notably the United States.

In the United States, training programs are much more heavily oriented to serving disadvantaged groups. In the words of President Nixon:

Manpower training means: (1) making it possible for those who are unemployed or on the fringes of the labor force to become permanent, full-time workers; (2) giving those who are now employed at low income the training and the opportunity they need to become more productive and successful; (3) discovering the potential in those people who are now considered unemployable, removing many of the barriers now blocking their way.³

¹William R. Dymond, "The Canadian Experience", *Proceedings of the 1970 Annual Spring Meeting*, Industrial Relations Research Association, Albany, New York, May 8-9, 1970, pp. 544-545 (emphasis added).

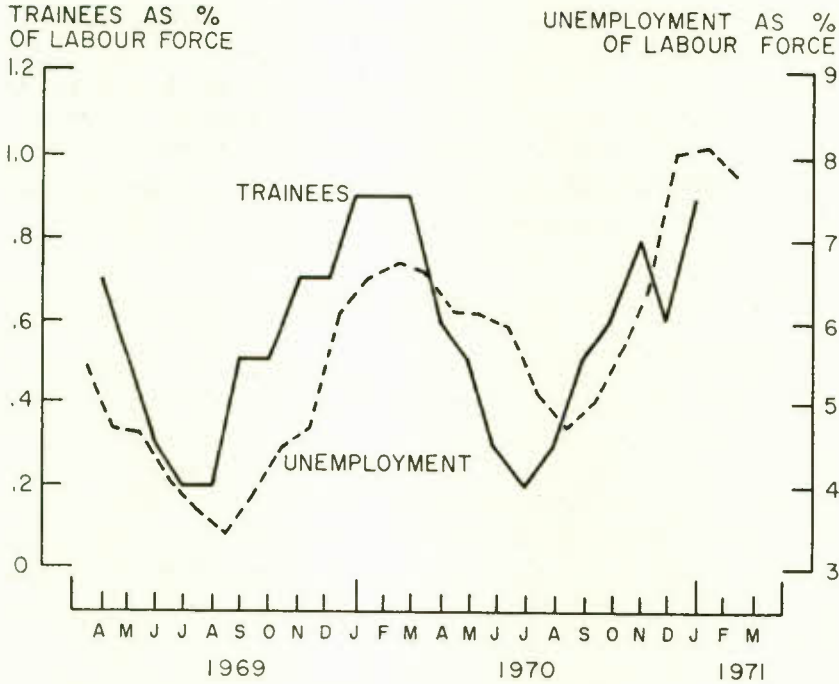
²*Ibid.* (emphasis added)

³Message of the President to Congress, August 12, 1969.

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CHART 6-1

FULL-TIME TRAINEES AND UNEMPLOYMENT, AS PERCENTAGE OF LABOUR FORCE



Source: Department of Manpower and Immigration, and Dominion Bureau of Statistics.

Most training programs which draw on federal funds in the United States require that all or a large majority of trainees come from the "disadvantaged" population, meaning that they are poor and have one or more serious handicaps in finding and keeping satisfactory jobs; for example, they may be school drop-outs, members of a minority group, or in other ways handicapped.¹

Concern with racial problems undoubtedly provides an important explanation for the stress in the United States on the equity objective of manpower policy. But this orientation may also reflect a view that "average" workers will probably be adequately served by the private market, while the disadvantaged will be ignored unless the government intervenes on their behalf.

¹The precise definition of the disadvantaged is spelled out in the U.S. Department of Labor, *Manpower Report of the President*, 1971, p. 39.

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To conclude, the objectives and general strategic orientation of federal manpower policy have been clearly delineated by the Department of Manpower and Immigration. A question of primary concern is whether, and to what extent, these objectives have been achieved. That question cannot be easily answered and, in any case, is more properly directed, at least in the first instance, to specific programs. The remainder of this chapter, then, deals with the largest of these, the Canada Manpower Training Program.¹ Our purpose here is not to present a detailed, comprehensive survey of this program. It is to concentrate on major issues that illustrate elements of the decision-making process: the choice of alternatives; benefit-cost evaluation; learning feedback; and information inputs.

THE CANADA MANPOWER TRAINING PROGRAM

The Program in Outline

Federal participation in manpower training is currently conducted under the provisions of the Adult Occupational Training Act of 1967. However, substantial federal involvement in training predates the passage of this Act. The Technical and Vocational Training Assistance Act of 1960 contained provisions for a federal-provincial shared-cost program for (a) capital expenditures on training institutions throughout the country, and (b) operating expenditures for training three groups in the population:

- (1) youths still in technical and vocational high schools;
- (2) youths and adults requiring postsecondary training to qualify as technicians; and
- (3) adults, employed or unemployed, requiring training to find jobs or to improve their employment prospects.

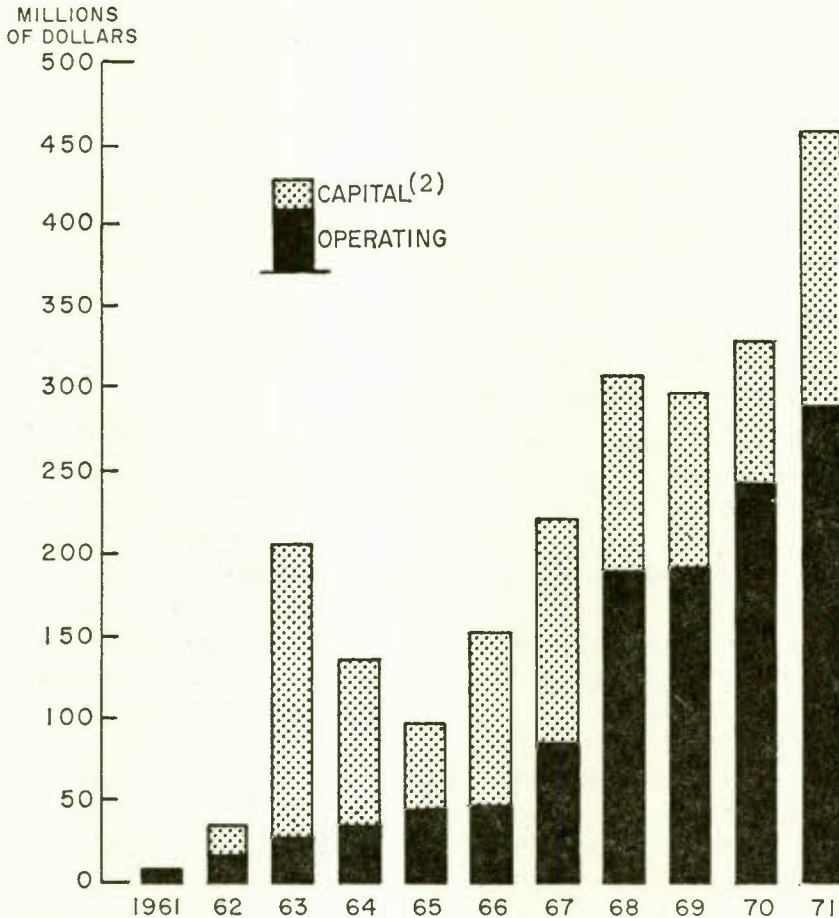
Total federal expenditures under the Technical and Vocational Training Assistance Act between fiscal years 1960-61 and 1966-67 were close to \$900 million (see Chart 6-2), and by the middle of the 1960's about half a million people a year were enrolled in technical and vocational high schools, receiving training under the Act.

The current training program differs from its predecessor in four major ways. It is not a shared-cost program; it includes only transi-

¹We have excluded apprenticeship training from this Review because both the concept and practice of apprenticeship are now being intensively analysed in a series of studies jointly sponsored by the federal government and the provinces. It was neither possible (because of lack of information) nor, indeed, desirable to duplicate this analysis. It is hoped that these studies will be published when completed.

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CHART 6-2
FEDERAL GOVERNMENT EXPENDITURES
ON MANPOWER TRAINING, FISCAL YEARS
ENDING MARCH 31⁽¹⁾



⁽¹⁾Includes expenditures under the Technical and Vocational Training Assistance Act and the Adult Occupational Training Act.

⁽²⁾Capital expenditures from 1968 are covered by a transitional arrangement related to TVTA.

Source: Government of Canada, *Public Accounts, and Estimates*, various years.

tional arrangements (related to the Technical and Vocational Training Assistance Act) for capital grants and a provision for long-term loans (which has not yet been put into effect); the program is confined exclusively to adults; and living allowances are paid. Under

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the current program the federal government will pay up to 100 per cent of the operating costs for the provision of adult technical and vocational training as well as the full cost of training allowances to "approved" trainees. These training allowances account for a major proportion of total federal expenditure for this program; in fact, they have constituted over 50 per cent of total operating costs since the inception of the program. The Department of Manpower and Immigration purchases training services, after consultation with the provinces, from provincial technical institutions, private schools, and industry.

To qualify for training, persons must be at least one year past the regular school-leaving age and either (1) have been out of school for one year, or (2) be in an apprenticeship course. There is one further requirement—although the person may be employed or unemployed, he must, in the judgment of the administrator of the Canada Manpower Centre, be considered capable of benefiting from training in terms of improved earnings prospects.

As distinct from eligibility for *training*, a person may be eligible for a training *allowance*. Living allowances are paid to trainees with dependants and to single persons who have been in the labour force for three years prior to training.¹ The training allowances formerly exceeded unemployment insurance benefits but they are less than the benefits under the revised Unemployment Insurance Act. They vary according to the number of dependants of the trainee and, to some limited extent, by region. They are also adjusted each year in accordance with changes in the Canadian average of hourly earnings in manufacturing. In 1970-71, the minimum weekly allowance was \$43, the maximum \$88, with an additional \$23 available for those required to live away from home for their training. The latter may also receive a small travel grant, and a commuting grant is provided for those who must travel some distance to the training centre.

Some 800 different courses are available under the program, providing skills for a wide variety of subprofessional occupations, to approximately 300,000 persons per year. These skill-training courses consist of no more than 52 weeks of full-time, or 1,800 hours of part-time, instruction, although, under certain circumstances, individ-

¹Interpretation of this three-year requirement has been undertaken more loosely, of late, to mean three years of labour force attachment any time in the past. Thus more married women, previously excluded under the stricter interpretation, are now able to qualify.

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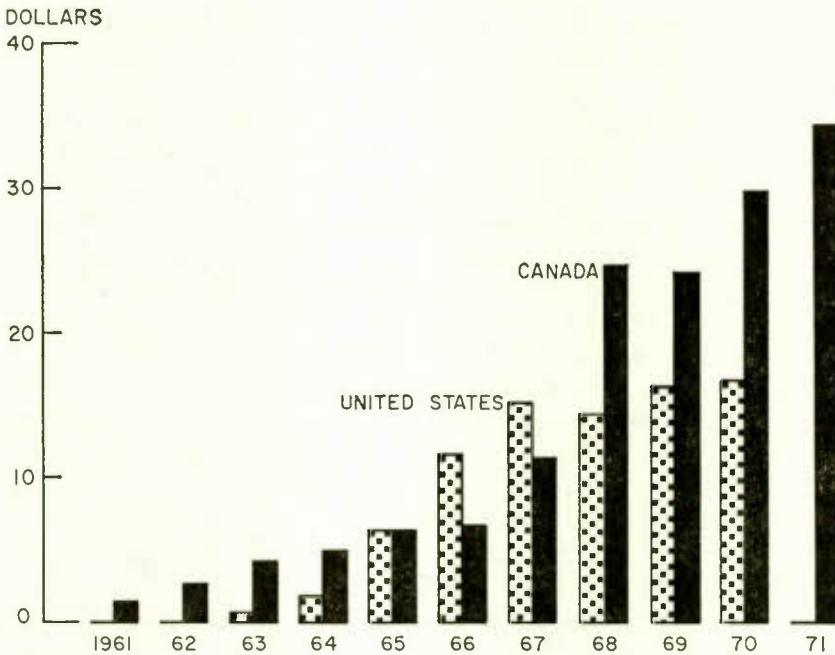
uals may take more than one course. Prior to such specific occupational courses, individuals may avail themselves of basic upgrading courses called Basic Training for Skill Development. Presently, close to one-half of all trainees (excluding apprentices) are in such courses.

It is apparent that the training component of Canadian manpower policy is one of considerable magnitude (see Chart 6-3). As shown in Table 6-2, the federal government has spent about \$1.4 billion since the inception of the Adult Occupational Training Program.

Canadian operating expenditures on training per labour force member are higher than in the United States, as shown in Chart 6-3.

CHART 6-3

FEDERAL GOVERNMENT OPERATING EXPENDITURES ON TRAINING PER LABOUR FORCE MEMBER, CANADA AND THE UNITED STATES, FISCAL YEARS*



*Fiscal years ending March 31 for Canada and June 30 for the United States.

Source: Canada—Government of Canada, *Public Accounts, and Estimates*, and DBS Labour Force Survey, various years. United States—U.S. Department of Labor, *Manpower Report of the President, 1971*, and *Employment and Earnings*.

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TABLE 6-2—FEDERAL EXPENDITURES UNDER ADULT
OCCUPATIONAL TRAINING ACT

Fiscal Year	Operating Costs	Capital Costs ¹	Total Expenditures
(Millions of dollars)			
1967-68.....	190.7 ²	119.0	309.7
1968-69.....	193.0	106.0	299.0
1969-70.....	245.0	83.7	328.7
1970-71.....	290.3	170.3	460.6

¹Transitional costs under the Technical and Vocational Training Assistance Act.

²Includes \$85.6 million under the phasing out of the Technical and Vocational Training Assistance Act.

SOURCE: Government of Canada, *Public Accounts*, and *Estimates*, various years.

Some Important Features of the Canada Manpower Training Program

The Canadian adult training program represents a very substantial undertaking—in international terms, second only to that of Sweden. A comprehensive description of its content and operation is clearly beyond the scope or purpose of this chapter, but two unique features of the program are worth noting: a large proportion of the training is preparatory upgrading not directly related to a distinct occupational skill; and there is a heavy emphasis, both for skill training and for preparatory upgrading, on institutional rather than industry training.

In striking contrast to several other countries, less than 5 per cent of total Canadian federal adult occupational training expenditures (excluding apprenticeship) is directed to training-in-industry. In the United States, about 80 per cent of federal training expenditures go to programs involving training and "work experience" in industry (Chart 6-4). In Britain, moreover, the Industrial Training Act of 1964 provides for a redistribution of funds among firms within a number of industries for training to be undertaken by industry itself.¹

The heavy—in fact, almost exclusive—emphasis on institutional training in Canada is difficult to understand when experts generally agree that, for many occupations and for many individuals, training-in-industry appears to be preferable.

There are, in fact, a number of advantages to training-in-industry relative to institutional training, of which a few will be described here. First, it seems clear that some degree of experience with the

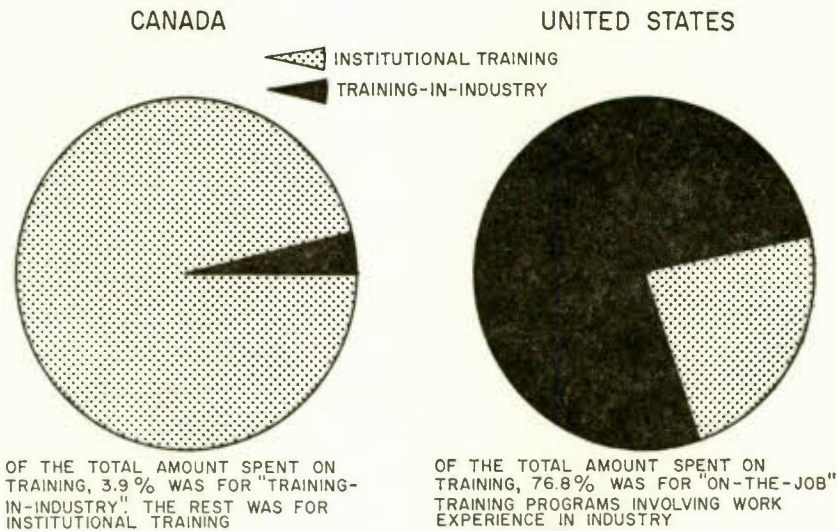
¹As of February 1970, there were 28 Industry Training Boards in Britain charged with ensuring an adequate provision of training facilities in each particular industry.

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work environment is essential for almost all jobs; familiarity with the physical plant, materials, co-operating personnel, the institutional rules of the work place, and the discipline and regimen of the job is required for satisfactory performance. This can rarely be simulated adequately away from the work place. In the latter environment, moreover, the relevance of the instruction to the job is much more readily apparent, and this tends to make the trainee a more attentive student.¹

CHART 6-4

A COMPARISON OF FEDERAL MANPOWER TRAINING PROGRAMS IN CANADA AND THE UNITED STATES, FISCAL YEAR 1969-70



Source: Canadian estimate derived from Department of Manpower and Immigration data; U.S. estimate based on U.S. Department of Labor, *Manpower Report of the President*, 1971, Table F-1.

Second, although institutional training may be advocated on the grounds of using the capacity of existing buildings, training-in-industry may enjoy a relative advantage in availability of skilled

¹See M. J. Piore, "On-the-Job Training and Adjustment to Technological Change", *Journal of Human Resources*, Fall 1968.

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instructors and access to relevant machinery and equipment. In general, it probably "doesn't pay for schools to invest in locomotives, earth-moving machinery, big computers, etc., especially since instructional equipment is used only a few hours a day".¹ Furthermore, training-in-industry has particular advantages for industries that experience a high rate of technological advance. In such instances, the institution may find it inordinately expensive to prevent both teachers and equipment from becoming obsolescent.

Third, one of the strongest points to be made in favour of training-in-industry is simply that it places the trainee in the employ of a particular firm, so that he enjoys the financial and psychological rewards of income and employment during his training period.

For the disadvantaged worker, there may be another argument in favour of training in the work environment. Inasmuch as the "disadvantaged" or "hard-core unemployed" are those with educational deficiencies, or low skill levels, or some other disadvantages, there may be psychological barriers associated with the attempt to undertake training for such persons in a classroom setting. The disadvantaged trainee may already have failed in such an environment, and may respond more readily to the more practically oriented atmosphere of training-in-industry.

However, it should be pointed out that training-in-industry is sometimes said to impart skills that are so *specific* to the firm in which the training is undertaken that the potential mobility and adaptability of workers is curtailed. In recognition of this problem, contracts with private firms under the Canadian occupational training program require that, in order to qualify for subsidy, training-in-industry must be *general* in nature—that is, the skills conferred must be transferable between firms and not specific to the training firm. The federal government may pay up to 100 per cent of the operating costs of such training—instructors' salaries, rental of premises, equipment and supplies—and half the wage costs of trainees. Subsidized training-in-industry must be more or less formally established in a location separate from the work station, and resulting output may not be sold. Thus all on-the-job training is excluded. Moreover, trainees coming under the contract must be hired by the firm. These requirements, while apparently designed to avoid possible

¹A. Rivlin, "Critical Issues in the Development of Vocational Education", chap. 11 of G. Bowen and F. H. Harbison, *Unemployment in a Prosperous Economy*, Report of the Princeton Manpower Symposium, May 13-14, 1965, p. 161.

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abuses of subsidies to private industry, do reduce the flexibility and scope of the program.

These arguments concerning the relative advantages of training-in-industry and institutional training are not meant to suggest that the two training methods are mutually exclusive. For some occupations, institutional training may well provide a stronger and broader training base, and enable the worker to adapt more easily to changing technology and to move more readily among industries and regions. For other occupations it is most likely that some *mixture* of the two methods may best serve a particular objective. At the present time there are cases of roughly similar occupational skills being imparted by both systems of training, which suggests one of two things: either training-in-industry and institutional training are equally effective and perfectly substitutable alternative means of skill-acquisition, which is at least questionable; or some skills are presently being imparted by an inappropriate method. What is needed is careful study of the comparative effectiveness of each method of training for different occupations or workers. Unfortunately the information necessary for such analysis is at present not available.

It is worthy of note that several of the provinces provide their own training-in-industry programs independently of federal government support and of the federal training program; Ontario, for example, promotes a particularly large effort of this nature. The Ontario Department of Education, which administers the provincial training-in-industry program, last year contributed about \$1.8 million for such training, covering over 50,000 trainees. This does not, of course, represent the full cost of the program, since private industry makes a substantial contribution. Nor does it take into account several other factors, such as type and length of courses. On the other hand, it is estimated that during the 1970-71 fiscal year the federal government entered into about 1,800 contracts with employers for training-in-industry across Canada covering approximately 21,000 trainees at a total federal cost of \$6 million.

The discussion above raises the important question of why the federal government has not chosen to place greater emphasis on training-in-industry. Perhaps one reason is that the existence of institutional capacity erected during the 1960's weakened the incentive to use training-in-industry more extensively. Secondly, there is the practical difficulty that Canadian industry, unlike that of some other countries, notably Britain, is rather heavily concentrated in a few geographic areas, so that in many locations, and for many occupational

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skills, training-in-industry is not feasible. Further, the general economic climate has probably been unfavourable to such training of late; the presence of considerable slack in the economy reduces the incentive of employers to participate in training-in-industry projects.

The Department of Manpower and Immigration is well aware of some of the advantages of training-in-industry, as is illustrated by the following observation of a former Minister of the Department:

... adult training is different from school education because quite a lot of it can best be carried on not in a teaching institution but within industry. This is plainly a growing trend. It makes a great deal of sense. But we cannot expect industry to carry it very far, in training that a man can use not only with his present employers but with many others, unless government bears much of the cost.¹

Nevertheless, training-in-industry remains a very small part of the Department's overall training effort and, in fact, it appears that the number of training projects requested and approved in fiscal year 1970-71 is somewhat lower than in 1969-70 due to the considerable amount of slack prevailing in the economy. As mentioned, however, there appear to be more fundamental reasons inherent in the Act itself and in the way it is administered which may explain the limited scope of the program. Perhaps a different method of operating and financing training-in-industry might provide greater flexibility—the redistribution of training funds among firms by a levy-and-grant system (as in Britain) might have some potential; or encouragement of businessmen to take on more trainees might be provided by allowing tax credits to cover a large share of the increased payroll. It is understood that the Department is conducting further research into training-in-industry, and it is hoped that this, along with experience in provincial programs, will provide a sounder empirical basis for decisions concerning the possible expansion of that program.

A second important feature of the Canada Manpower Training Program is that about 40 per cent of all enrolments are for Basic Training for Skill Development—that is, preparatory upgrading which is not directly related to a distinct occupational skill. Such training constitutes a way of imparting an improved knowledge of language and other fundamental communicative skills, as well as a better understanding of basic mathematics and science. Because a very substantial proportion of the Canadian labour force had no more than elementary school completion (nearly 40 per cent of males in 1966), many

¹Hon. Jean Marchand, "Statement to Federal-Provincial Conference on Federal Training Programs, October 25th, 1966", Ottawa, p. 5, mimeo.

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workers were unable to benefit from skill courses without such preparatory upgrading.

In the context of the strong growth-orientation of the Canadian training program in its early years, it was anticipated that the Basic Training for Skill Development courses would be directed primarily to "upgrading" workers facing technological displacement. It was expected that such workers would then be better equipped to respond to subsequent skill training which would enable them to maintain their employment or even improve their earnings prospects in the face of technological change.

In the event, however, technological displacement has proved less pervasive than rising cyclical unemployment. In a period of high unemployment, when few skill vacancies are apparent and when training for particular occupational skills is therefore hazardous, there exists the possibility that such basic training may be used, as it were, simply as an absorbent. Further, in slack labour markets the worker with inadequate education is forced to the end of the unemployment queue. The very nature of the basic training and skill development courses, which in a sense "fill in the gaps" of the formal education system, has apparently given them a rather strong orientation towards the "disadvantaged".

As mentioned earlier, equity is indeed one of the goals of Canadian manpower policy—and rightly so, in our view. But it is questionable that basic training *alone* is the appropriate way to deal with disadvantaged or marginal groups. What is required for such groups is a *combination* of specialized and diversified programs adapted to their particular needs. These might involve special counselling; new motivational techniques; training through work experience; improved community participation; as well as educational upgrading. This is not to deny that there is clearly a role for basic educational upgrading, both to prepare inadequately educated workers for skill courses and to widen the employment horizon for such workers.

The Economic Impact of the Canada Manpower Training Program

The federal government has, since the inception of the Department of Manpower and Immigration, spent approximately \$1.4 billion on manpower training. What have been the results? This is certainly not an easy question to answer with respect to this or any other type of government expenditure. Nonetheless, some indicators of performance are available.

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Training programs are intended to have an impact on both the employment and earnings potentials of the trainees. Thus data on the numbers of trainees employed and unemployed, before and after training, would give some indication of the success of the training program in improving the employability of trainees. Such figures, however, must be interpreted with caution. For example, it is reasonable to expect that a large number of Canada Manpower Centre clients will be unemployed *at the time they seek training*—their temporarily disadvantaged status may be their very motivation for applying. They may nevertheless have been employed for a considerable part of the preceding few years. If trainees happen to be employed on the date (say, three months after completion of training) when a follow-up survey is made, that is not to say that they will necessarily remain employed. The notion of “employment”, moreover, has several dimensions that should be taken into account—the number of hours worked per day; days worked per week; and weeks worked per year.

In looking at the earnings improvement of trainees, care should be taken to ascertain whether the improvement is due to the training itself or to other factors, such as changes in general economic conditions.

Such indicators as those mentioned above are, in fact, generated by the Department and will be discussed in connection with the formal evaluation procedure described below. Another indicator used by the Department is the percentage of trainees who are in the same occupation at the time of survey as that for which they were trained. This gives an indication of the extent to which training is geared to short-term manpower requirements. The Department's survey, covering workers trained in the period between January and September 1969, showed that, three months after training, 71 per cent of employed trainees were in the occupation for which they were trained or in a closely related one. An extension of this indicator—namely, the percentage of persons trained for occupations expected to require a large inflow of trained personnel—could be very useful.

Completion rates, too, furnish relevant information. For 1968-69, departmental figures show that, for persons referred to full-time nonapprentice training, over 82 per cent had either successfully completed the course or were still in training—a far higher figure than under the Technical and Vocational Training Assistance Act. It should be pointed out, however, that this indicator will be sensitive to seasonal and cyclical fluctuations in economic activity, so that a follow-up to determine the *reasons* for withdrawal from training would be useful.

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Other useful indicators might include the ratio between training places available and the number of eligible applications for training, and the degree of correspondence between the number of man-days of training (or number of "full-time equivalent" trainees) and the unemployment rate. The latter would be a guide as to the extent to which the program serves either seasonal or cyclical stabilization goals.

Such general indicators are a potentially useful source of information about the relative success of training programs and should be made available on a regular basis for public review. But a more rigorous and comprehensive approach to evaluation is needed in view of the variety, and the shortcomings, of the indicators described above.

The Benefit-Cost Model

Systematic evaluation of the Canada Manpower Training Program is performed by the Department with the aid of a benefit-cost model. Briefly, this model includes an enumeration and estimation of the flow of costs and benefits of training, compared through the use of a discount rate. A short explanation of each of these concepts is in order.

Costs, in the departmental model, include outlays on processing and administrative procedures, training courses, travel grants, and extra personal expenses of trainees not covered by the living allowance. They also include estimates of before-tax forgone earnings of trainees during the training period. By "forgone earnings" is meant the earnings to which trainees would have had access if they had not entered training. The estimation of this figure obviously entails some problems because it involves taking into account the probable employment experience of the trainee in the absence of training. If he would have been unemployed during the entire training period, or if he would have been replaced in his job by another unemployed worker, then there is less cost to society in having him undergo training. If, on the other hand, he would have been working on a job for which no replacement could be found, then putting him on training means that a job remains undone, an output remains unproduced during the training period, and society bears the cost of that lost production.¹

¹Our short exposition of the model is framed in terms of the benefits and costs of training to society as a whole. It is possible, however, to evaluate training from the standpoint of the individual, or of the administering department, or even of the government as a whole. Such evaluations, while useful for particular purposes, would require a rather complex conceptual explanation which seems inappropriate for our present brief outline.

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The earnings forgone by such a trainee are an element of the cost—the value of lost production. The Department is obliged to estimate such figures on the basis of the probability of unemployment (or replacement) derived from information on the trainees' characteristics and the state of the labour market during the training period.

The *benefits* of training are estimated by comparing pre- and post-training earnings of trainees. Pre-training earnings are measured by the weekly earnings on the trainee's last job of one month's duration or longer. Since, as explained earlier, the trainee might be in a temporarily disadvantaged situation just prior to training, this use of the last "permanent" job is an effort to avoid the problem of distorting "random" factors. The model design provides that post-training earnings be estimated from follow-up surveys conducted at specified intervals after the trainee leaves the program, and such earnings are assumed to represent a permanent change lasting over the rest of the trainee's working life.

The *discount rate* is designed to adjust the flow of costs and benefits to their present value for purposes of comparison. That is, since the costs and benefits we have described accrue over different time periods, some method of providing a common base for comparison must be found. The discount rate (rather like an interest rate) undertakes this function of "discounting" returns that occur in future periods back to a base period, taking into account the simple notion that a dollar of returns realizable in a future period is worth less than a dollar of returns now. The contentious issue of what is the appropriate discount rate to use is handled in the departmental model by computing results separately for rates of 5 per cent, 10 per cent, and 15 per cent and comparing them for sensitivity to these arbitrary selections.

With respect to training under the Canada Manpower Training Program in the period January through September 1969, the Department has stated that the benefits derived from the program are in the order of two to three dollars for each dollar of expenditure. A further analysis of the data from this period suggests, however, that when account is taken of the work experience of trainees for several years prior to training, the program does not appear to have resulted in improvement in employment. With regard to earnings, average wages of trainees do appear to have increased by approximately 12 per cent. Whether this improvement is entirely attributable to training *per se* is, however, questionable. The period that elapsed between the measurement of pre-training and post-training earnings was

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probably about a year. During this period the rate of price increase alone would have reduced the increase in average real wages to a rate of around 8 per cent.

Further Aspects of Evaluation

Systematic evaluation procedures inevitably yield results that must be interpreted with caution. We have already mentioned the notion of "externalities"—that is, that some of the effects of training may have their impact upon persons other than the trainer and the trainee. A serious drawback of most benefit-cost models at the present time is their exclusion of "third party effects", which may have important implications for the success of training programs.

Two types of third-party effects are of particular interest. One, called the "vacuum effect", is of a beneficial nature and works in the following way. Suppose that training relieves a serious skill bottleneck, and that the filling of the formerly vacant skilled job opens up a number of related, complementary jobs for auxiliary workers. Then the effect of training is not only the placement of the worker in the skilled position, but also the employment of complementary less-skilled workers and the extra output thereby produced. Under the undesirable "displacement effect", by contrast, the trained worker improves his own situation at the expense of nontrainees who are displaced from their jobs and enter the pool of the unemployed.

The extent to which these third-party effects take place, in which occupations, and under what general economic conditions, poses a difficult problem of empirical investigation. It seems likely that in a period of fairly high unemployment there may be relatively few "bottleneck" occupations, so that many trainees would, in fact, displace other workers who lack the "seal of approval" of a training course. Moreover, to the extent that the courses and occupations generally covered by the Canada Manpower Training Program concern subprofessional occupations, the scope for enjoyment of the "vacuum effect" would appear rather limited. Thus there exists the possibility that, on account of displacement effects, claims concerning the benefit-cost estimates of the program should be treated with some caution.

A further reason for scepticism arises from the use of pre- and post-training earnings comparisons. The crucial question is: *What difference did training make to the worker's employment and earnings prospects?* Really, then, we want to determine the difference between the worker's

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experience *with*, and *without*, training—which is not the same thing as his experience *before* and *after* training. “Before-and-after” is used only as a proxy or indicator of “with-and-without”. To use the before-and-after approach, one must make the heroic assumption that “other things remained the same”—that is, that all other things, *except training*, didn’t change. But during the training period it is likely that other things did change, for better or worse, and they would affect the worker’s prospects regardless of whether he received training. If, for example, the economic climate improved during the training period, then the trainee’s better prospects *may* be due to the improved climate and not to the training itself.

A further complicating factor is that trainees typically receive some services from the Department in addition to training; special effort may be made to counsel the graduates of training courses. There is the danger, therefore, that the “before-and-after” method of measuring benefits may attribute to training what is in fact due to changes in the economic climate or to special counselling.

There is no ideal solution to this problem, but one method that has been used in the United States for small-scale projects is to use a “control group”—a group of persons with the same characteristics as the trainees but who receive no training. A follow-up survey of the groups permits comparison of the employment and earnings experience of persons with training and persons without training. This avoids some of the problems stemming from the impact of economic change, but it is still difficult to exclude the effects of any counselling and placement efforts made on behalf of the trainees.

Moreover, it is difficult to achieve precise comparability of the two groups to be studied. For example, one might make the groups as similar as possible with respect to age and sex composition, educational background, previous employment and earnings experience, and many other factors. Yet, the question might then arise as to whether the group who applied for training are more strongly motivated than the nontraining group, and whether the greater motivation might ensure greater success, irrespective of training. Nevertheless, some form of control group, even if it does not satisfy purist notions of controlled experimentation, is probably preferable to the “before-and-after” approach. It could at least serve as a useful additional check on the viability of the latter approach. The method employed in the Department’s present model raises some doubts as to the confidence with which one can attribute benefits to training *per se*.

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Learning Feedback

Perhaps the most important aspect of evaluation is that it may be used for the purpose of providing *learning feedback* which was discussed in Chapter 5. That is, a benefit-cost model should not simply provide a once-and-for-all analysis of existing or proposed programs on which expenditure decisions can be made. It should serve to monitor the continuing performance of the program in the light of changing circumstances. The Department has, in fact, stressed the use of its model to provide guidance for improving and modifying the evolving structure of the training program.

This dynamic feature of the evaluation process is clearly of great importance if the program is to be kept "on course" or improved, and the Department's emphasis on this aspect is commendable. Perhaps such evaluation has not been operating long enough to provide adequate feedback. In any event, it is difficult to reconcile some of the observations we have made above with the assertion that continual monitoring of the various "components" of the training program is "feeding back" into the system.

The very heavy preponderance of institutional, as opposed to industry, training remains a unique (in international terms) feature of the Canadian system despite considerable evidence that a different mixture would likely be more efficient. Recent substantial unemployment could well have deterred some expansion of training-in-industry but, as mentioned earlier, some modification of administrative and financing procedures might render it a more useful tool.

The problems besetting the basic training courses provide another example. As described above, it appears that these courses are presently being used for a purpose other than that for which they were originally designed, and that they may well be less than adequate for the task of assisting the disadvantaged worker.

Nor has the feedback mechanism been effective in directing the training effort to "shortage" occupations. Departmental estimates of the required manpower inflows into various occupations over the period 1961 to 1975¹ were used to test the degree to which the percentage of trainees in a given target occupation grouping was correlated with these projected requirements. No significant correlation was found. Nor were trainees concentrated in those occupations that had been growing most rapidly, as indicated in the latest census

¹B. Ahamad, *A Projection of Manpower Requirements by Occupation in 1975*, Department of Manpower and Immigration, Research Branch, Ottawa, 1969.

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information. However, one cannot overestimate the formidable nature of the problem of forecasting manpower shortages in terms of specific occupations.

Distributional Effects

Some attention must be paid to evaluation of the program with respect to other objectives, such as equity—and more particularly to the questions about the alleviation of poverty, and “who pays and who benefits” (i.e., the redistributive consequences of the program).

The annual earnings data in Table 6-3, which show that a very substantial proportion of trainees had low incomes, throw some light on the program's contribution to reducing poverty. If \$3,000 per trainee is arbitrarily defined as a “poverty level”, the table shows that just under 50 per cent of the sample was below this level before training and about 40 per cent after training. These data are provided as an example of a rather simple distributional indicator. A more careful analysis of the shifts in the distribution of earnings is desirable when more detailed information becomes available.

TABLE 6-3—PRE- AND POST-TRAINING ANNUAL EARNINGS DISTRIBUTIONS, 1969

Income Class	Percentage of Trainees in Income Class before Training	Percentage of Trainees in Income Class after Training
Less than \$1,000.....	10.8	7.5
1,000 — 1,999.....	17.0	14.0
2,000 — 2,999.....	20.6	19.3
3,000 — 3,999.....	18.0	18.6
4,000 — 4,999.....	12.0	13.7
5,000 — 5,999.....	8.7	9.7
6,000 — 6,999.....	5.3	6.2
7,000 — 7,999.....	3.3	4.4
8,000 — 8,999.....	1.5	2.8
9,000 — 9,999.....	0.9	1.6
10,000 and over.....	1.9	2.2

SOURCE: Economic Council of Canada estimates based on survey data from Department of Manpower and Immigration.

On the question of who pays and who benefits, Table 6-4 shows the fiscal transfers among regions resulting from the Canada Manpower

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Training Program. The basic issue here is how much the taxpayers in each province contributed towards the funding of the program through the taxes paid to the federal government, and how much each province got back again through federal training expenditures. How much taxpayers in each province "paid" for training was estimated by taking the percentage of federal budgetary tax revenues attributable to each province and multiplying these percentages by total program expenditures in fiscal 1969-70.¹ The resulting figures were then subtracted from the actual amount spent by the federal government on the program in each province, to estimate net fiscal transfers. This calculation suggests that the program transfers revenues strongly in favour of the Atlantic Region and Quebec. Thus the "redistributive profile" of the program is, in fact, generally in accord with the intention to assist the slower-growing regions of this country.

TABLE 6-4—NET FISCAL TRANSFERS UNDER CANADA
MANPOWER TRAINING PROGRAM

Region and Province	Net Fiscal Transfers Fiscal Year 1969-70
	(\$ million)
Atlantic Region.....	22.7
Newfoundland.....	7.8
Prince Edward Island.....	2.4
Nova Scotia.....	9.6
New Brunswick.....	2.9
Quebec.....	33.0
Ontario.....	-38.6
Prairie Region.....	- 4.1
Manitoba.....	- 1.6
Saskatchewan.....	- 2.0
Alberta.....	- 0.5
British Columbia.....	-13.0

NOTE: Excludes Yukon and Northwest Territories.

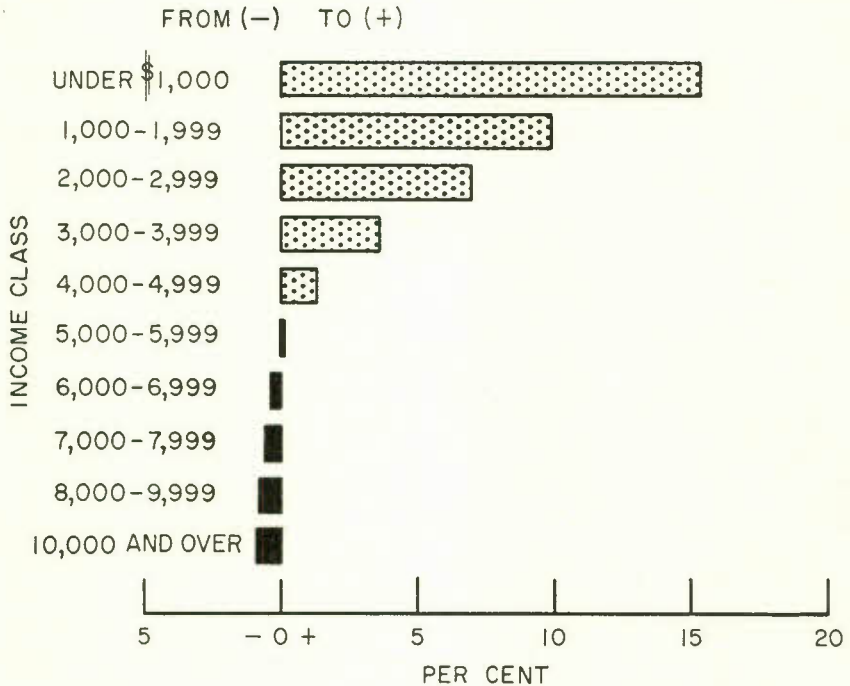
SOURCE: Based on data from Department of National Revenue, Dominion Bureau of Statistics, and Department of Manpower and Immigration; and estimates by Economic Council of Canada.

¹A full explanation of estimation procedures used for these calculations will be published in a forthcoming study by D. M. Paproski and J. Cousin, *The Incidence of Selected Taxes, by Province and Income Groups*, for the Economic Council of Canada, mimeo.

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A similar type of calculation helps to reveal the redistributive effects of the training program, by income class. In this case (see Chart 6-5) the percentage of the program funds derived from each income class is compared with the percentage of training funds spent on each income class by the federal government. This shows which income groups received positive or negative transfers. It appears that the "break-even" income category is around \$6,000.

CHART 6-5
NET FISCAL TRANSFERS UNDER
CANADA MANPOWER TRAINING PROGRAM,
BY INCOME CLASS, 1969



Source: Based on data from Department of National Revenue, Dominion Bureau of Statistics, and Department of Manpower and Immigration; and estimates by Economic Council of Canada.

OTHER DIMENSIONS OF MANPOWER POLICY

*Federal-Provincial Aspects of the
Canada Manpower Training Program*

The main focus of attention in this chapter has been on manpower policies of the federal government and, more particularly, on the occupational training program financed by the federal government. But provincial governments are also involved in this field. Important questions have therefore arisen both about the determination of appropriate jurisdictional divisions and about achieving effective co-ordination between the two levels of government. Jurisdictional division is a constitutional and political question beyond the terms of reference and competence of this Council.

The problem of achieving effective intergovernmental co-ordination *within the context of the present federal adult occupational training program* is a separate, though not unrelated, issue. Some aspects of the latter question are discussed briefly here. However, fuller consideration of the intergovernmental aspects of manpower training must await more intensive study of the on-going *process* of implementation and the *structure* of the governmental agencies involved. In other words, what is required is a case-study approach, province by province, of the *system* of planning, producing, and delivering training services under the Adult Occupational Training Act. This is clearly a tall order and one beyond the capacity of this Review. However, an effort was made to discuss relevant issues regarding programs in this field with informed officials from every province, as well as with operating officers of the Department of Manpower and Immigration at the regional and national level. What is presented below is distilled from these discussions and represents selective examples of problem areas cited repeatedly by either or both of the provincial and federal representatives dealing with occupational training "on the front line".

Planning—One vital aspect, from a planning point of view, is the lead time required to make available the necessary facilities and personnel. This involves two main elements—the budgetary preparation, discussed below; and the ascertainment of training needs, dealt with in a later section.

For budget preparation, the Department of Manpower and Immigration receives in late summer an indication from Treasury Board of probable changes in the total Canada Manpower Training Program budget. The regions are then notified of their likely changes and asked to give estimates for final settlements with the provinces on current

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activities, as well as for the number of training days and per diem costs for the main types of training to be purchased the following year. They are also asked to indicate significant changes anticipated in the regional demand or supply of training. All this is used in the Department's final budget, which is completed some two months before the new fiscal year. Regional offices are then provided with the confirmed allocation, by province, in total and broken down, as previously mentioned. Each region uses this for the preparation of monthly schedules, which are then used in negotiations with the provinces on formal annual "purchase agreements" for training. These schedules may also form the basis for interim monthly payments.

Under the purchase agreements with the provinces in 1967, renewed on a year-to-year basis since then, a minimum purchase of 90 per cent of the training days purchased in the previous year has been guaranteed, thus providing some continuity for provincial planning. But this very accommodation presents the Department of Manpower and Immigration with rigidity problems; since it covers training *days*, mounting per diem costs eat up some of the budget balance. This is further complicated by built-in commitments for students still finishing, for any year-end adjustments, and for enrolments beyond the Department's control, such as apprenticeship, together with the pressures from educational institutions to maintain a similar pattern of general course purchases. Thus regional headquarters may find themselves with little manoeuvrability, making it difficult to respond to demands that they be more flexible and responsive to short-term needs. The present arrangements therefore tend to inhibit innovational activities and to hamper changes in emphasis and sources of training as, for example, in a shift away from institutional to industry training.

At the same time, many provinces voice concern about the lack of information on likely annual expenditures, and on the late start in negotiations; they, too, plan and budget for one year ahead or longer. Some claim that the 90 per cent rule *per se* provides no guidance on the final nature, volume, or timing of purchases. Since discussions on the final purchase agreement often run well into the operating year, both parties use temporary working agreements. These permit some lead time but are not binding and can be adjusted to the final purchase pattern approved by the region. Federal audits also create planning uncertainties, and some final settlements are several years outstanding.¹ As one provincial official expressed it, "Long range

¹The main difficulty appears to be problems in the costing of courses. It is hoped that costing guides now being prepared by the Department of Manpower and Immigration will resolve these and provide a useful analytical tool.

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planning is possible only on the premise that if the Department of Manpower and Immigration does not buy training, our department will."

To provide lead time and yet leave flexibility, several solutions were suggested—in particular, that negotiations begin on the 90 per cent during the preceding summer. Some feel that any balance after cost and other adjustments could be left open, others wonder whether pilot projects might be funded separately. Several federal and provincial officials suggest that alternative strategies and standard programs be worked out in anticipation of changes in priorities. We understand that efforts are, in fact, being made to develop more timely planning procedures.

Training Allowances—Training allowances paid under the Adult Occupational Training Act create difficulties for some provinces in two respects. First, because the allowances are, in effect, based on national averages and vary little by region (on quite understandable grounds of equity), the levels are substantially higher than actual wage levels in some provinces. Thus, after completion of a course, a trainee may have to take a cut in income because the jobs available in the area pay less than the training allowance. This situation will be exacerbated if allowances are raised to match the higher level of benefits under the new Unemployment Insurance Act. The problem thus involves a fundamental conflict between equity, on the one hand, and efficient use of resources, on the other. In other words, reasonable uniformity of allowances under a federally financed program is quite consistent with the notion of equitable treatment of individuals, but when applied to the widely varying labour market conditions in different parts of the country, such uniformity produces distortions and disincentives that detract from efficiency.

The second problem stemming from the training allowance provision relates to the so-called "three-year rule"—that is, the provision in the Act that trainees eligible for allowance must have been in the work force for three years, unless they have dependants. The reason for including this particular provision was that education is a provincial responsibility, and the federal government wanted to indicate a very clear distinction between schooling and manpower training. It was also felt that students might be encouraged to leave school to enter training programs for which they would receive living allowances. However, this stipulation effectively excludes a substantial number of young single workers who are especially vulnerable to unemployment. The provinces are free, of course, to provide training

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allowances for those who are ineligible under the federal Act and, in fact, eight out of the ten do so. But not all provinces can afford to match the level of the federal allowances and so, in different parts of this country, a trainee attending a particular course may receive a federal allowance, or a provincial allowance (which is likely to be lower), or no allowance at all. Further, because the Department of Manpower and Immigration buys many of the available training places for eligible trainees and pays up to 100 per cent of the costs of courses, there is often pressure from provincial Treasury Boards to favour federal occupational trainees over those whose costs are not fully recoverable. It is claimed by some provinces that this influences educational programs by allocating resources in a fashion that does not always coincide with provincial needs and priorities. This situation can hardly be defended on grounds of either equity or efficiency. Indeed, both federal and provincial authorities are acutely aware of these and other disadvantages of the present scheme and have commissioned a number of studies to assess the financial and labour market effects of alternative eligibility requirements and allowance levels.

Ascertaining Training Needs—As noted earlier, the main objective of federal manpower policy is improved labour market efficiency and improved growth; hence the thrust of the training program is towards those who can most “benefit” from training and not necessarily those in most “need”.

Many provinces appear concerned that this growth-orientation is not sufficiently responsive to changing economic conditions or local situations in provincial labour markets. Some provincial officials feel that their perception of local needs is quite different from that of the federal authorities and that some training effort is therefore misdirected or wasted, while pressing problems receive inadequate attention.

Some of these expressions of concern represent disagreements over *objectives*—that is, the relative weight to be placed on growth versus equity. Some are a consequence of *administrative* difficulties arising from the nature of the federal-provincial consultative procedure. But it was our impression that the lack of *information* about training needs is fundamental and pervasive. By way of contrast, accommodation on administrative procedures could be worked out. Indeed, improved and more flexible arrangements are gradually being developed in many provinces. We shall, therefore, focus on the need for better information about training requirements.

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The informational needs of a selective manpower policy are indeed formidable. Data are required on labour demand and supply, with considerable detail on both occupation and geographical areas. Further, since the aim of manpower policy is to *anticipate*, and therefore prevent, structural maladjustments in the labour market, what is really required is highly detailed *prospective* information—i.e., projections of manpower needs by occupation and area, together with projections of supply from training institutions and other sources. Despite considerable efforts by the Department and by provincial governments to improve labour market intelligence and analysis, manpower forecasting is still a primitive art, here as elsewhere. It is not possible to project, with any degree of confidence, the needs for specific jobs in particular areas. More and better data will improve the situation and reduce the conflict between different agencies with different perceptions of local market needs. But perhaps what is also needed is a more innovative approach—a move away from the concept of a specific job, defined in terms of a *specific* occupation, to a broader, more flexible notion of “job families” with common basic skill elements that can be related to components of training programs.

Some interesting experiments along these lines have recently been emerging in various places. One of these has been undertaken in Ontario.¹ The concept followed was originally suggested by the Canadian Manufacturers' Association and is called “block” or “modular” training. Essentially, it involves identifying, for homogeneous families of occupations, the elements of skill and knowledge required to perform the functions involved. These elements are then assembled into “blocks” of training, some of which are common to many jobs; others are more job-specific or even company-specific. Appropriate methods of instruction—classroom or on-the-job—can then be selected for different blocks.

Such an approach promises greater flexibility in adaptation to dynamic change than the traditional method of trying to fit a worker into a particular job slot—and trying to forecast how many such slots are likely to appear in any given area. Workers can be shifted horizontally into jobs with the same block components—although with perhaps quite different occupational titles—or upgraded by acquiring additional blocks of either classroom or specialized on-the-job training.

Preliminary evaluation of the small-scale Ontario experiment is promising, although there might be complex administrative problems

¹See International Labour Office, “Industrial Training for the Twentieth Century”, *Training for Progress*, vol. 9, 1970.

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involved in its control and development if it were conducted on a substantial scale. While there are no easy solutions to the problem of ascertaining training needs, it is hoped that similar pilot projects might be launched and carefully monitored in other parts of the country. These should parallel continuing efforts to improve the information base and reduce the uncertainty now bedeviling the manpower planning efforts of both the federal and provincial governments.

Co-ordinating Mechanisms—In selecting examples of difficulties in federal-provincial co-ordination under the Canada Manpower Training Program, we do not mean to imply that these and other problems are unrecognized or that efforts are not proceeding towards their amelioration or resolution. A number of mechanisms aimed at more effective co-ordination and problem-solving are already functioning.

The Council of Ministers of Education and its Manpower Committee provide an important avenue of communication, at the senior policy-making level, among the provinces and, through periodic delegations from the Council, with the Minister of Manpower and Immigration. In addition, the federal Department annually hosts a federal-provincial manpower conference at the deputy minister level. At these conferences, significant problems are discussed; progress on the resolution of problems is reviewed; and proposals for changes may be introduced. One vital source of inputs is the special joint Review and Assessment Subcommittee. It meets periodically over the year to consider research proposals and needs; to advise on whether federal, provincial, or outside resources might be used, to monitor progress on jointly financed research projects, and to report to the annual conference.

At the operational level in each province, the so-called "Section 13" Committees¹ now increasingly advise on course content and training needs. All these committees include representatives from provincial Departments of Education and Departments of Labour. However, their structure varies from province to province—sometimes including representatives from several provincial departments in addition to Departments of Education and Labour, and sometimes including representatives of federal departments in addition to Manpower. Since, as we have underlined, manpower policy interacts strongly with many other federal and provincial policies, the broader is the representation on such committees, the greater is the likelihood of more effective

¹Section 13 of the Adult Occupational Training Act states: "The Minister may, at the request of the government of a province, join with that government in the establishment of a joint committee to assess manpower needs in that province."

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co-ordination of competing and complementary policy strategies. It is fair to add, however, that large committees are often not effective vehicles for decision-making.

The problem of intergovernmental co-ordination has another dimension—co-ordination of *federal* and *provincial* manpower policies and programs. We have previously mentioned that most provincial governments support, in some degree, manpower training programs for adults. The extent of provincial involvement varies widely. Rough estimates¹ show that Ontario spent more than \$60 million in fiscal year 1968-69; Alberta, British Columbia and Quebec spent over \$10 million, while the expenditure in other provinces was well under \$10 million, with Prince Edward Island spending less than \$100,000. It is our impression that there is very little in the way of formal mechanisms for ensuring that provincial programs are integrated with the federal manpower training activities in order to maximize the effectiveness of training subsidies by *both* levels of government, although there are exceptions in the case of particular projects.²

While many provinces support some training activity, Quebec has extended much further into the field of manpower policy as a whole. It has established 59 provincial employment bureaus (13 of which are used exclusively by construction workers), offering placement services similar to the 94 Canada Manpower Centres³ in the province. Although precise information is not available, it appears that the province currently spends close to \$6 million annually in maintaining these bureaus and the Manpower Branch of the Quebec Department of Labour and Manpower, while the cost of the federal government Centres is approximately \$13 million. There is no co-ordination between these two operations; on the contrary, there appears to be a substantial duplication of services, although at the present time, placements by the Quebec bureaus are well below one-third those of the Canada Manpower Centres.

This duplication reflects an underlying difference in the views of the federal and Quebec governments on the objectives of manpower

¹These estimates are based on information from the *Public Accounts* of the various provinces, and cover operating expenditures for occupational training of adults, including nonsecondary technical institutions, apprenticeship training, and training-in-industry. Some federal funds from departments other than the Department of Manpower are, in some instances, included.

²An example of federal-provincial co-ordination on a particular *project* is the Department of Regional Expansion's training-in-industry project on the Peguis Indian Reserve in the Interlake area of Manitoba, involving several provincial agencies as well as a federal agency—the Fund for Rural Economic Development.

³These latter include 17 branch offices and 11 university and college placement offices.

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policy. Quebec considers manpower policy both as an instrument of social policy, to be integrated with other forms of social policy, and as an instrument of manpower planning, to be integrated with overall educational planning. On the basis of this approach, some views in Quebec favour having the Quebec bureaus take over the entire job placement function within that province. Whether these differences between Quebec and the federal government as to the strategic objectives of manpower policy can be reconciled within the present arrangements by means of more effective co-ordination, or whether they necessitate a redefining of jurisdictional responsibility, is a matter on which the Council can offer no meaningful appraisal.

The Role of the Private Sector

Government-financed programs are often criticized for providing, at the taxpayers' expense, training that might otherwise have been provided by the private sector. We have referred earlier to the reasons why government activity is presumed to be necessary, including:

- the fact that there are benefits of training activities that are external to the private gains that could be captured by either the trainee or the trainer, including special advantages to society of training certain groups, such as the disadvantaged;
- the existence of imperfections in both labour and capital markets, related in part to uncertainty; and
- the likelihood that scale economies in training exist which may make it more efficient for governments to carry out much of this activity.

The existing federal government training program and federal-provincial arrangements have been treated at some length. There is, however, very little information drawn together on the extent, nature, and costs of private training. A survey has recently been carried out for the Department of Manpower and Immigration covering the extent of training-in-industry during the 12-month period ending June 30, 1970. It included all industries except agriculture, fishing and trapping, and public administration and defence. Some type of organized training program was reported by 23 per cent of the respondents. About 500,000 trainees took part in this organized training during 1969-70 of which about half were in various types of occupational training courses. Of these latter trainees, perhaps nearly 100,000 would have been under federally or provincially financed programs of training-in-industry.

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The incidence of training programs is not, of course, uniform across industries. It is a much higher proportion than the average of 23 per cent for the finance, insurance, and real estate group of industries, and a much lower proportion for the community, business, and personal services group. For manufacturing, construction, and trade, the proportion was slightly below the average.

The type of training programs also differs widely among industries (Table 6-5). In the construction industry, close to 60 per cent of the trainees were in apprenticeship programs. In most of the service industry groups, the largest proportions of the trainees were in other occupational training programs. In primary industry and manufacturing, the largest proportions were in managerial and a considerable variety of "nonoccupational" programs—such as language, safety, and orientation courses.

TABLE 6-5—PERCENTAGE DISTRIBUTION OF INDUSTRY TRAINEES BY CATEGORY OF TRAINING, FISCAL YEAR 1969-70

Industry Group	Apprentice (Registered and Non-registered)	Other Non-manual Occupational	Managerial and Non-occupational ¹	Total
Primary	4.5	26.8	68.7	100.0
Manufacturing	2.7	33.9	63.4	100.0
Construction	58.1	16.8	25.1	100.0
Transportation, communication and other utilities . . .	2.6	54.8	42.6	100.0
Trade	2.1	55.8	42.1	100.0
Finance, insurance and real estate	0.1	69.0	30.9	100.0
Community, business and personal service	1.2	43.4	55.4	100.0
Total, all industries	2.9	45.5	51.6	100.0
(Thousands) ²				
Number of trainees	14	217	247	478

¹Includes language, safety, and orientation courses.

²These estimates have not been adjusted to take account of a small proportion of non-response.

SOURCE: Based on data from Dominion Bureau of Statistics.

An evaluation of the relative efficiency of private training in industry would require much more information than is presently available. Some of this training is conducted in a classroom on the employer's premises. Some of it is on-the-job training, with saleable output as a normal by-product of the training process. Furthermore, the

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purpose and content of the training courses vary widely. In evaluating such programs, it would be essential to have access to information on the characteristics of those being trained and the effect of the training on their productivity and earning power. Also, very little is known about the costs of the different types of industry training, including the extent to which there are economies of scale. For example, are there many industrial establishments outside of the central provinces large enough to support training programs on an efficient basis? One possible solution in the case of small-scale enterprises is the formation of training schemes by groups of firms—a practice that is coming into increasing use in some other countries, notably Britain.

It is clear that present information is not adequate to assess, on an overall basis, the efficiency of the training that is now taking place in industry. Questions arise, however, as to whether the heavy reliance on institutional training in Canada's federally supported manpower training programs has been appropriate and whether it has been displacing private activity.

SOME CONCLUDING OBSERVATIONS

The purpose of this chapter is not to provide specific recommendations concerning manpower policy or manpower training but to illustrate the possibilities of analysing policies and programs within the kind of framework set out in Chapter 5. Looking at policy within an analytical framework helps to raise pertinent and meaningful questions. This may not satisfy those who look for unique, correct, and final "solutions". Yet it is a useful aid to increasing understanding.

We began at what should be the beginning of the policy-making process—searching out the possible policy objectives. At this stage, as at every stage of the process, the question of *choice* arises. The economist can provide analytical aids to the decision-maker by demonstrating how and why, for example, manpower policy is a potentially feasible instrument for promoting growth and stability, and improving equity. But the *choice* among *objectives* (or some combination of objectives) is a *political* choice. The analyst *cannot* say the strategic objective *ought* to be this or that. The importance of the analyst at this stage of the process should not be underestimated, however. An understanding of the principle that there *are* feasible alternatives is itself an important step forward, and this understanding is important not just for the decision-makers but for the public. It is important because it underlines the idea that there are rarely,

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if ever, *unique* objectives that *must* be pursued in a given policy sphere. Moreover, where there is conflict over objectives, public understanding is improved by illuminating the fact that a disagreement over objectives involves questions of *preferences*, or *values*—that is, of *political judgment*—and not technical matters which are the monopoly of “experts”.

The choice among objectives is not the only matter of choice. A given objective (or some “mix” of objectives) may be pursued by alternative *strategies*. There are a number of different ways to pursue growth or to improve the distribution of income. But the process of scanning alternative strategies in a systematic fashion is formidably complex and, indeed, the information and analytical techniques presently available are seriously deficient. For this reason, we have had little to say in this area. It is important to note that the costs of ignoring alternatives are unknown, but so are the costs of exploring them. Thus the element of *judgment*—how far does one go in pursuing complex analytical schemes for scanning alternative strategies—must enter here as well as in the ultimate choice which reflects policy-makers’ assessments of what is appropriate or acceptable in political terms.

Several issues of significance with respect to the selection of alternative strategies have, however, emerged from this chapter. Any policy involving investment in human resources impinges on a wide range of other policies. For example, manpower policy could be viewed within a context that encompasses a range of other educational and training programs, on the one hand, and a spectrum of social policies, including income-support programs, on the other. A failure to do this will, in all probability, result in overlooking important interdependencies or spillover effects. But the institutional framework—such as the federal-provincial jurisdiction, the interdepartmental division of responsibility at both levels of government, or the overlapping of private and public training activity—may to some extent preclude this.

The real world is not ordered in a fashion designed to satisfy “efficiency experts”! Analysts have provided a jargon to cover this awkward fact. They talk of “the theory of second best” and “sub-optimization” and other such inelegant terms. What it boils down to, in effect, is that the decision-maker must exercise judgment about *feasible* alternatives, in the light of the constraints that exist in the real world. The analyst can assist by providing some information on the extent and nature of the constraints and the interdependencies,

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even though he cannot provide a single "best" solution. To take an example from the preceding analysis, very little is known about the extent and nature of privately financed manpower training in Canada. But more information on this matter is basic to developing a more effective and efficient training approach. This is particularly true if, as has already been suggested, there seem to be strong arguments in favour of strengthening the noninstitutional forms of publicly subsidized training. With our present knowledge, we do not really know whether an expansion of public expenditure on training-in-industry will act as a complement and catalyst for privately financed training or merely as a substitute for it.

There is another issue of the strategic nature that emerges from the analysis. This concerns the co-ordination of demand-management policies and manpower policy. When the economy is operating under conditions of substantial slack, most manpower shortages disappear, and occupational requirements become increasingly difficult to forecast. While there are some advantages in increasing training during periods of high unemployment (for example, costs are lower—especially forgone earnings), there are clear dangers in such an approach if the period of economic slack is of long duration. Because a slack market offers little guidance on potential job opportunities, there is a tendency to simply "absorb" workers into training programs that may not be appropriate. Upon release from such courses, these workers may face unemployment. Even if they are successful in finding jobs, they are likely to displace other workers who then become unemployed. The notion, put forth most vigorously by the OECD,¹ that it is desirable to concentrate training in periods of economic slack in order to create a "platform" of skills for the subsequent expansion may be feasible *if the period of slack is short-lived and the economy is operating close to potential most of the time*. However, when departures from potential are *substantial and persistent*, the operation of an effective and efficient manpower strategy becomes increasingly difficult. Under such conditions, some portion of the training program becomes, in effect, a form of income support. It may be considered *preferable* to transfer income in the form of training allowances rather than in some other way. However, it is at least questionable whether such training can be defended on the grounds that it improves the efficiency of the labour market.

¹This is to be seen clearly in the documentation of the Manpower and Social Affairs Committee. See especially, Gösta Rehn, "A Note on the Importance of Manpower Programmes—Exemplified by Adult Training for the Short-Term Variability of Labour Supply", Paris, 1967, mimeo.

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An important question raised by the analysis, then, is this: Can manpower policy play a contributory role in stabilization of the economy—reconciliation of the price and employment goals—and what is the nature of that role? It would appear from the preceding discussion that the setting of aggregate demand-management policies constitutes an important constraint in determining the contribution that manpower policy can make in this respect. Our original recommendations for developing manpower policy as a major instrument of government policy were predicated on the view that the economy could be maintained close to potential output.

If the economy is operating close to potential, or if departures from potential are of short duration, a manpower strategy may well be effective in anticipating and preventing the emergence of bottlenecks in the labour market, thereby reducing cost and price pressures. Further research is needed to identify likely "bottleneck occupations" before shortages emerge that could give rise to cost pressures. This argues for redirection of the present federal program, which covers a very large range of subprofessional occupations, towards a more *selective* training approach. Such an approach, focused on potential shortage or "pressure-generating" occupations, might then be more effectively combined with training the disadvantaged to fill the lower-level jobs vacated by workers who have been upgraded. Further, it might be worth exploring the possibility of operating *selectively* on the *demand* side of the market as well. Thus, as far as seasonal stabilization is concerned, the revival of such programs as municipal winter works and winter housing should be considered in formulating a more *integrated* and *selective* strategy for manpower policy.

In discussing strategic issues—choice of objectives and of policy approaches—we have stressed the importance of *judgment* facilitated by *analytical aids* that clarify and sort out basic *questions*. At the tactical or program level, systematic evaluation procedures, such as benefit-cost models, can play a more important role in providing some *answers*, albeit of a qualified and tentative nature. Where, for example, there are comparatively narrow problems of choice—among alternatives that are rather close substitutes—systematic evaluation can provide valuable information, which greatly reduces, though never eliminates, the scope for divergent judgments.

As noted earlier, the Department of Manpower and Immigration applies systematic evaluation of the manpower training program by means of a benefit-cost model, and they are to be commended for this pioneering effort in Canada. In this chapter we have pointed up some

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difficulties in assessing the results of the model, but this very fact underlines the importance of the evaluation process. In the absence of any knowledge about whether or how the training program is being evaluated, we would have had to rely on hunches and guesses and opinions, or on fragmentary, indirect, and tenuous information derived from secondary sources. The questions that were raised focus the discussion on issues of a largely technical or analytical nature within a framework of *organized evidence* provided by the model itself. For example, questions concerning the use of a control group, the estimation of third-party effects, the estimation of an "inflation" factor for wage change, the separation of employment from income effects, and the display of distributional results, are raised as matters for *further investigation* with a view to *improving* or *clarifying* the evaluation procedure and, most importantly, to increasing public understanding of the use of such procedures.

Another question, of a rather different nature from the essentially "technical" matters mentioned above, emerged from the analysis of the evaluation process. It concerned the extent to which systematic evaluation is being used for purposes of *learning feedback*. Potentially at least, a major purpose of on-going evaluation is to provide continuing guidance to the decision-maker in adapting and revising programs to enhance their effectiveness (in achieving stated objectives) and their efficiency (in improving the productive use of resources). For example, successful learning feedback should provide signals for appropriate shifts in types of training (institutional versus industry), in the composition of courses, in the "mix" of clients, in the weight of "skill" versus basic upgrading, and so forth. These shifts will be needed not only because it is improbable that the initial program would be right "on course" from the outset, but also because the economic environment and other conditions will be changing and these changes should evoke adaptive response. We fully recognize the difficulties, both institutional and informational, that impede the process of adaptive response in large programs such as the training program. We are also conscious of the fact that the present program is still a relatively new one, and that it may be too soon to expect major modifications. Nonetheless, we would underline one point. An important *raison d'être* of systematic evaluation is to encourage such adaptive response; the value of benefit-cost models or any form of systematic evaluation is very much reduced if this element is lacking.

Finally, the problem of lack of information was given special emphasis because of its importance in decision-making. Despite

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significant advance in the provision of labour market information and analysis,¹ the problems of forecasting detailed estimates of labour demand and supply are extremely complex and unlikely to be easily solved. The safest forecast is that uncertainty, because of lack of information, will continue to be pervasive. Uncertainty can be *reduced* through improved information but not *eliminated*. We believe that a continuing effort to acquire more information is worth the cost.

Another route designed to "hedge" against uncertainty is to explore the development of more flexible training methods, such as training for *job families*, rather than *specific* occupations. What is important is that *flexibility* can be a hedge against uncertainty.

¹For example, the Department of Manpower and Immigration contracted with the Dominion Bureau of Statistics to develop a major survey of labour demand—the Job Vacancy Survey—which will provide detailed estimates of job vacancies by occupation or geographic area.

Canadian Manpower Policy: Mobility

IN THE previous chapter it was pointed out that the training and retraining of adults in the labour force may facilitate the adjustment of labour markets to the process of change in a growing economy. The *geographic mobility* of workers is also an important element in this adjustment process. Indeed, in many respects, labour mobility is analogous to training. Expenditures on both training and mobility, whether financed privately or publicly, can be viewed as forms of investment in human capital since they entail the current use of resources for improving the worker's future income and employment prospects. Training involves movement across occupational boundaries, while geographic mobility involves spatial movement, from one area to another. Thus, while training may help to ensure a proper balance between the supply of labour and demand at the "occupational skill" level, mobility facilitates the "locational" matching of labour supply and demand.

In some cases, training and mobility can be looked upon as substitutes for each other. For example, if technological change threatens a worker's job, he may either undergo retraining for a different locally required skill or move to a different area where his present skill is in demand. In the case of workers with obsolete skills, in economically stagnant localities, there may be a need for both retraining and relocation. In such cases, training and mobility would complement each other. In fact, training may well enhance a worker's mobility.

Geographic imbalance in the labour market may stem from many sources. On the supply side, a relatively high rate of natural increase may cause population growth to outpace that of job opportunities in

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a region, or there may be inadequate education and training to prepare labour force members for regional manpower requirements.

Many factors may shift regional patterns of demand for labour, including:

- long-run shifts in consumer demand;
- changes in resource availability through depletions or discoveries;
- technological changes involving the development of new products, cheaper processes, or different transportation routes and modes; and
- differential rates of economic growth, industrialization, and urbanization.

The policies of federal, provincial and municipal governments are also likely to have major resource allocation implications. Indeed, it is difficult to think of any major activity of any level of government that does not, directly or indirectly, affect the spatial distribution of either capital or labour, although such effects are often neither planned nor foreseen.

For these reasons, it would be surprising if the regional pattern of future labour demand coincided with the current one, or if the manpower made available through natural increase and immigration exactly met changing manpower requirements in the various regions. But imbalances and differentials tend to give rise to corrective forces, partly in the form of interregional flows of labour and capital. A large and complex regional adjustment process is, in fact, continuously taking place. Labour *does* move from declining to expanding areas in search of better jobs and higher incomes. Wages and other costs *are*, to some limited degree, responsive to changes in economic conditions. Some industry *is* attracted to locate in lower-wage areas in order to take advantage of the lower costs of production. However, the "natural" adjustment process tends to be slow and inadequate due to a number of impediments and imperfections. Some regions may remain chronically depressed despite substantial out-migration of labour, and governmental attempts to induce an inflow of capital through subsidies, tax concessions, and other incentives.

The objectives of this chapter are modest in relation to the dimensions of the problem of regional adjustment. Since, however, labour mobility is a key element in the adjustment process and since this Review is concerned with government decision-making, particularly with respect to programs in the area of human resources, the chapter focuses on the analysis of manpower mobility within Canada and the

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role of government in this field. In particular, it deals with the federal Manpower Mobility Program and its interrelationships with certain other programs that explicitly or implicitly affect labour mobility.

This chapter consists of four parts. The first deals with the role of labour mobility in the process of regional economic adjustment and explores the rationale for government-assisted mobility in the light of the potential contribution of mobility to the achievement of economic objectives. The second deals with those governmental programs that *explicitly* affect mobility, such as the Manpower Mobility Program and the Newfoundland Resettlement Program. The third part focuses upon some governmental policies and programs that *implicitly* impinge upon mobility. The mobility process is placed in a larger framework which stresses the importance of using a "systems" approach in exploring "spillovers" or unintended effects of policies or programs. Finally, the chapter ends with some concluding remarks and suggestions.

LABOUR MOBILITY AND ECONOMIC ADJUSTMENT

Labour mobility is not desired for its own sake, but rather for its contribution to improvement in the income of employed persons and, more generally, to better economic performance. By effecting a more efficient allocation and utilization of manpower through the matching of labour supply and demand at the regional level, labour mobility may contribute to the objectives of economic growth and stability, as well as to improved equity.

Spatial relocation of labour can reduce both wastage of human resources and the constraints of manpower bottlenecks, thus facilitating *growth*. To the extent that labour mobility does, in fact, reduce labour surpluses in particular areas and relieve shortages in others, it will also contribute to the *stabilization* objective by improving both the price and employment performance of the economy.

The role that labour mobility plays in improving equity, particularly in regional terms, is difficult to predict. It depends essentially on who migrates and on the effects of their migration on income—both in the areas they leave and in the areas to which they move. Empirical evidence suggests that migrants tend to be *above average* in education and skills in relation to other residents in the originating areas and *below average* relative to the population in the receiving areas. To the extent that migration frees jobs that can be filled by unemployed or underemployed local workers, per capita income in out-migration areas would tend to rise. Further, the absorption into

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employment of underutilized and unemployed workers should reduce the downward pressures upon wages. If, however, there is no such "vacuum effect" created, out-migration may lower per capita incomes, not only because the more productive workers tend to migrate but also because a smaller population must now bear the burden of "social overhead" costs which are unlikely to be proportionately reduced.¹

In the destination areas, the incomes of the in-movers, though often higher than before, are likely to be below the average of local residents.² In-migration may, therefore, tend to reduce per capita income in such areas, unless there are indirect, offsetting factors—such as greater economies in the utilization of public services.

Just as the effects of labour mobility on regional income disparities are difficult to predict, so, too, are its effects on the distribution of income among individuals or families. Again, the outcome would depend on who moves and what happens to the movers in their new areas of residence. There is some evidence that movers *do* better themselves financially *as a consequence of moving*. Thus it is likely that migration does make a positive net contribution to total output or income, but it is less certain that it results in a reduction of income disparities among individuals or families. The latter result would be more likely if the lower-income or more disadvantaged individuals moved rather than the more skilled and educated members of the population.

Autonomous Mobility

There is a great deal of "autonomous" mobility in this country—that is, movement undertaken at the initiative and expense of the worker or his employer. In this Review, we define autonomous mobility as that which takes place without direct government financial assistance. The 1961 Census showed that almost one out of every five members of the labour force had changed their municipality of residence over the five years from 1956 to 1961. Moreover, these figures understate the actual migration flows over this period since they (a) report only the mobility of the surviving movers, and (b) ignore

¹When unemployed workers migrate, they do not, of course, free jobs for other workers. They do, however, remove some income (largely transfer payments) from the area and, hence, one tendency of such migration is to reduce total demand in the originating area. For an analysis of the "net" effect on unemployment of the migration of the unemployed, see John Vanderkamp, "The Effect of Out-Migration on Regional Employment", *Canadian Journal of Economics*, November 1970.

²J. B. Lansing and J. N. Morgan, "The Effects of Geographical Mobility on Income", *Journal of Human Resources*, vol. 2, no. 4, Fall 1967.

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multiple and return migration of workers who moved more than once, or who moved but had returned to their province or municipality of origin during the five-year period.

Studies in both Canada and other countries suggest that economic motivation is a dominant factor underlying mobility. A survey undertaken in 1965 showed that slightly over 60 per cent of the male migrants 17-64 years old had moved due to job-related reasons.¹ A large part of the "job-related" autonomous mobility was financed in whole or in part by the employer. When hiring an "out-of-town" college graduate or skilled worker, or when transferring an employee to another city, a government department or a private firm often pays the costs of moving him and his family, and frequently their household effects too. In addition, some big firms compensate the employee for the loss resulting from selling his house or cancelling an unexpired lease, and provide company-built housing in remote areas.² Some collective agreements obligate the employer to reimburse a transferred employee for moving expenses and to grant him both paid time off to look for living quarters and allowances for temporary expenses and higher living costs, and to pay a laid-off worker for his move to a location chosen by the worker.

Some new information on the mobility of male workers, by region and type of movement, is presented in Table 7-1.³ The Atlantic Region, as might be expected, has the highest interregional mobility rate and is followed by the Prairies, especially Saskatchewan and Manitoba. The low rate of outflow from Quebec is largely due to cultural and language factors, while that from Ontario is to be explained by the great range of job opportunities available in that province relative to other parts of the country. The rather high rate of interregional outflow from British Columbia may be due, in part, to the high unemployment in the Pacific Region and, in part, to return migration of workers who went to British Columbia from other provinces but were unsuccessful in their search for work.

As may be seen from column (2) of Table 7-1, movement *within* all regions is far greater than movement between regions. The rates

¹ May Nickson, *Geographic Mobility in Canada, October 1964—October 1965*, Special Labour Force Studies, No. 4, Dominion Bureau of Statistics, Cat. No. 71-508, April 1967.

²For more details, see the two research reports entitled *Company-Paid Moving Expenses* (Montreal: National Industrial Conference Board, 1959 and 1965), Canadian Studies Series, nos. 3 and 8.

³Derived from a sample of males who filed income tax returns in both 1968 and 1969 and whose locality of residence could be identified in both years. The estimates of mobility based on these data may differ somewhat from those derived from a more comprehensive population.

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within regions should be regarded with some caution because the area units on which they are based vary in size and population density from region to region. Nonetheless, the comparison between the *inter*-regional and *intra*regional movement by region reveals some interesting facts. For example, Quebec has a low ratio of interregional to intra-regional migration because the factors that tend to discourage movement *out* of the province—language and cultural barriers—do not operate as strongly *within* the province. The richer provinces—Ontario and British Columbia—also tend to have low ratios because there is frequently less to be gained, in income terms, by moving to another region than by moving within the province. This is especially true of Ontario, both because of its size and because of the concentration of industrial activity in that province. For the smaller provinces, and for those with lower average incomes, the economic advantage appears to lie in the opposite direction; there may be more to be gained by moving outside the region than within it. Such factors seem to be reflected in the relatively high ratios for both the Atlantic and Prairie Regions.

TABLE 7-1—INTERREGIONAL AND INTRAREGIONAL MOBILITY RATES¹, 1968-1969

Region	Mobility Rates			Inter/ Intra Ratio	Inter- regional Movers as Percentage of Total Movers
	Inter- regional	Intra- regional	Both Types		
	(1)	(2)	(3)	(4) = (1) ÷ (2)	(5)
Atlantic.....	2.0	7.1	9.1	.28	21.5
Quebec.....	1.0	6.7	7.7	.15	12.4
Ontario.....	0.9	6.8	7.7	.13	12.0
Prairies.....	1.6	7.4	9.0	.22	17.6
British Columbia.....	1.5	10.1	11.6	.15	13.1
All Regions.....	1.2	7.3	8.5	.16	14.1

¹Number of males filing income tax returns who were resident in region in April 1968 but not in April 1969 as percentage of total males who filed income tax returns.

SOURCE: Estimates by Economic Council of Canada based on data from Unemployment Insurance Commission.

While interregional migration represents only a small part of the total volume of movement in Canada (only about one out of every seven movers for the country as a whole), it is of some interest to

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examine the direction of these flows. This information is shown in Table 7-2. A good deal of the movement is into contiguous regions, and most of the flows are from high-unemployment, low-income regions into high-income, more buoyant areas. Thus close to two-thirds of out-migrants from the Atlantic Region and from Quebec go to Ontario. Alberta receives nearly two-fifths of the flow of workers from Manitoba and Saskatchewan, while British Columbia receives close to one-third of this outflow. There appears to be a very substantial exchange of population between Alberta and British Columbia; over half of the workers who leave Alberta go to the West Coast, while over 40 per cent of those leaving British Columbia go to Alberta. An interesting point that emerges from the table is the large proportion (53 per cent) of the out-movers from Ontario destined for the Atlantic Region and Quebec. This is largely return migration—that is, workers who originally moved from the latter regions to Ontario and who, for a variety of reasons, decided to move back again.

Finally, as Table 7-2 shows, gross flows in both directions across regional borders are very much larger than net migration. The last line of the table summarizes the net interregional movement and shows that British Columbia ranks first among regions of net inflow, followed by Alberta and Ontario. The other two Prairie Provinces experience the largest net outflow, followed by Quebec and the Atlantic Region.

While it seems clear, both from these data and many other studies, that the search for economic betterment is a primary influence in the decision to migrate, the question still remains as to what are the economic consequences of mobility upon the migrant. For the period 1965 to 1968, estimates show that the increase in annual income was greater for workers who moved interprovincially than for those who moved within a province (except in Ontario, where intraprovincial movers did better than interprovincial migrants), and that both types of movers improved their incomes more than did those workers who remained in their original area of residence.¹ This makes sense on economic grounds since moving is not costless, involving as it does both monetary and other costs—lifelong family and community ties are affected in the process of moving. Both types of cost increase with distance. Thus, if longer moves are undertaken, monetary returns should be higher to compensate for the extra costs.

¹See Thomas J. Courchene, *Migration, Employment, and Income*, Economic Council of Canada Special Study No. 20 (Ottawa: Information Canada, forthcoming).

TABLE 7-2—INTERREGIONAL MOBILITY¹, 1968-1969

Region of Origin	Region of Destination					Total Out-Movers (Number)		
	Atlantic	Que.	Ont.	Man./ Sask.	Alta.		B.C.	
(Per cent) ²								
Atlantic.....	—	18.8	66.2	1.9	5.6	7.5	100	8,940
Quebec.....	12.1	—	65.9	5.2	6.0	10.8	100	13,912
Ontario.....	25.9	26.8	—	15.3	10.1	21.9	100	20,453
Manitoba/Saskatchewan.....	2.4	2.8	24.7	—	37.7	32.4	100	13,808
Alberta.....	1.9	4.3	11.8	26.1	—	55.9	100	9,000
British Columbia.....	1.9	9.4	24.5	22.7	41.5	—	100	8,887
Total In-Movers.....	7,657	8,775	21,743	(Number)	12,292	16,148		75,000
Net In-Movers (+) or Out-Movers (-)...	-1,283	-5,137	+1,290	-5,423	+3,292	+7,261		

¹Based on males who filed income tax returns.²Proportion of interregional movers resident in region of origin in April 1968 who had moved to region of destination by April 1969.

Source: Estimates by Economic Council of Canada based on data from Unemployment Insurance Commission.

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This evidence, while suggestive, is by no means conclusive. For example, the same data reveal that there is a substantial amount of return migration among workers who move interprovincially. Those who remain in the new area apparently do very well, but those who return, say, from Ontario to the Maritime Provinces appear to be worse off than if they had stayed in their province of origin. A more thorough analysis of the economic returns to migration would have to take into account the effects of return flows and other types of multiple moves. For this purpose, more longitudinal data—"economic life histories"—are required from samples of migrants and nonmigrants.

Another interesting fact emerges from these data. The monetary *returns* to migration appear to be high even for older workers (over 45) who are in the lowest income group (annual income under \$3,000). But the *mobility rate* for this group is very low (about one-third that of younger workers). A partial explanation may be that the income of these older workers simply does not provide adequate resources to undertake a move. One implication is that government assistance may be appropriate to permit a greater number of persons in the middle- and older-age groups of the poorer segment of the population to take advantage of the benefits that may arise from migration. Further, regardless of age, migration is found to yield higher monetary benefits to the low-income than to the middle- and high-income groups. If government assistance were to be directed to this group, there would be a greater probability of more favourable equity effects.

Why Assisted Mobility?

While people move for a variety of reasons, economic motives are of primary importance. The desire to obtain more remunerative and stable employment *pushes* people out of lagging areas and *pulls* them into expanding regions.

But there are many barriers to movement. For some, it is difficult to leave their community because of social and family ties, including educational attachments of children. Income gains may not be sufficient to outweigh the importance of familiar surroundings. This is a matter of taste, and tastes vary; the higher mobility rates of the young reflect a difference in preferences as well, of course, as differences in economic returns. (The benefits to be derived from an improved earning position are more attractive to the young because they will accrue over a longer period.)

Quite apart from preferences, an important barrier to movement is the actual *cost* of the move. These costs include not only forgone

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earnings, travel and removal expenses, but also, in many instances, a capital loss incurred in selling a house. The cost will be higher, the farther the move and the larger the family.

Because a decision to pull up one's roots and move to a new area is such an important and complex decision for most people, *information* about the area of destination is essential. Lack of adequate information—about jobs, housing, social conditions, schools and a host of other matters—will certainly increase the reluctance to move. Further, movement is risky under the best of conditions. There is a large subjective element in any individual's estimation of risk. An older, poorer, less educated worker is likely to overestimate risk and this will probably make him less mobile. Uncertainty due to lack of information will increase the individual's assessment of the risk involved, perhaps beyond what the objective conditions justify. The inhibiting effects on mobility of both uncertainty and risk aversion are likely to be greater, the more disadvantaged is the worker.

These and other barriers to movement suggest that there may be less autonomous mobility in the economy at any given time than would be desirable on grounds of economic efficiency. This raises the question as to whether some government assistance to facilitate movement may be appropriate.

When the decision not to move is purely a matter of individual preference, the question of economic efficiency is not applicable. But when potentially mobile workers are unable to raise the necessary funds to finance the move—as is often the case among lower-income workers, the unemployed, and family heads with dependants—a government loan or grant may provide them with the opportunity to improve their standard of living in a new area with better job opportunities.

Further, there is an obvious need for better information. This could even take the form—as it does under the Manpower Mobility Program—of “exploratory” grants, which permit the worker to visit the new area and secure the information himself. Such information should reduce the uncertainty barriers to movement and may help the worker to reassess the risk in a more objective fashion.

Finally, as was the case with training, the benefits of migration may accrue to third parties as well as to the individual migrants and their families. In other words, “externalities” may be involved. For example, migrants tend to send back information and financial assistance to relatives and friends and thus, as many studies show, migration may have a “snowball” effect, inducing further migration that may benefit a growing number of people.

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Also, some private employers may not be willing to finance the transfer of recruits because they fear they will not be able to retain them long enough to recoup the costs. The problem of attracting and holding skilled and professional workers is particularly acute in remote areas of Canada where new developments are taking place in resource-based industries. Many employers are reluctant to undertake the costs of moving workers, not only because of the high transfer expenses but also because of very high turnover. The latter stems from a variety of factors, but mainly because such areas often lack the social and cultural amenities that are of increasing importance in an urban society. This problem, which is also prominent in other countries with remote resource development activities, merits special attention, although we have not been able to examine it here.

FEDERAL PROGRAMS FOR ASSISTING MOBILITY

The preceding discussion suggests that there is some scope for public subsidization of movement of individuals and families on efficiency grounds, particularly if subsidies are directed to workers who are least likely or least able to move of their own accord. Presently available information and analysis provides little guidance as to the "optimal" size of an assisted mobility program. In any case, political considerations are of such importance in matters concerning population distribution among the provinces in Canada that any program involving large-scale subsidization of interprovincial migration is unlikely to be acceptable.

The Manpower Mobility Program of the Department of Manpower and Immigration is a small program in terms of expenditure or persons moved, or in relation to the natural migration in this country or, indeed, in comparison with the training program. The only other federal program directed towards assisting the movement of people is the Newfoundland Resettlement Program of the Department of Regional Economic Expansion. It is limited in scope, being confined to one province, and specifically precludes interprovincial outflow. Our chief concern in this section is with the Manpower Mobility Program, but a brief description of the Newfoundland Resettlement Program is also included.

The Manpower Mobility Program

The current subsidy program was initiated in April 1967 along lines suggested in our *Second Annual Review* in 1965, after an earlier

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program, more heavily oriented to loans than grants, proved unsuccessful.¹ As is the case with the adult training program, the approach is strongly growth-oriented, the objective being to "contribute to increased GNP and accelerated economic growth by more efficiently allocating the economy's stock of human resources to areas of higher productivity".²

Under the present program, any worker 18 years or older who is (a) unemployed, (b) underemployed, or (c) about to become unemployed, is eligible for mobility grants.³ There are three types of grants available. *Trainee travel* grants are paid to a person "to assist him in attending an occupational training course...not given within the locality in which the person resides". *Exploratory* grants are authorized to a worker "to assist him in seeking suitable employment in the closest area...in which there is...a good prospect of the worker's obtaining suitable employment". Workers who receive exploratory grants also receive living allowances and subsistence allowances for their dependants that vary from province to province. The worker can obtain one or more exploratory grants for job-seeking in areas with good prospects for employment, and a relocation grant once a job has been found.

The *relocation* grant is for the purpose of enabling the worker and his family to move to the new area of employment and re-establish themselves there. It covers the following items:

- (1) The transportation expense, by the most economical means, of the worker and his family, including meals and necessary overnight accommodation; and the cost of moving their household effects.
- (2) A re-establishment allowance of up to \$1,000 made over a six-month period (\$100 for the worker with no dependants, \$100

¹In December 1965 a program was initiated by the Department of Labour to provide relocation grants mainly to "long-term" unemployed workers, and loans to the short-term unemployed and those laid off. For a variety of reasons, response to the program was disappointing; during a 16-month period less than 1,500 workers moved with grants and 1,300 with loans. When the current program was initiated, loans were forgiven and other changes were introduced in an effort to improve the effectiveness of the program.

²R. A. Jenness, "Manpower Mobility Programs", in G. Somers and W. Wood (eds.), *Cost-Benefit Analysis of Manpower Policies* (Kingston: Queen's University Industrial Relations Centre, 1969), p. 192.

³An underemployed worker is one who is working less than 30 hours per week or in a job where his main skill is not being used. The worker who is "about to become unemployed" has received written notice of his permanent layoff.

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for the first dependant, \$200 for each of the second and third dependants, and \$100 for any further dependants up to a maximum of four).

- (3) A home-owner's allowance of up to \$1,500—\$1,000 paid when the worker sells his home and \$500 if he buys a new one within 12 months after moving to the new locality.¹

Total expenditure under the Manpower Mobility Program has risen from \$3.1 million in fiscal year 1967-68 to \$7.2 million in 1970-71. But in the latter year, it represented less than 2 per cent of the expenditures on manpower training. Chart 7-1 shows that close to 60 per cent of the expenditure was devoted to relocation grants, and close to 40 per cent for trainee travel grants (a proportion that is very much higher than in the earlier years of the program).

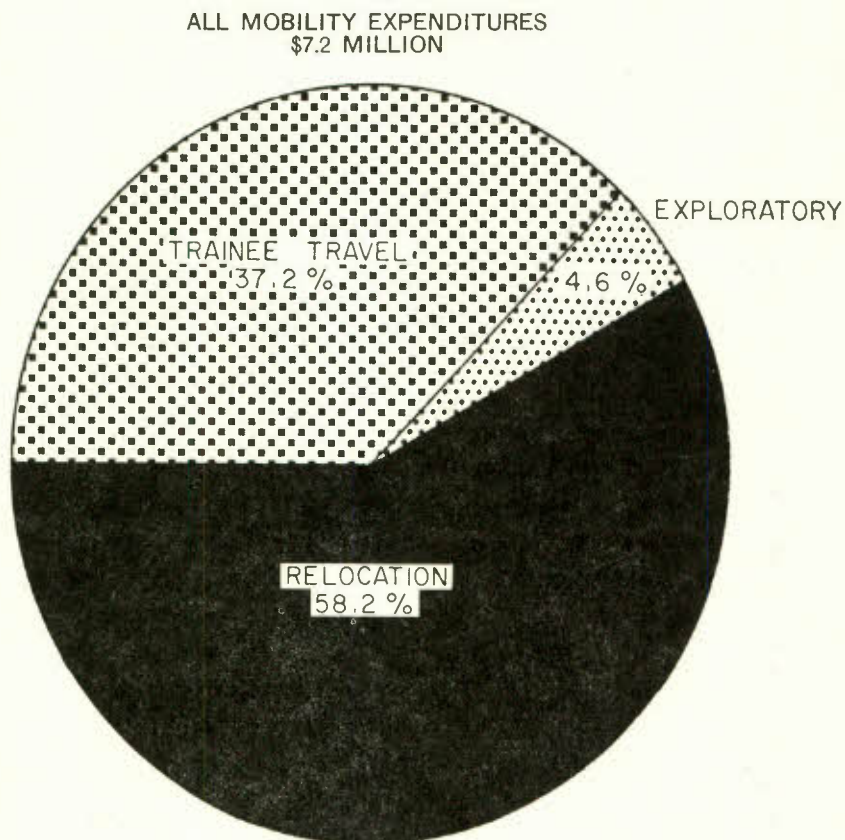
In fiscal year 1970-71, less than 6,500 workers received relocation grants under the program. This was well under 2 per cent of the unemployed in that year, and was only about 1 per cent of persons who moved without government assistance.²

Further perspective on the program can be gained from comparisons between assisted and autonomous movers. As indicated in Chart 7-2, the most marked differences are that the assisted movers tend to be younger, predominantly male, and far more concentrated among the unemployed (because of the eligibility requirements of the program). A larger proportion of assisted than autonomous movers have some or complete secondary education while smaller proportions are in the primary and university categories. As for weekly earnings, over half the assisted movers were in the middle-income category—a larger proportion than that for autonomous movers. The overall impression derived from this admittedly rough comparison is that the assisted mover is not particularly disadvantaged in terms of labour market characteristics. Nevertheless, for the three-fiscal-year period 1967-68 to 1969-70, almost 30 per cent of workers who received relocation grants were earning less than \$3,000 before moving.

¹A grant may also be authorized to the worker covering the cost of a pre-hire medical examination when required by the employer. Immigrants are eligible for all types of grants but cannot receive the re-establishment and home-owner allowances until they have resided in Canada at least 12 months.

²Most of the data on autonomous movers used in this section are derived from a sample of males filing income tax returns. A full description of the data will be found in the forthcoming Special Study by Thomas J. Courchene. Since only 6 per cent of the assisted movers are females, the use of males only for autonomous movers is not likely to affect very much the comparisons shown in Chart 7-2.

CHART 7-1
PERCENTAGE DISTRIBUTION OF MOBILITY
EXPENDITURES, BY TYPE, FISCAL YEAR 1970-71

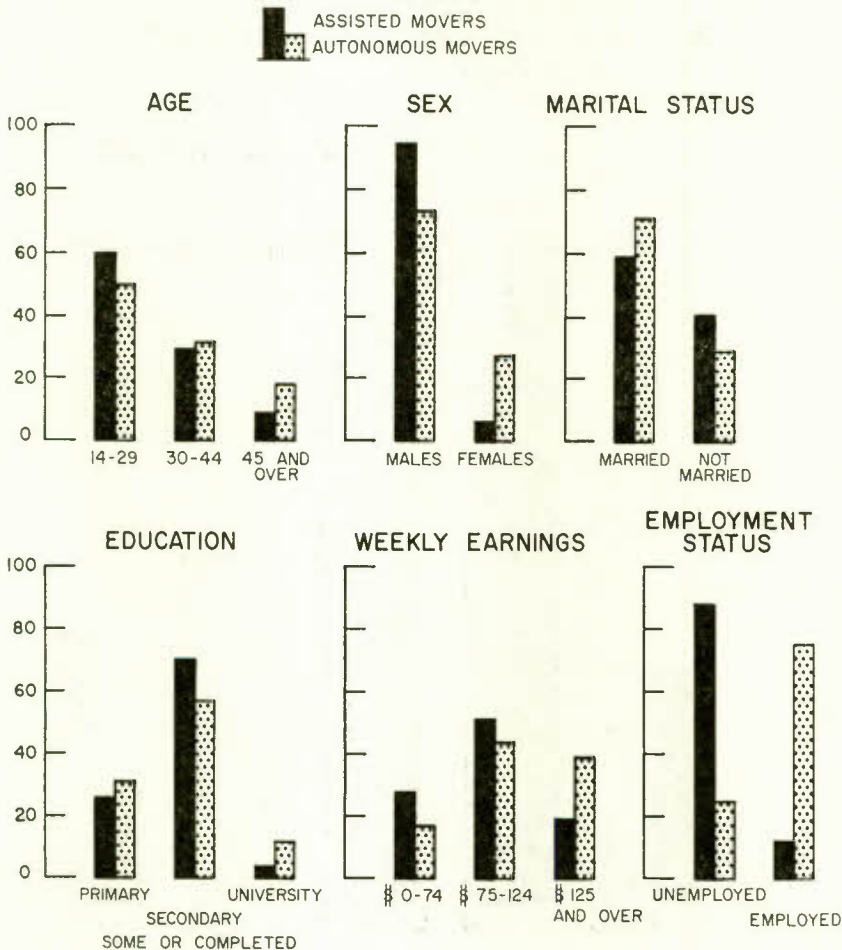


Source: Based on data from Department of Manpower and Immigration.

As was indicated earlier, autonomous mobility is highest in British Columbia and lowest in Quebec and Ontario. Chart 7-3 indicates that the Mobility Program tends to complement autonomous mobility in regions where it is low, or where unemployment is exceptionally high. Thus Ontario, Quebec, and the Atlantic Region have proportionately more assisted movers than autonomous movers—for example, 34 per cent compared with 24 per cent for Quebec—while the opposite is true for British Columbia and the Prairies.

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CHART 7-2
PERCENTAGE DISTRIBUTION OF ASSISTED AND
AUTONOMOUS MOVERS, BY SELECTED
CHARACTERISTICS*



*Data on assisted movers are for fiscal years 1967-68 to 1969-70. The "sex" and "education" distributions of autonomous movers refer to labour force migrants between 1956 and 1961. The other distributions refer to males who filed income tax returns in both 1967 and 1968.

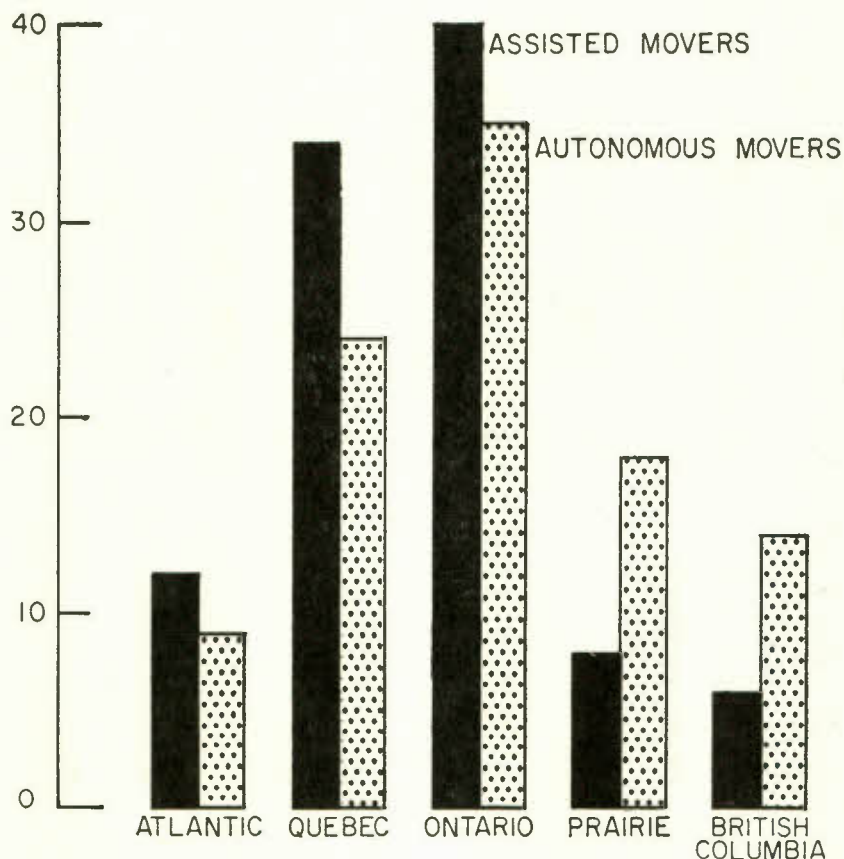
Source: Based on data from Department of Manpower and Immigration, 1961 Census of Canada, and Unemployment Insurance Commission.

In Chart 7-4, the incidence of unemployment is taken into consideration by charting the relocation grants authorized per 1,000 unemployed workers. Such grants are highest in Ontario, followed by the

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Atlantic Region. They are below the Canadian level in Quebec, the Prairies, and especially in British Columbia.¹

CHART 7-3
PERCENTAGE DISTRIBUTION OF
ASSISTED AND AUTONOMOUS MOVERS,
BY REGION OF ORIGIN*



*Data on assisted movers are for fiscal years 1967-68 to 1969-70. Data on autonomous movers refer to males who filed income tax returns in both 1967 and 1968.

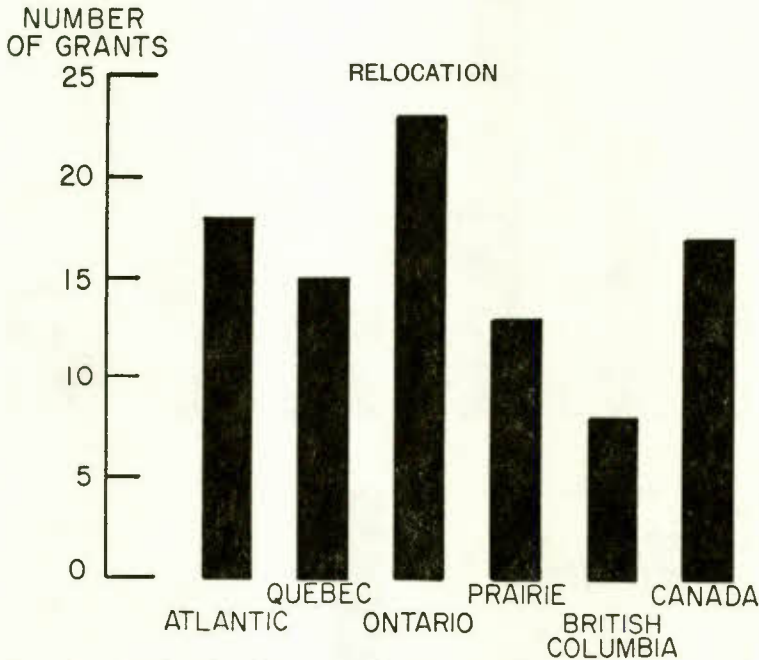
Source: Based on data from Department of Manpower and Immigration, and Unemployment Insurance Commission.

¹The "grants per 1,000 unemployed" ratio varies among provinces within each region. Prince Edward Island, Nova Scotia, and New Brunswick have ratios substantially below that of Canada, while Newfoundland has a ratio much above the national one. In the Prairies, Saskatchewan has a ratio higher than that of Canada, while Manitoba and Alberta have ratios below it.

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CHART 7-4

RELOCATION GRANTS PER 1,000
UNEMPLOYED WORKERS, BY REGION,
AVERAGE OF FISCAL YEARS 1967-68 to 1969-70

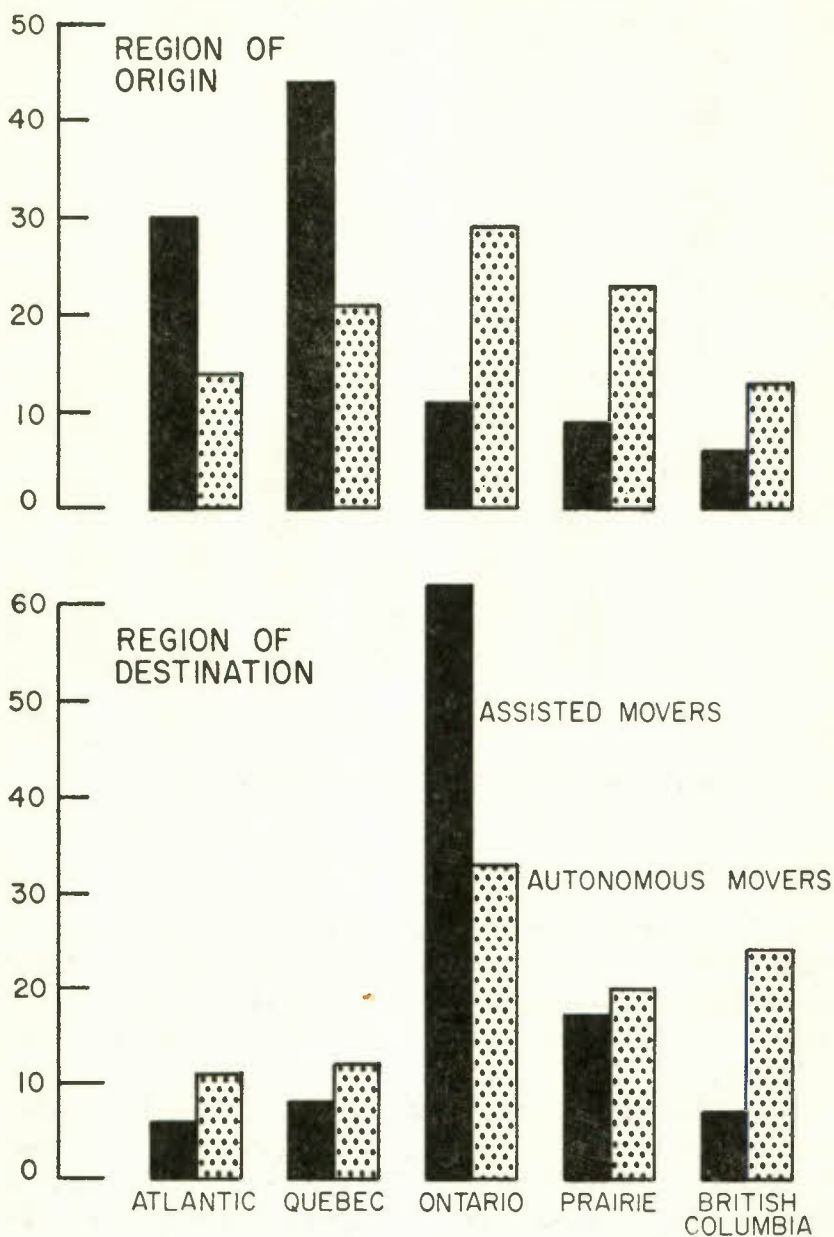


Source: Based on data from Department of Manpower and Immigration.

As shown earlier, most *autonomous* movement in this country is *intraregional*. The same is true of assisted movement. Only 14 per cent of the autonomous movers and 16 per cent of the assisted movers cross regional boundaries. The direction of these interregional flows is shown in Chart 7-5.

Chart 7-5 shows that proportionately more of assisted than autonomous movers leave the Atlantic Region and Quebec. While many of the former go to Ontario, relatively fewer go to British Columbia. It therefore appears that the Mobility Program largely complements the natural migration stream flowing out of the Atlantic Region and Quebec into Ontario, but rather less so, the other stream into Alberta and British Columbia.

CHART 7-5
 PERCENTAGE DISTRIBUTION OF ASSISTED AND
 AUTONOMOUS INTERREGIONAL MOVERS,
 BY REGION OF ORIGIN AND DESTINATION*



*Data on assisted movers are for fiscal years 1967-68 to 1969-70. Data on autonomous movers refer to males who filed income tax returns in both 1967 and 1968.

Source: Based on data from Department of Manpower and Immigration and Unemployment Insurance Commission.

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Program Evaluation

As was the case with adult training, the Department has constructed a benefit-cost model to evaluate the impact of assisted mobility. The model has a number of ingenious features and represents an admirable effort to capture many of the complexities of mobility decisions from the vantage point of investment in human resources. For example, the family, and not merely the breadwinner, is taken as the appropriate unit of analysis. Further, the benefits consist of the present value of the differential earnings of the worker *and his wife and children* in the destination area. The differential earnings for each depend upon the expected length of employment in the first and subsequent jobs, the wage differential over the origin area, the age and remaining work life. A proportion of differential earnings determined by the probability that the worker *would have moved autonomously* without the relocation grant is subtracted from the benefits attributable to the Mobility Program.¹

The direct costs of the program include the exploratory grants, the relocation grants covering the travel and household removal expenditures, and the re-establishment and home-owner's allowances, plus some *pro rata* share of departmental overhead costs. Then, benefit-cost ratios are obtained for individual relocated workers or groups by dividing the benefits to be derived from relocation by the costs incurred. As was the case with the adult training model, the evaluation is based on a before/after mobility comparison and not on a with/without mobility analysis. The latter approach would involve monitoring a control group in the originating area and would, in our view, be worth exploring.

The Department has stressed that the evaluation procedure—the design of the model and the data collection process—are strongly oriented to “learning feedback”—that is, to indicating which jobs or destination areas provide the highest returns, what workers need mobility assistance, and who among them can be relocated successfully. Such information feedback, in fact, has led Manpower officials to tilt the Mobility Program “in favour of older married workers with large families because they are the ones least likely to move on their own and most likely to settle successfully afterwards”, and to be

¹Jenness, *op. cit.* Submodels for estimating (1) the expected tenure of workers in Canadian industry, (2) the “personality coefficient” for indicating successful relocation, and (3) the autonomous mobility coefficient, were developed for these purposes.

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cautious in "authorizing relocations to...high turnover areas".¹ Both these developments accord with the Council's findings concerning the benefits accruing to older workers and the serious effects of return migration.

The Economic Impact of the Program

Data on earnings before and after moving, received from the Department of Manpower and Immigration, indicate that during the fiscal years 1967-68 through 1969-70, mobility enabled the average assisted mover to increase his annual earnings by about \$540 or 12 per cent. Such a mover cost the Department some \$625 (consisting of \$35 in exploratory grant, \$545 in relocation grant, and an administrative cost of \$45). Thus, by working 14 months, the worker's differential earnings would be sufficient to offset the monetary costs of moving and resettlement.

A simple and crude benefit-cost ratio for individuals, though not families, moving under the Mobility Program can easily be estimated for illustrative purposes. Assuming a time horizon of five years over which benefits will accrue to the assisted mover, using a discount rate of 10 per cent, and concentrating on the individual worker rather than on the whole family, the present value of the differential earnings is estimated at \$2,020. Dividing this by the \$625 incurred in costs by the Department yields a benefit-cost ratio of over 3. However, follow-up studies undertaken six to nine months after the move suggest that one out of every three assisted movers had either returned home, become unemployed, or left his job and his whereabouts were unknown. When these unsuccessful relocations are taken into consideration, a benefit-cost ratio of about 2.5 would be a more realistic estimate. In spite of the difficulties in the benefit-cost approach, which were outlined in earlier chapters, it would appear that the Mobility Program does contribute to improved economic efficiency.

In line with our emphasis on the importance of displaying distributional effects as an essential part of the systematic evaluation process, the net transfers of workers and funds² among the various

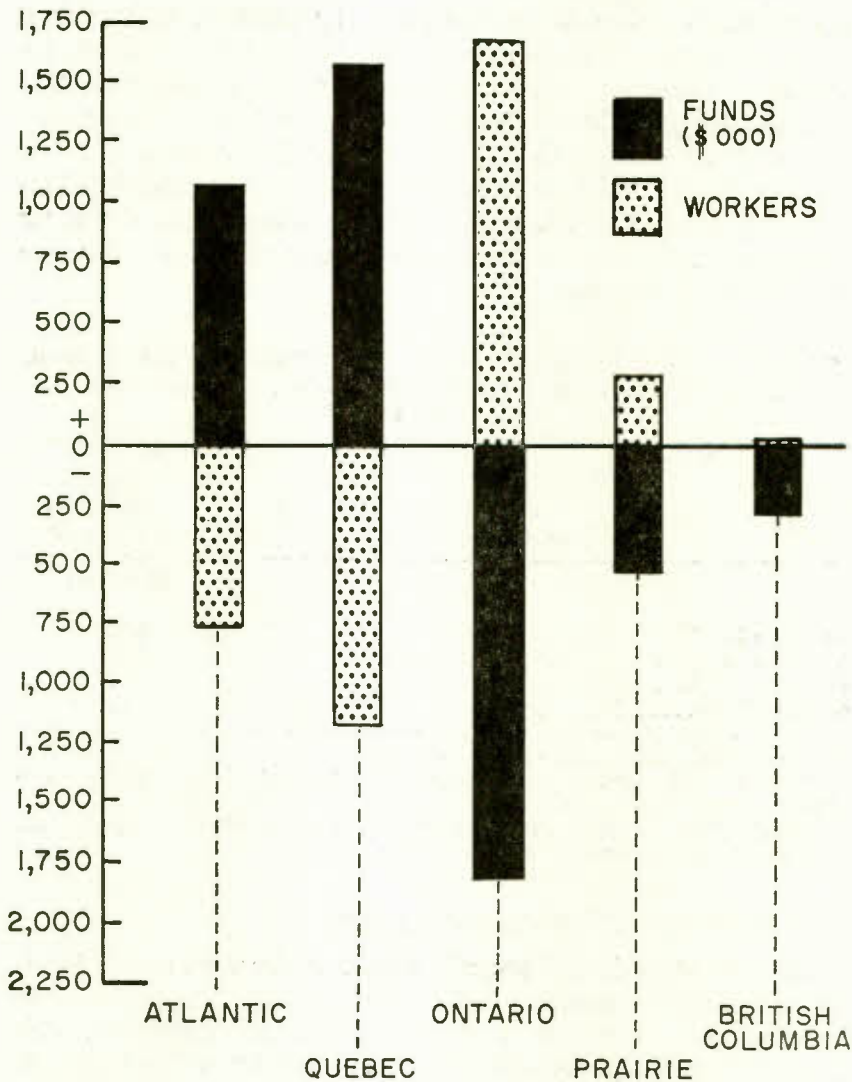
¹W. Dymond, "The Role of Benefit/Cost Analysis in Formulating Manpower Policy", in G. Somers and W. Wood (eds.), *Cost-Benefit Analysis of Manpower Policies* (Kingston: Queen's University Industrial Relations Centre, 1969).

²A full explanation of the estimation procedures used for such calculations will be published in a forthcoming study by D. M. Paproski and J. Cousin, *The Incidence of Selected Taxes, by Province and Income Groups*, for the Economic Council of Canada, mimeo.

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CHART 7-6

NET TRANSFERS OF FUNDS AND WORKERS
UNDER THE MOBILITY PROGRAM, BY REGION,
FISCAL YEARS 1967-68 to 1969-70



Note: Net transfers of funds exclude subsidies in the form of travel grants to trainees.

Source: Economic Council of Canada estimates based on data from Department of Manpower and Immigration and Department of National Revenue.

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regions as a result of the Mobility Program are shown in Chart 7-6. In terms of net flows of workers, about 800 have moved out of the Atlantic Region (especially Newfoundland and Nova Scotia) and about 1,200 out of Quebec. Ontario is the predominant area of net in-movement.

In terms of funds, assisted out-movers from the Atlantic Region are subsidized to the extent of \$1.1 million by taxpayers in the regions of net in-movement. In the case of Quebec's assisted out-movers, the subsidy is about \$1.6 million. Ontario taxpayers are paying a \$1.8 million subsidy to the assisted in-movers, those in the Prairies, \$0.5 million, and the British Columbians, less than \$0.3 million.

Table 7-3 shows the net transfer of funds under the Mobility Program, by selected income groups. Positive transfers are shown for those earning less than \$6,000, and these are largely derived from the highest income categories.

TABLE 7-3—NET TRANSFERS OF FUNDS UNDER THE MANPOWER MOBILITY PROGRAM, BY INCOME CLASS, FISCAL YEARS 1967-68 TO 1969-70¹

Income Class	Net Transfers Received (+) or Paid (-) ²
	(\$ million)
Less than \$3,000.....	+2.6
3,000 — 5,999.....	+4.1
6,000 — 8,999.....	-1.1
9,000 and over.....	-5.6

¹Excluding \$1.7 million paid in trainee travel grants.

²The net transfers of each income class are calculated by deducting the contributions to mobility funds through taxes from mobility expenditures on assisted movers.

Source: Economic Council estimates based on data from Department of Manpower and Immigration and Department of National Revenue.

The Newfoundland Resettlement Program

The only other federal program explicitly directed towards facilitating manpower movement is the Newfoundland Resettlement Program of the Department of Regional Economic Expansion. This program helps people to move out of designated "sending communities" and resettle in approved "receiving communities" that are predicted to have a good growth potential. The "sending communities" fall into two categories: the "designated outports", and the "other

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isolated sending communities". A "designated outpost" is a community that has submitted a petition for resettlement from not less than 80 per cent of its householders. In the "other" category, at least 15 per cent of the population of a locality in major isolation, or 20 per cent of that of a locality in intermediate isolation, as it existed five years before, must have moved or indicated in writing their wish to move.¹

The "receiving communities" also fall into two categories: the "special areas" and the "approved receiving centres". There are eight "special areas" in Newfoundland that are considered to be the most rapidly growing areas in the province and receive assistance for developing adequate infrastructure from the Department of Regional Economic Expansion. In addition, a number of scattered "resource development" centres and service towns have been accepted as "approved receiving centres" on the basis of a set of criteria recommended by a federal-provincial Joint Planning Committee, covering such matters as the employment situation, educational facilities, health services, accommodation, and community services.

Any householder moving out of a sending community and into a receiving community is eligible for resettlement assistance. This assistance covers travel expenses, removal costs, a relocation grant and a grant for land purchase in the new area. While the provincial government administers the Program (and bears its administrative costs), the federal government covers almost all the costs of the resettlement assistance.

The First Resettlement Program was operated by the Department of Fisheries from April 1965 to March 1970. Under this program, 3,250 households were moved at a total federal expenditure of \$5 million. The average federal subsidy per household moved was about \$1,500—far larger than the average grant for Newfoundland under the Manpower Program (\$700). The Second Program began in April 1970, under the Department of Regional Economic Expansion, and will last for five years. A sum of \$2.5 million was appropriated for it in the fiscal year 1970-71. This is rather large compared with \$0.3 million spent under the Manpower Mobility Program during fiscal year 1969-70.

There are further differences between the Resettlement and Manpower Mobility Programs. The latter program, unlike the first, provides mobility assistance to movers between various parts of the

¹The 15 per cent and 20 per cent requirements are waived on compassionate and social grounds in the case of widows and handicapped or incapacitated persons "moving to improved circumstances".

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province, not just between the sending and receiving communities, as well as to interprovincial movers out of and into Newfoundland. Of the assisted movers in the province during the three fiscal years 1967-68 to 1969-70, 30 per cent (or 390 persons) chose to go to other provinces. Further, the Mobility Program is entirely oriented to workers, while the resettlement assistance may be authorized, on compassionate and humanitarian grounds, to people who are not in the labour force such as widows and incapacitated persons. It appears, then, that the Resettlement Program is rather less strictly economic in orientation and more broadly social in its approach than is the Manpower Mobility Program.

IMPLICIT MOBILITY POLICIES

The Manpower Mobility Program and the Newfoundland Resettlement Program are programs *explicitly* directed to assisting geographic mobility. So, too, are the proposed changes in the tax structure, that would exempt all moving expenses from personal income taxation, and would permit tax-free living allowances at distant work sites. In an important sense, the provision of job market information through the Canada Manpower Centres should also be included as a "mobility" program if this information facilitates movement of workers that might not otherwise have occurred. In a sense, too, immigration policy is a mobility policy. To the extent that excess demand for labour is satisfied by flows of workers from outside Canada, there will be less geographic relocation of the domestic labour force. One approach, then, to assessing the influence of government policy on manpower movement would simply be to analyse and evaluate these *explicit* mobility programs.

However, such an approach would be inadequate. Since labour is a factor of production, any policy of any level of government that affects the demand for, and/or supply of, productive factors will, in all likelihood, generate economic forces that affect labour force migration. Quite clearly, this includes virtually every government tax and expenditure policy, and many of the regulatory functions as well. Given the size and scope of these policies at all levels of government, it is obvious that the influences on labour mobility of these *implicit* policies are likely to be far greater than those of the much smaller programs *explicitly* directed towards affecting the decision to migrate. The latter are "mere digressions" when compared with the undoubted mobility impact of the former.

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It was argued in Chapter 5 that a *systems* framework, which attempts to set specific decisions within a more general context, will encourage a mode of thought that seeks out major, and sometimes hidden, consequences of choosing among alternative objectives, policies, and programs. It is perhaps not very helpful to assert that virtually all activities of all levels of government affect the spatial distribution of population in this country. This is the familiar proposition, dear to economists, that everything affects everything else. But, fortunately, some relationships are stronger than others. The systems approach predisposes the analyst to the *expectation* that relationships exist and that it is important at least to try to identify the probably major "spillovers" between, and among, policy areas. By exposing the effects of, say, some of the major government expenditures or transfer programs on the mobility of labour, the acceptance—or rejection—of these effects or desired modifications in programs can be made as a result of a *conscious* decision in the light of fuller information.

In the remainder of this section we can do little more than provide some illustrative examples of "policy spillovers" in the general area of manpower migration. Clearly, what is needed is more rigorous analysis that attempts to *quantify* some of the relationships suggested here. We hope that such analysis will be pursued in the future, by ourselves or others, and that the data required to undertake such studies will be developed and made available.

A long list of instances of "policy spillover" might have been provided to illustrate the point that *implicit* mobility policy is likely more important than *explicit* policy in influencing the spatial distribution of the labour force in this country. We have selected two examples—demand-management policy and federal government transfer programs. Others that might have been chosen are: regional development policy, commercial policy, transportation policy, housing policy, tax policy, and occupational licensing arrangements. Their exclusion is not based on an assessment of their relative importance in affecting mobility, for that is unknown, but only in the interest of brevity of illustrative presentation.

Demand-Management Policies

Evidence from a number of studies in different countries suggests that the overall level of economic activity has an important influence on geographic mobility. When unemployment is high, both the extent

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and nature of geographic movement is adversely affected.¹ While it appears that, *at any given time*, the mobility rates of the unemployed are higher than those of the employed, an increase in the general level of unemployment tends to:

- depress the mobility rates of both the employed and unemployed;
- reduce the average distance of the move;
- lead to a significant amount of “perverse” movement in the form of return migration to lagging areas.

Thus, during periods of high unemployment, individuals and families are, on the average, less able to bear the costs of movement, and they face greater uncertainty regarding prospects in unfamiliar areas.

While the empirical evidence on the precise magnitude of these effects is open to some question because the available data base is inadequate, there is little doubt that the impact of the overall level of economic activity on the quantity and “quality” of *autonomous* mobility is substantial. If the objective of the federal government’s *assisted* mobility program is to facilitate the economy’s adjustment process, it is unlikely to be effective when the economic environment is such that the far more important *implicit* mobility effects of demand-management policy are operating in the opposite direction.

This situation is closely analogous to that of the manpower training program described in Chapter 6. In the most general terms, the “natural” adjustment processes of the economy are seriously impeded when overall economic performance is poor. Programs, such as for training and mobility, that are directed towards *facilitating* these adjustment processes will not only be “swamped” by countervailing pressures that retard the adjustment process, but will themselves be rendered less effective because of the inhospitable economic environment. In an economy operating close to potential, however, manpower shortages and potential production bottlenecks will emerge in particular markets. Under these conditions, a manpower mobility program can contribute to better economic performance by assisting the movement of workers with requisite skills from surplus labour markets to markets where demand pressures are strong. Indeed, the effectiveness with which such a program helps to perform this task is a critical

¹For Canadian data, see John Vanderkamp, “Interregional Mobility in Canada: A Study of the Time Pattern of Migration”, *Canadian Journal of Economics*, August 1968. The underlying reasons for the negative relationship are a matter of some dispute, however. See Thomas J. Courchene, “Interprovincial Migration and Economic Adjustment”, *Canadian Journal of Economics*, November 1970. See also John Vanderkamp, *Mobility Patterns of the Insured Population*, Economic Council of Canada Special Study No. 16 (Ottawa: Information Canada, forthcoming).

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part of the real test of whether an assisted mobility program oriented to growth and stability objectives is operating successfully.

Federal Transfer Programs

Federal-provincial fiscal transfers are basically of two types—conditional and unconditional. The conditional transfers are tied to certain programs, such as social welfare and hospital insurance, and are provided mostly on a cost-sharing basis, often at a 50 per cent rate. The unconditional transfers consist mainly of equalization payments.¹ In addition, the operation of the unemployment insurance system involves very substantial redistribution among regions, as well as among different population groups.

The effect of transfer payments on the decision to migrate has been a subject of debate among economists. On the one hand, the receipt of transfer income tends to discourage migration because the gains from moving are reduced accordingly. On the other hand, the incremental income in the form of various transfer payments may provide the necessary funds to make desired moves financially feasible. The actual impact of transfer income on the rate and direction of migration depends on the relative strength of these two opposing influences, which probably varies according to the specific program.

An example of a specific transfer program that may well be mobility-inducing is the Canada Assistance Plan of 1966. Under this Plan, the federal government reimburses the provinces for 50 per cent of the costs of assistance to persons in need, and of the cost of certain welfare services. The assistance is directed essentially to persons not in the labour force, such as needy mothers with dependent children. However, a significant portion of payments under the Canada Assistance Plan goes, especially during high unemployment periods, to assist those able-bodied unemployed workers (and their families) who do not qualify for unemployment insurance benefits. Table 7-4 shows such assistance, by region, for fiscal year 1965-66 and demonstrates that it tends to be high per recipient in "high-income" regions (British Columbia and Ontario) and low in the Atlantic Region.

Access to such assistance in the area of origin may reduce the inclination to move of those who are relatively immobile. However, since previous residence is not a condition for eligibility in the

¹The per capita provincial revenue yields that would accrue if national average provincial rates were in effect in each province are equalized by federal transfers to provinces below the national average yield with guarantees to assure some degree of stability in the level of these equalization payments from year to year.

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destination areas, and since the rates of assistance are substantially higher in "high-income" provinces, the assistance might well, on balance, encourage the marginally mobile person to move. Its availability at such high rates (and the figures in the table show only the federal 50 per cent portion) may facilitate the large inflow of autonomous movers into British Columbia and Ontario.

TABLE 7-4—FEDERAL SHARE OF UNEMPLOYMENT ASSISTANCE, TOTAL AND PER RECIPIENT, BY REGION, FISCAL YEAR 1965-66

Region	Recipients ¹	Federal Share	
		Total	Per Recipient
	(Thousands)	(\$ thousand)	(\$)
Atlantic.....	106.3	8,258.7	78
Quebec.....	258.4	42,735.6 ²	165
Ontario.....	134.8	28,318.0	210
Prairie.....	131.7	21,054.5	160
British Columbia.....	94.2	20,176.1	214
Canada.....	725.4	120,542.9	166

¹Includes dependants.

²Of this amount, \$20.1 million was provided by the federal government to Quebec in the form of a tax abatement.

SOURCE: Based on data from Dominion Bureau of Statistics.

Another program of interest in this context is the Unemployment Insurance Plan, which dates back to 1940. This is a compulsory contributory scheme that protects the worker against temporary loss of income as a result of involuntary unemployment. A weekly contribution is made by the worker on the basis of his earnings, and his employer contributes an equal amount. The government has augmented the contributions of employees and employers by a 20 per cent grant from the Consolidated Revenue Fund and paid all the administrative costs.

Under the new Unemployment Insurance Act, the financing of the scheme will be entirely borne by employees and employers when the national unemployment rate is 4 per cent or less. The government will pay the additional costs of extended benefit periods when the national unemployment rate exceeds 4 per cent or when the regional rate is over 4 per cent and exceeds the national rate by 1 per cent.

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Under the former scheme, the unemployment benefits received by a claimant depended on his average weekly contribution and his dependency status. Two types of benefits were paid—regular and seasonal. Eligibility for regular benefits, until June 1971, required a minimum attachment of 30 weeks to insured employment, and every two weeks of contributory employment entitled the worker to one week of benefits up to a maximum benefit period of one year. The seasonal benefits were payable from December 1 to May 15, and any worker who had 15 weeks of contributions since the preceding March 31, or whose regular benefits expired during this 5½-month period, was eligible for five weeks of seasonal benefits for every six contribution weeks. As of July 1, 1971, extended periods of regular benefits replaced the seasonal benefits.

Because the worker's contribution was not based upon his unemployment risk and because of the differential incidence of unemployment, the operation of the scheme resulted in large transfers and significant redistributive effects among the insured population at the regional, industrial, income class, sex, and age levels. This may be seen from Table 7-5 which shows, for 1968, a "benefit/contribution ratio" for different groups of workers (total benefit payments as a percentage of the total contributions). When the ratio is greater than 1, the group of workers receives a net transfer; when it is less than 1, the workers pay more into the Fund than they receive in insurance claims. It may be seen from Table 7-5 that workers in the Atlantic Region, Quebec, and British Columbia were subsidized by those in Ontario and the Prairies. It was mainly workers in the primary industries (except mining) and in construction and services who were subsidized by those in finance, trade, mining, and manufacturing. Those with incomes below \$4,000 were subsidized by those with higher average incomes. Females benefited somewhat more than males, and the young and middle-aged subsidized those who were over 55.

If such substantial transfer elements in the Unemployment Insurance scheme inhibit mobility,¹ these effects would not be confined to *geographic* movement only, but might well operate to "hold" workers in particular occupations and industries *within* regions. For example, fishing and logging activities in the Atlantic area undoubtedly

¹Some evidence suggests that, at least for highly aggregated data, unemployment insurance benefits tend to inhibit interprovincial migration. See Thomas J. Courchene, "Interprovincial Migration and Economic Adjustment", *Canadian Journal of Economics*, November 1970.

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have a larger supply of workers than would be the case in the absence of the additional income provided by unemployment insurance benefits.

TABLE 7-5—THE "BENEFIT/CONTRIBUTION" RATIO OF INSURED WORKERS, BY SELECTED CHARACTERISTICS, 1968

Category of Insured Workers	Ratio
All insured workers	1.12
Sex	
Males	1.11
Females	1.16
Age	
14 — 19 . . . . .	.80
20 — 24	1.00
25 — 44 . . . . .	.98
45 — 54 . . . . .	.99
55 — 64	1.44
65 and over	3.95
Income	
Less than \$2,000	5.52
2,000 — 3,999	1.80
4,000 — 5,999 . . . . .	.62
6,000 — 9,999 . . . . .	.25
10,000 — 14,999 . . . . .	.19
Occupation	
Managerial and professional . . . . .	.57
Clerical and sales . . . . .	.83
Service	1.73
Transportation workers	1.14
Farmers	2.62
Logging	4.58
Mine workers . . . . .	.80
Craftsmen . . . . .	.97
Production workers	1.21
Labourers	2.02
Fishermen	9.88
Construction workers	2.12
Industry	
Agriculture	2.51
Forestry, fishing, and trapping	5.25
Mining and oil drilling . . . . .	.83
Manufacturing . . . . .	.90
Construction	2.49
Transportation, communication, and utilities	1.11
Trade90
Finance, insurance, and real estate62
Services	1.44

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TABLE 7-5 (Concluded)

Category of Insured Workers	Ratio
Region	
Atlantic.....	2.15
Quebec.....	1.31
Ontario.....	.86
Prairies.....	.89
British Columbia.....	1.22

NOTE: (1) A ratio greater than 1 indicates a category of insured workers who are "net beneficiaries" of the Unemployment Insurance Fund, and a ratio of less than 1 indicates a category of "net contributors".

(2) The ratio of total benefits to total contributions for all insured workers indicates the financial position of the Unemployment Insurance Fund; when the ratio is greater than 1, as it was in 1968, there is a net withdrawal from the Fund.

SOURCE: Estimates by Economic Council of Canada based on data from Unemployment Insurance Commission.

Of course, any unemployment insurance program will entail some element of income redistribution. This element will be less, however, under schemes in which the contributions (and benefits) are more strongly linked to the "risk" of unemployment. Under the new Act employer contributions are tied to past layoff patterns. This should act as a stimulus for some employers to stabilize employment patterns. However, the new Act greatly strengthens the transfer element in most other respects. In particular, because of the provisions regarding lessened eligibility requirements and the extended duration of benefits for claimants residing in high-unemployment regions, it is likely that the *interregional* transfers will be much larger than under the former scheme. It is clearly a matter of some importance that the effects of the new program on mobility including all forms of movement—regional, industrial, and occupational—be carefully evaluated when data become available for such analysis.

Once again, the point of this illustration is to suggest that the effects on manpower mobility of a program designed to fulfil quite different objectives may far outweigh the impact of an explicit mobility program. It seems to us essential that the decision-maker be provided with information concerning the "spillover" effects—where these are likely to be significant—of a particular policy or program so that these may be taken into account in choosing among alternatives.

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WE HAVE previously emphasized the importance of maintaining high levels of employment if manpower policy is to deal effectively with structural changes in the labour market. The visible effects of cutting down high levels of unemployment, or reducing hard-core structural unemployment, are clearly more dramatic than those derived from improving the operation of job markets. Nonetheless, the benefits of improved job market efficiency are real, both for individuals and the economy as a whole. Workers may experience shorter periods of unemployment. Employers may reduce unit costs, and this in turn may be reflected more widely in lower prices. Yet very little study has been devoted to the working of these markets.

This chapter draws on new data to examine the behaviour of four major groups of participants in the job market: employers and employees, on the one hand; and two types of intermediaries—the federal public employment agencies (Canada Manpower Centres) and private employment agencies—on the other. The analysis, which focuses on the crucial role of disseminating information about jobs, suggests the need for improved evaluation of government activities in job markets and for developing a more effective strategy for Canada Manpower Centres.

THE EFFICIENCY OF JOB MARKETS

The process by which workers find jobs, and employers with vacancies find workers to fill them, takes place in a "job market".

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Like other markets, a job market may work with more or less efficiency, but determining the degree of efficiency is difficult. If an overriding objective of the unemployed is to find work, the simplest evidence of inefficiency may be the duration of unemployment for those workers who could have obtained a job more rapidly than they did, if they had known about all openings. High "quit rates" and the underutilization of labour are additional evidence of inefficiency. For example, a worker may, rather than remain unemployed, accept a job that does not fully utilize his skills, with the intent of quitting when he locates a better opportunity. Or if he has unrealistic views about what kind of job he can get, he may suffer unnecessarily long spells of unemployment as he prolongs his probing of the market.

Inefficiencies are also, of course, observable from the other side of a job market. For the most part, they are the same phenomena noted above but viewed from the perspective of the employer. When an employer has been unable to fill vacancies and is therefore forced to pay overtime rates, which may raise his unit costs of production, the job market is operating less efficiently than when more knowledge about available workers enables the employer to fill his vacancies with suitable individuals. Employers, too, may have unrealistic notions about the wages or working conditions that will attract or maintain a stable work force. Such perceptions of the labour market may result in persistent vacancies, delayed production, high labour turnover rates, and difficult industrial relations.

Although several other factors—market structure; the effects of discrimination; and most particularly, the overall level of economic activity—are relevant, the efficient functioning of job markets depends crucially on information. To a considerable degree, this efficiency is related to the costs and benefits of obtaining and disseminating labour market information. The economic benefits are greater output and lower unit costs of production (which should have beneficial effects upon the level of prices). There are also noneconomic benefits, such as greater job satisfaction for workers that may, of course, also contribute to increased productivity. The communication of information is not costless, however. The costs are borne in some part by workers who spend money and time to "ferret out" information, and by employers who advertise vacancies and screen and recruit employees. There are also costs borne by various private intermediaries—such as private employment agencies, employer trade associations, trade unions, and professional associations—and by governments through the operation of public employment services.

SEARCH BEHAVIOUR IN JOB MARKETS

Employees

In a free labour market—that is, where workers are not directed to jobs—some portion of the total duration of unemployment for job changers may be voluntary. The overall level of activity in the economy probably has an important effect on workers' job search behaviour; all other things being equal, the lower the level of unemployment, the more likely is the worker to defer or prolong his job-seeking activity. The 1968 survey data to be presented later suggest that substantial numbers of persons did not begin seeking another job immediately after leaving their previous employment. Rather, they delayed search for periods varying from several days to two or more weeks, even though the unemployment rate averaged as much as 5 per cent. Persons who do begin to look immediately may not do so very intensively at first. Some job seekers, particularly those with financial resources, may not accept the first job they find, even if it is a "good" opportunity, because they wish to explore a number of opportunities and select the "best". In such cases better information dissemination might not significantly decrease their period of search.

Job seekers are interested in information of two different types. The first, which may be termed *extensive* information, consists of the fact of a vacancy, the name of the employer, the title of the job or the basic nature of the work, and the wage rate. The second, which may be termed *intensive* information, consists of more specific facts about the job and the employer, as well as subjective judgments on matters such as the physical characteristics of the work place (such as cleanliness and lighting), the "fairness" of supervision, and opportunities for promotion.

The employer also desires information of the same two types, but he may have greater access to *intensive* information—for example, about an applicant's personality and work habits, through letters of reference. Job seekers, on the other hand, cannot secure from a prospective employer a list of names of current or past employees who could attest to the fact that his firm is a "good place to work". Since *intensive* information is important to job satisfaction, a job seeker may prefer employment in firms where his acquaintances are already employed. He may garner *extensive* information, such as the existence of a vacancy, from these acquaintances as well. Particularly in the higher-paid occupations, a prospective employee sometimes attempts to get the candid views of current employees, but the phenomenon is

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not widespread. The longer the expected tenure of employment, the more important *intensive* information is to the job seeker.

It has been suggested by some economists that a worker will spend time and other resources on the search for information up to the point at which the costs of doing so begin to exceed the expected benefits. This approach furnishes only a partial explanation of employee search behaviour because it fails to recognize the need for intensive, as well as extensive, information. Nevertheless, the benefit-cost approach provides a good deal of insight into the search activity of workers in the labour market. The costs of search are higher for some workers than for others. Thus persons with dependants and those with limited resources—for example, those without a working spouse or not receiving unemployment benefits—would be likely to seek employment more vigorously than other persons. It is also likely that a worker may, after some period of unsuccessful search, decide that the probability of finding employment is very low, perhaps due to seasonal factors or local conditions, and may curtail his search activity for a time.

Employers

A job vacancy exists when an employer decides that an additional employee would add more to some measure of "benefit" to the firm (profit is a simple example) than it would cost to obtain the services of that additional employee.¹ The cost category includes not only the wages paid to the employee, including all relevant fringe benefits and on-the-job training, but also expenditures on advertising and recruitment, testing, screening, and orientation. Several implications flow from this definition. For example, an employer has the choice of paying above-average wages as a means of attracting and holding a desired number and quality of workers or spending more money on recruitment and screening. These two approaches are, to some extent, alternative strategies of manning. Further, since the difference between expected benefits and wages would be greater the longer the expected tenure of employment, employers would probably be willing to incur higher manning costs for permanent rather than temporary employees or for full-time rather than part-time employees.

The breakdown of manning costs by type also provides some implications, particularly for the choice of search technique. For simplicity, consider only two cost components—recruitment and screening.

¹For simplicity, this definition ignores the problem of discounting the time streams of benefits and costs.

An employer who has screening capabilities within his own organization will be less likely to use screening services of intermediaries, although he may use different techniques for different types of workers. He may advertise in newspapers to fill certain vacancies on the production line because he is able to screen the resulting applicants, but, on the other hand, he may use an employment agency to fill a technician vacancy because he does not have screening capacity in this area. In most cases, firms that regularly hire large numbers of workers of a given type find it worthwhile to establish screening capability. If only a few vacancies are involved, it is probably cheaper to use intermediaries. Survey information on employer search behaviour confirms that employers respond this way.

A large number of other factors influence the employers' approach to manning. They may continue to use techniques not merely from force of habit but because they have worked in the past, or to avoid techniques that have, on occasion, not produced the desired results. Employer choice of search technique is also affected by employee search behaviour. If, for example, professional workers consider it "beneath their dignity" to seek employment through the public employment service, employers would be unlikely to list vacancies for professionals with this service. The data presented below in the section on employer search behaviour indicate that disproportionately few vacancies for professionals are, in fact, listed with Canada Manpower Centres. This in turn provides an additional reason for professional workers not to register, and a "cycle of non-use" develops and is perpetuated. Despite these and other factors influencing the employer's approach to recruitment, the analysis that follows suggests that many of the observed patterns in employer search behaviour can be explained by the simple economic benefit-cost considerations noted above.

SOME FACTS ON SEARCH BEHAVIOUR

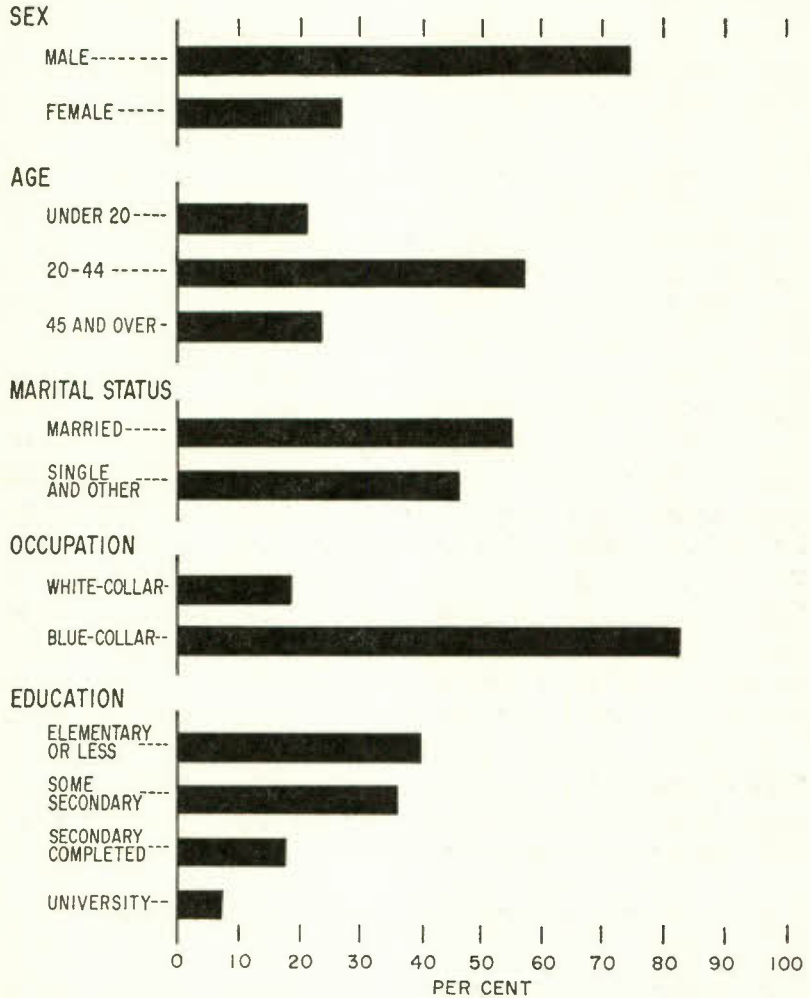
Employees

To secure some information on how workers look for work and find jobs, a set of special questions was appended to the January 1969 Labour Force Survey. These questions were directed to workers who had experienced a total of five or more weeks of unemployment during the year 1968 (the average for the group was 19 weeks), and the responses were related to the longest continuous spell of unemployment if more than one period was involved. The characteristics of these workers are presented in Chart 8-1.

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CHART 8-1
SELECTED CHARACTERISTICS OF PERSONS
UNEMPLOYED FOR FIVE OR MORE WEEKS IN 1968

CHARACTERISTICS:



Source: Based on data from Dominion Bureau of Statistics.

There are two major types of questions that can be at least partially answered on the basis of such information:

—How do certain characteristics of workers, like age, sex, and education, affect such elements of search behaviour as (a) the

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time elapsed between leaving one job and beginning to look for another, (b) the number of search techniques used, and (c) the selection of search techniques used?

—How do these worker characteristics, as well as the elements of search behaviour listed above, affect the probability of finding employment?¹

The answers to both of these questions, particularly the second, may provide some insight into the operation of the job market, from the employee's point of view, that is relevant to public policy issues.

The workers were asked how soon they began to search for work after they had left or lost their previous job. This information helps to throw light on the costs of search from the worker's viewpoint. Many factors will, of course, influence a worker's behaviour after he has lost his job, but if the costs of joblessness weigh heavily on him and his family, he is likely to begin his search without delay. Table 8-1 presents the distribution of persons according to a number of "time-elapsed-before-search" categories. About one-third of the individuals sampled did not begin to seek work immediately but delayed for periods varying from several days to several weeks before starting to look for work. If one interprets the period between leaving one job and beginning to search for another as voluntary unemployment, then a not insignificant proportion of unemployment duration appears to be voluntary. Of course, some of the persons who waited before beginning their search may have done so because they felt no work was available, or for other reasons not compatible with the notion of voluntary unemployment.

TABLE 8-1—TIME TAKEN TO START JOB SEARCH BY PERSONS
UNEMPLOYED FOR FIVE OR MORE WEEKS IN 1968

	Percentage of Sample
Began search immediately	49
Began search in 2-14 days	20
Began search after two weeks or more	14
Had no previous job	14
Did not search ¹	3

¹Most persons in this category were expecting recall to a previous job.

SOURCE: Based on data from Dominion Bureau of Statistics.

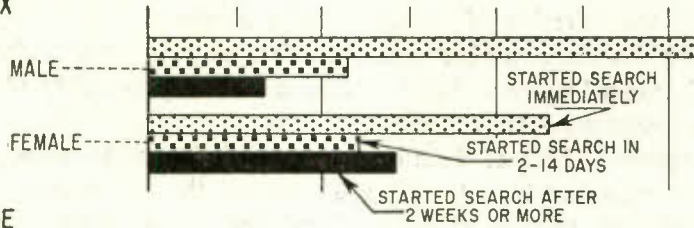
¹A full exposition of the data and the analysis may be found in Dennis R. Maki, *Search Behaviour in Canadian Job Markets*, Economic Council of Canada Special Study No. 15 (Ottawa: Information Canada, forthcoming).

CHART 8-2

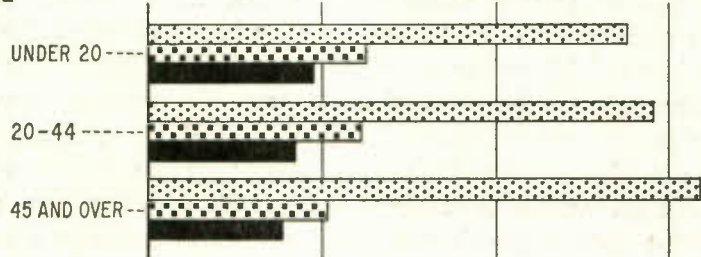
WORKERS WITH SELECTED CHARACTERISTICS,
BY TIME TAKEN TO START JOB SEARCH, 1968

CHARACTERISTICS

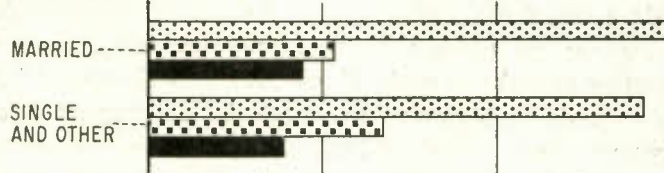
SEX



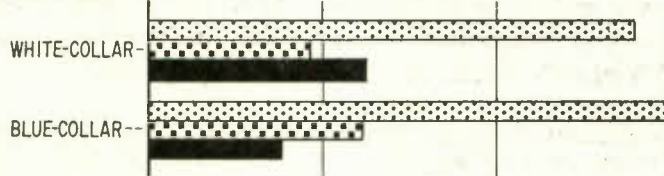
AGE



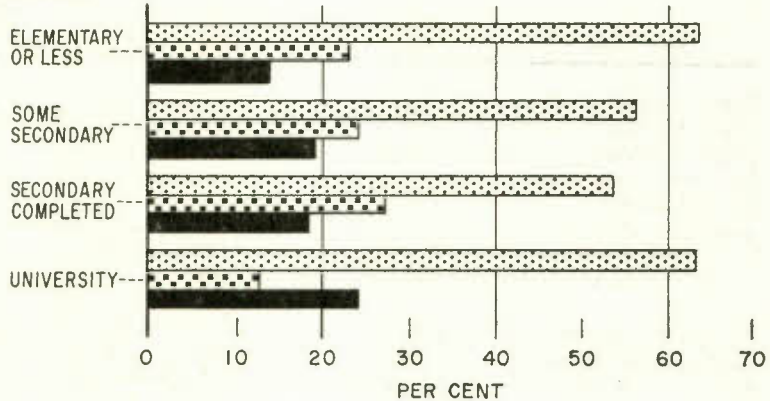
MARITAL STATUS



OCCUPATION



EDUCATION



Source: Based on data from Dominion Bureau of Statistics.

Chart 8-2 further elaborates the survey data on time taken to start job search, by various characteristics of job seekers. This analysis indicates that men are more likely than women to begin search immediately and are less likely to wait two weeks or more. Married persons are more likely to begin search immediately, as are those with an elementary education or less. On the other hand, white-collar workers are more likely than blue-collar workers to wait two weeks or more before beginning search. Taken together, these observations suggest that those persons for whom the burden of unemployment is greatest—that is, those more likely to have dependants and less likely to have a cash reserve to tide them over—tend to begin to search early.

To gain further insight into the search activity of the unemployed, the workers in the sample were presented with a list of search methods, such as contacting Canada Manpower Centres or private agencies, visiting employers, speaking to friends and relatives, and so forth, and asked to check *each* method used. A complete list of methods is shown in Table 8-2. This provided information of two types: the specific *technique* of job seeking, and the “intensity” of search as reflected in the *number* of techniques used.¹

Perhaps the most striking feature of the data shown in Chart 8-3 is the increase in the number of methods used by persons with successively higher levels of education. Thus it does not appear that those upon whom the burden of joblessness weighs most heavily use more techniques. The number of techniques used does not appear to be an indicator of “need” but rather of what may be termed the “completeness” of search. Those who use more techniques may be more concerned about obtaining a relatively complete inventory of openings available. Alternatively, they may be more knowledgeable about the range of search techniques available.

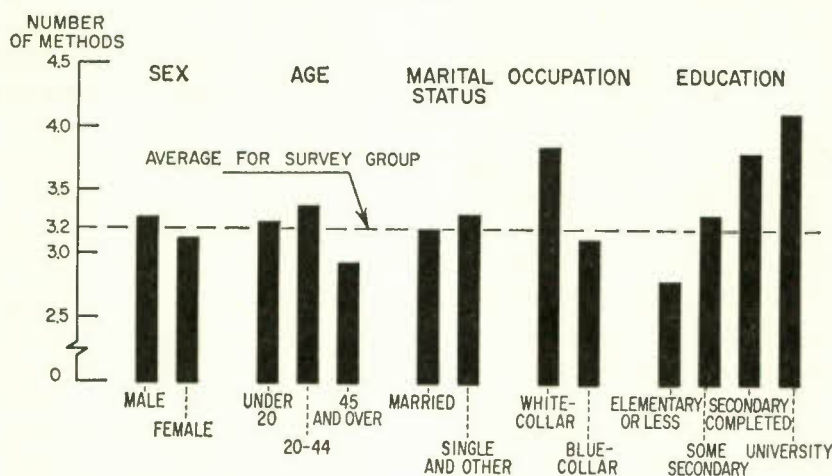
According to Table 8-2, which shows the use of various alternatives, the Canada Manpower Centres constitute the single most used search technique. To some extent, this may be because most of the persons in the sample were receiving unemployment benefits and were advised to register at these Centres as a matter of course. What may be termed “informal” techniques, such as checking with employers or friends and relatives, are also very heavily utilized. This accords with the data on employee search behaviour in the United States.

¹This is only a partial measure of search intensity since there is no record of the frequency of use of any given method.

Design for Decision-Making

CHART 8-3

AVERAGE NUMBER OF METHODS OF JOB SEARCH USED BY WORKERS WITH SELECTED CHARACTERISTICS, 1968



Source: Based on data from Dominion Bureau of Statistics.

Detailed data on the characteristics of the users of each of the search methods listed in Table 8-2 were tabulated but are too cumbersome to be presented here.¹ The major finding was that the clients of the Canada Manpower Centres differ remarkably little from the survey group as a whole. The major difference is that only three out of five of the professional workers used the Centres, although, as noted in Table 8-2, close to four out of five of the total sample did so.² Further, about two out of five of the professional workers used private agencies, while only one out of five of the total sample did so. Local newspapers are extensively used by women and white-collar workers; trade unions, by men and those over 44 years of age or those with an elementary education or less. Male workers and those who have completed secondary school are more likely to search outside the local area than others. By and large, these findings are

¹*Ibid.*

²However, the Department has been moving to strengthen its information services for professional manpower. Among other things, it co-operates with some professional associations to undertake relevant studies, and publishes material on career opportunities and related information for professional and technical manpower. The Department also administers Operation Retrieval to provide information to Canadians abroad about job opportunities in Canada, is experimenting with the provision of placement services at conferences of some professional groups, and operates about 50 Canada Manpower offices at Canadian universities and colleges.

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not incompatible with the economic benefit-cost hypothesis of search behaviour, which takes account of the relative cost of different search techniques.

TABLE 8-2—WORKERS USING SPECIFIED JOB SEARCH METHODS, 1968

Search Method	Percentage ¹
Contact Canada Manpower Centre.....	76
Contact private employment agencies.....	20
Check with employers in area.....	67
Check with employers outside area.....	29
Place, or answer, advertisements in local papers.....	29
Place, or answer, advertisements in papers outside locality.....	9
Write letter of application.....	26
Check with friends or relatives.....	57
Check with trade unions.....	12
No action (did not look).....	3

¹Since persons in the survey group used 3.25 techniques each, on the average, the unrounded sum of the percentages in this column is not 100 but 325.

NOTE: Information on the use of Quebec Manpower Centres was not available from this survey.

SOURCE: Based on data from Dominion Bureau of Statistics.

In 1968, young workers—those 14-19 years of age—represented about 10 per cent of the labour force; yet, as Chart 8-1 indicates, 20 per cent of workers in the “unemployed five weeks or more” sample were aged 14-19 years. This age group is alleged to “job hop” and “shop around” inordinately, and largely “voluntarily”. Chart 8-2 indicates that in looking for work they are somewhat less likely than older workers to begin searching immediately, and more likely to wait two weeks or more before beginning, than older workers, but the difference is certainly not marked. Further, Chart 8-3 suggests that the average number of search techniques used by young workers is identical to the average for all persons in the survey. The evidence also suggests that young workers are less likely than other age groups to use trade unions, and more likely to use friends and relatives. In summary, the search behaviour of young workers did not significantly differ from that of the average worker in the survey group.

As noted at the outset, the second major question the survey sought to answer was the “effectiveness” of workers’ job search activity. For the purposes of this analysis, the percentage of persons in a particular category, or using a specific search method, who found jobs is taken as a measure of successful search or, simply, a “success ratio”. The data are presented in Tables 8-3 and 8-4.

Design for Decision-Making

TABLE 8-3—AVERAGE SUCCESS RATIO FOR WORKERS USING AT LEAST ONE JOB SEARCH METHOD, 1968

Characteristics	Success Ratio
Sex	
Male.....	52
Female.....	53
Age	
Less than 20.....	56
20-44.....	57
45 and over.....	39
Marital Status	
Married.....	53
Single and other.....	52
Occupation	
White-collar.....	70
Blue-collar.....	49
Education	
Elementary or less.....	48
Some secondary.....	52
Secondary completed.....	57
University.....	69
Time Taken to Start Job Search	
Had no previous job.....	57
Began search immediately.....	55
Began search in 2-14 days.....	51
Began search after two weeks or more.....	52
Number of Methods Used	
One method.....	39
Two methods.....	52
Three methods.....	54
Four methods.....	58
Five or more methods.....	62
Overall Success Ratio for Survey Group.....	52

NOTE: Percentages within each category are comparable with each other. Percentages between categories are also comparable, except those for age and marital status which, because of the methods of estimation, should not be compared with other major categories.

SOURCE: Based on data from Dominion Bureau of Statistics.

Table 8-3 shows that success increases with level of education. This appears to be partially due to variations in the number of methods used and the choice of methods by persons with different

education levels. But it probably mainly reflects more job vacancies relative to the number of job seekers in those occupations requiring higher education levels. Similarly, although white-collar workers appear to have higher success ratios than blue-collar workers, more detailed analysis indicates that this is closely associated with the generally higher level of education and larger number of methods used by white-collar workers.

Table 8-4 shows considerable variation in the degree of success of workers using different methods of search. Two of the most widely used methods of search—local employers, and friends and relatives—seem to have the greatest success. The ratio for Canada Manpower Centres is higher than that for private agencies, but each is less than half as large as the ratios for local employers, and friends and relatives. This suggests that job market intermediaries are “less effective” than more informal ways of looking for work. Of course it must be recognized that several factors other than the method of search affect success in finding jobs. Among these other factors, the state of demand relative to supply in different occupation groupings is paramount.

TABLE 8-4—AVERAGE SUCCESS RATIO, BY SPECIFIC JOB SEARCH METHOD, 1968

Method of Search	Success Ratio
Contact Canada Manpower Centre.....	11
Contact private employment agencies.....	7
Check with employers in area.....	27
Check with employers outside area.....	8
Place, or answer, advertisements in local papers.....	15
Place, or answer, advertisements in papers outside locality.....	3
Write letters of application.....	6
Check with friends or relatives.....	24
Check with trade unions.....	17

SOURCE: Based on data from Dominion Bureau of Statistics.

Success ratios give only a partial impression of the importance of various methods of search. Table 8-5 provides an additional dimension—the percentage distribution of the total number of successful searches (job matches) that are effected through each technique. Personal contact with employers and other informal methods, which were earlier shown to be important methods of search, are here also revealed to be highly effective.

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TABLE 8-5—PERCENTAGE DISTRIBUTION OF JOB MATCHES,
BY JOB SEARCH METHOD, 1968

Method of Search	Percentage
Contact Canada Manpower Centre.....	16
Contact private employment agencies.....	3
Check with employers in area.....	34
Check with employers outside area.....	5
Place, or answer, advertisements in local papers.....	9
Place, or answer, advertisements in papers outside locality.....	—
Write letters of application.....	3
Check with friends or relatives.....	26
Check with trade unions.....	4

SOURCE: Based on data from Dominion Bureau of Statistics.

The preceding discussion has focused on the measure of "success" in job search. It is also interesting to examine the reasons given for *not finding* work, as perceived by the unsuccessful job seekers. About half of those unemployed at the time of the survey explained why they felt they had been unable to find a job. The results are presented in Table 8-6.

TABLE 8-6—REASONS GIVEN FOR NOT FINDING A JOB, 1968

Reason	Percentage
No work available.....	43
Off season.....	15
Health.....	8
Age.....	14
Lack of education.....	20

SOURCE: Based on data from Dominion Bureau of Statistics.

Over half of the respondents believed that the main reason was a lack of demand for workers (first two categories in Table 8-6), but over 40 per cent felt that their own qualifications—education, age, or health—were the major impediments to finding jobs. Although it may be significant that no substantial number of respondents indicated that lack of information about job openings was a key problem, it cannot be assumed that this fact played no role. In many situations, a respondent would be unlikely to differentiate, even in his own mind, between the *lack of information* about jobs and the *absence* of job opportunities.

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In summary, the highlights of this section are:

- Informal techniques of job search are important.
- The only difference between the typical user of Canada Manpower Centres and the average job seeker is that he is less likely to be a professional.
- Young people tend to search for jobs in much the same manner as the average unemployed worker.
- The probability of finding a job is significantly improved by more-intensive search—that is, the use of several techniques.

Employers

Some perspective on employer search behaviour has been developed from information and analysis based on the Job Vacancy Survey of the Department of Manpower and Immigration and the Dominion Bureau of Statistics. The data relate to job openings, designated by a particular job title, for which employers were actively seeking workers during the first half of 1970.¹

Table 8-7 shows the distribution of employers' search activities among various search techniques for a number of occupations. The information relates to how employers *tried* to fill vacancies, *not* how, or if, these vacancies were actually *filled*. The final column of Table 8-7 indicates that advertising is the most used method, accounting for almost twice as much of the total search activity as the next most important method—Canada Manpower Centres. Although the Centres receive almost 22 per cent of all listings, they receive only about 10 per cent of the professional, technical, and managerial listings. Private agencies, on the other hand, receive disproportionately large percentages of professional, technical, and managerial, as well as clerical and sales, listings. In fact, about 19 out of every 20 listings with private agencies are comprised of these occupational categories.

¹The Job Vacancy Survey is described in S. Ostry and A. Sunter, "Definitional and Design Aspects of the Canadian Job Vacancy Survey", *Journal of the American Statistical Association*, September 1970, pp. 1059-1070. These data are measures of "main" activity undertaken by employers to fill a given occupational category of vacancy. They are not related to the number of vacancies reported for these categories and thus may be subject to some bias. The coverage of the Job Vacancy Survey was incomplete at the time the data were gathered; substantial sections of the government and institutional sector are unrepresented. The data are unweighted. Two sets of sample data were used for the particular analysis. Neither of these two samples is a pure cross-section, but rather a "cross-section over a period of time". Both of these surveys took place in the first half of 1970 and, since they cover less than a full year, are subject to seasonal influences. In particular, the percentages for universities and colleges are probably inflated. Separate information on the use of the Quebec Manpower Centres was not available from this survey. The survey data here exclude the Yukon and Northwest Territories.

TABLE 8-7—SEARCH TECHNIQUES USED BY EMPLOYERS TO FILL VACANCIES, BY OCCUPATION, 1970*

Search Technique	Professional, Technical, Managerial	Clerical and Sales	Service	Other ¹	All Occupations
	(Per cent)				
Canada Manpower Centre.....	10	21	24	36	22
Advertising (newspapers, periodicals).....	42	40	51	35	40
Trade unions.....	—	—	4	4	1
Walk-in interviews.....	1	2	2	2	2
Search of files.....	2	8	6	8	6
Private employment agencies.....	10	14	—	1	8
University, college, high school and trade school recruitment.....	20	3	1	2	8
Personal contact and word of mouth.....	8	8	8	8	8
Employee referral.....	1	1	1	2	1
Other or not specified.....	6	3	3	2	4
Total.....	100	100	100	100	100

*See footnote on page 181.

¹Composed primarily of Processing, Machine Trades, Bench Work, and Structural Occupations—i.e., blue-collar occupations.

Source: Based on data from Dominion Bureau of Statistics.

TABLE 8-8—SEARCH TECHNIQUES USED BY EMPLOYERS TO FILL VACANCIES, BY REGION, 1970*

Search Technique	Atlantic	Quebec	Ontario	Prairie	British Columbia	All Regions
	(Per cent)					
Canada Manpower Centre.....	30	18	23	22	22	22
Advertising (newspapers, periodicals).....	43	31	43	47	37	40
Trade unions.....	1	1	1	1	6	1
Walk-in interviews.....	—	2	1	2	3	2
Search of files.....	4	6	4	5	10	6
Private employment agencies.....	1	13	11	4	5	8
University, college, high school and trade school recruitment.....	1	17	6	3	4	8
Personal contact and word of mouth.....	15	8	5	10	8	8
Employee referral.....	1	—	2	2	2	1
Other or not specified.....	4	4	4	4	3	4
Total.....	100	100	100	100	100	100

*See footnote on page 181.

SOURCE: Based on data from Dominion Bureau of Statistics.

TABLE 8-9—SEARCH TECHNIQUES USED BY EMPLOYERS TO FILL VACANCIES, BY INDUSTRY, 1970*

Search Technique	Manufacturing	Construction	Transportation, Communication	Wholesale Trade	Retail Trade	Finance, Insurance, Real Estate	Educational Services	Health and Welfare	Services	Public Administra- tion and Defence [†]	All Industries
						(Per cent)					
Canada Manpower Centre.....	30	22	17	25	26	7	11	9	27	8	20
Advertising (Newspapers, period- icals).....	39	38	31	48	41	64	63	62	48	48	48
Trade unions.....	1	21	10	—	—	—	—	—	—	2	2
Walk-in interviews.....	3	—	3	1	6	2	2	5	4	2	3
Search of files.....	6	7	12	6	14	4	13	9	6	6	8
Private employment agencies.....	10	4	7	7	2	7	—	1	2	1	5
University, college, high school and trade school recruitment.....	2	1	1	—	1	2	1	2	2	1	1
Personal contact and word of mouth.....	5	3	13	8	8	5	8	6	7	3	6
Employee referral.....	1	1	—	2	1	1	1	1	1	2	1
Other or not specified.....	3	3	6	3	1	8	1	5	3	27	6
Total.....	100	100	100	100	100	100	100	100	100	100	100

*See footnote on page 181.

[†]Not fully covered in the survey data on which this table is based.

Source: Based on data from Dominion Bureau of Statistics.

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Table 8-8 looks at regional differences in the way employers search for workers. To some extent, these variations may be due to different occupation "mixes" in the several regions, so that one should not attribute all of the regional differences observed in Table 8-8 to actual differences in search behaviour. After taking this into account, there appeared to be no significant regional difference in the use of the Canada Manpower Centres. In other words, these Centres seem to have achieved a rather uniform "penetration" across this country, despite marked regional variations in labour market structures and conditions. By way of contrast, private agencies are more important in Quebec and Ontario than elsewhere, at least partially because the legal status of private agencies varies among provinces. Advertising is less important in Quebec than in other regions; and recruitment from educational institutions, relatively more important. Trade unions appear to be more important as job market intermediaries in British Columbia than in other regions, perhaps because the percentage of the labour force that belongs to trade unions is higher in British Columbia.

Employer search behaviour by *industry* (Table 8-9) shows other interesting patterns. For example, the large number of "other" techniques used by "public administration" is due to the inclusion of public service commissions (federal and provincial) under that heading. But as indicated in the case of regional variations, after adjusting for the "occupation mix" effect, the analysis reveals no strong evidence that the use made of Canada Manpower Centres varies greatly by industry. In the highly unionized construction industry, employers tend to use trade unions for recruiting, while private agencies are more extensively used by the manufacturing industry.

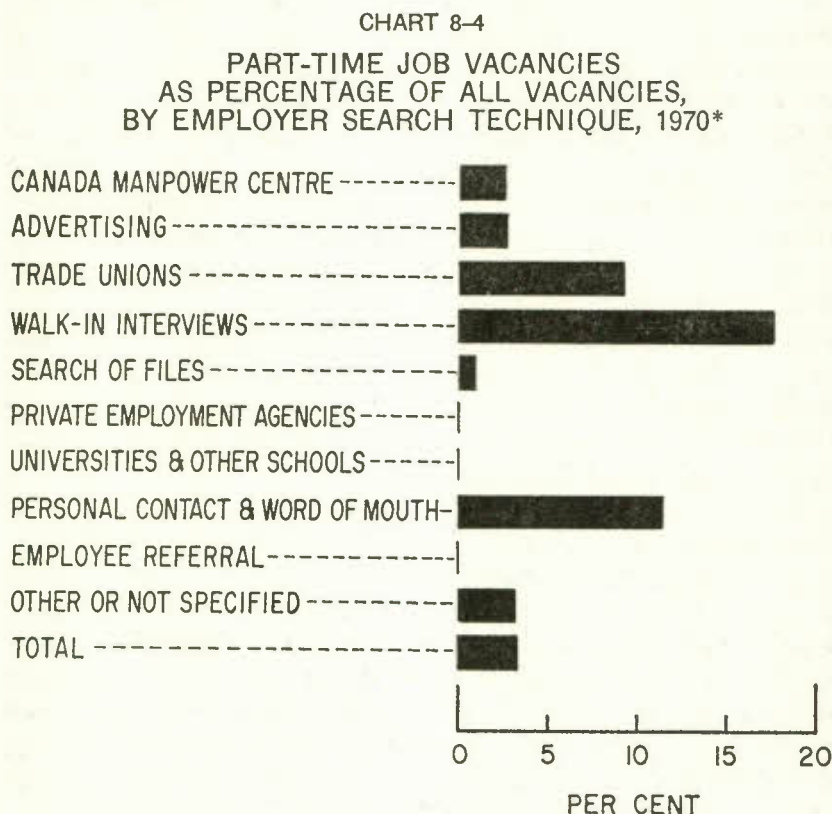
Chart 8-4 supports the suggestion made earlier that employers would not be expected to use high-cost methods of search to fill part-time vacancies; hence the relatively greater reliance on informal recruiting techniques, such as walk-in interviews and personal contacts, for part-time than for full-time vacancies. In fact, the underlying data indicate that almost one-third of part-time vacancies were listed by these methods. By way of contrast, less than 10 per cent of full-time workers were sought by these two methods.

In summary these are the major findings of this section:

- Advertising in newspapers and periodicals is the most frequently used technique of recruitment, with Canada Manpower Centres ranking next in importance.
- Search technique appears to vary significantly by occupation.

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—When occupation mix is accounted for, the usage of Canada Manpower Centres is generally uniform across industries and regions.



*See footnote on page 181.

Note: Information refers to vacancy counts, not activity counts.

Source: Based on data from Dominion Bureau of Statistics.

PRIVATE EMPLOYMENT AGENCIES

For certain occupation groups, notably professionals and white-collar workers, private agencies are an important job market intermediary in Canada. In fact, using gross receipts of private agencies per labour force member, it appears that such agencies were more important in Canada than in the United States in the mid-1960's.¹

¹1966 *Census of Canada*, Service Trades, Cat. No. 97-642 (Ottawa: Queen's Printer, 1969); and Jack W. Skeels, "Perspectives on Private Employment Agencies", *Industrial Relations*, February 1969, p. 152.

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The only data available on these agencies are Census data for 1961 and 1966. In 1961, private agencies had only 52 locations (roughly, offices) and gross receipts of less than \$3 million. By 1966, there were 248 locations and gross receipts in excess of \$35 million. The locations were heavily concentrated in Ontario and Quebec; in fact, more than half of them were in Ontario. The growth in gross receipts from 1961 to 1966 was over 1300 per cent! While this percentage is based upon figures that are not deflated for price changes, it is obvious that the industry was relatively small at the start of the decade and that its growth over the next five years was phenomenal.

Although very little is known about the internal operations of private agencies,¹ it appears that substantial expenditures are incurred for advertising, canvassing of employers, and public relations in general. Payroll costs were, on average, only 25 per cent of gross receipts for private agencies in 1966. But private employment agencies are by no means a homogeneous group. Firms range from management consulting firms, which derive a small percentage of their total revenues from placement or recruitment operations, to large multi-office agencies specializing entirely in placement and recruiting. While most of the agencies in the industry are small firms with only one or perhaps two offices, the large multi-office agencies account for most of the job placements.²

Management consulting firms generally specialize in executive recruitment and charge their clients (employers) on a retainer-fee (per diem) basis. Most of the other firms in the industry charge employers on a contingent-fee basis—that is, so much per vacancy filled. In some cases, private agencies charge fees to the job seeker. The practice is not widespread and should be eliminated, except perhaps in the case of senior professional and managerial manpower.

Concentrating on that sector of the industry which accounts for most of the placements—that is, leaving out management consulting firms and part-time individual ventures—the key concept characterizing private agencies is *specialization*. Most agencies, particularly the successful ones, are highly specialized in some rather narrow occupation classifications, such as electronic data processing personnel or life insurance and other financial sales personnel. Even in the

¹Most of this information is based on material from L. Fric, currently completing his doctoral dissertation on Private Employment Agencies in Canada at the University of Toronto.

²The industry also includes one-man operations, operated out of private homes on a part-time basis.

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large multi-office agencies that serve several occupations, individual consultants tend to work within given narrow occupational categories. Private agencies, even in the aggregate, do not serve the entire occupation spectrum. It has previously been noted that they concentrate heavily on managerial, professional, technical, clerical, and sales occupations. Even within this group of occupations, there is evidence to suggest that private agencies concentrate on those occupations in which excess demand exists in the labour market. *This implies that the successful agencies are those which continually move into new areas to exploit shortages of workers in particular occupations and professions.*

The real question is this: What do private agencies provide that public agencies do not, or could not, provide? More fundamentally, why would any employer pay a fee to a private agency for filling a vacancy when the public agency stands ready to perform this function without charge? Some analysts have attempted to explain this through recourse to the argument that the private sector, guided by the profit motive, is more "efficient" than the government—that is, that private agencies are more perspicacious than the public employment service in seeking out and exploiting emerging areas of excess demand for labour. This would imply that if public agencies were as "efficient" as they could be, private agencies would disappear for lack of a market.

This explanation is much too facile, although it may contain a grain of truth. A more convincing rationale, admittedly still tentative, is that private agencies are "employer-oriented". Private agencies exist because they perform certain functions for employers, who pay their fees. Presumably, due to scale economies—and, more particularly, *specialization*—they perform these functions more efficiently than the employer could perform them himself.

It is no doubt possible that a public agency could perform these functions, but it would undoubtedly need to be an agency very different from the current Canada Manpower Centres. Such Centres must serve, or attempt to serve, the entire spectrum of job seekers. The Centres are, to a substantial extent, "employee-oriented", and it does not appear reasonable to suggest that they should change this orientation. Moreover, the information presented in the earlier part of this chapter suggests that such Centres have managed to "penetrate" most occupational, industrial, and regional job markets.¹

¹Such "penetration" may be increased if current experiments with computer-based information systems for the clients of some Centres are successfully implemented on a broader basis.

If *specialization* is the key to private agency success, this degree of specialization may not be possible in public agencies. Moreover, even computerized "job banks" will not necessarily work effectively in this direction. If this is the case, private agencies have a role in the job market, although this argument, by itself, does not provide an adequate rationale for the astonishingly rapid growth of private agencies during the early 1960's.

Private agencies do, in one sense, contribute to the flow of extensive labour market information. They provide, particularly for small employers, information on numbers and characteristics of job seekers in the market—information that the employer could not have obtained for himself except at prohibitive cost. Moreover, as already noted, workers use various methods of job search and many will turn to private agencies in an effort to locate a suitable vacancy. Unlike a public intermediary, however, private agencies quite naturally endeavour to keep this information on vacancies and workers confidential, since they would be unable to *sell*, at a price, information available elsewhere *free of charge*, at least if potential purchasers knew of this availability. Thus, in another sense, private agencies *restrict* the flow of information in the market. This latter problem—if it is a problem—could be dealt with by special regulations.

THE CANADA MANPOWER CENTRES

Substantial federal involvement in providing employment service dates back to the establishment of the National Employment Service, under the Unemployment Insurance Act, implemented in 1941. This Act emphasized that its prime function was to provide an employment service; but if an involuntarily unemployed worker could not be placed, insurance benefits were provided. Through time, the public, and particularly employers, developed suspicions about the ordering of priorities in the National Employment Service. Employers felt that this Service might be giving preference in referral to those whose insurance benefits were exhausted or those who had been unemployed for long periods. (It is not relevant at this point whether or not these suspicions were well founded; in fact, it would have been equally damning to have accused the Service of trying to place those whose expected insurance benefits were "large", in an attempt to conserve the "fund".) In any event, employers came to feel that the average quality of worker referred to jobs by the National Employment

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Service was not as high as could be obtained through other means.

When the Department of Manpower and Immigration was formed in 1966, the National Employment Service became part of the Canada Manpower Division. Relieved of involvement with the administrative operations of the unemployment insurance system, the new service is represented by a nation-wide network of some 350 Canada Manpower Centres.¹ These Centres are, in fact, the institutional arm through which federal manpower policy operates. A brief listing of some of the current functions of these Centres shows a marked shift in focus, involving a variety of services to workers, both employed and unemployed. These services include: referral to jobs (the placement function); authorization for training and allowances under the Adult Occupation Training Act; and authorization for grants under the Manpower Mobility Program. As part of the process of deciding which of these services to offer a given worker, they provide counselling and testing services. The Centres also provide clearing services to assist in alleviating local labour market surpluses and shortages; special services for recent immigrants; recruitment services for employers; and the dissemination of labour market information. They also co-operate with other agencies in developing special applications of manpower programs for the handicapped, for mitigating the effects of large layoffs, and for promoting regional development. Clearly, if the role assigned to the National Employment Service was too narrow, a similar charge cannot be made against the Canada Manpower Centres!

How is it possible to monitor an institution with so comprehensive a range of objectives? It is apparent that evaluation of the functions of the Centres, one at a time, through the use of benefit-cost analysis or any other technique, may lead to misleading conclusions, since many of their functions are strongly interrelated. This is certainly true of the placement function, referrals to training, and authorizations for mobility grants. These three programs, at least, serve what is largely a common "client population". As we have seen in the preceding chapter, both the training and mobility programs

¹The operating cost of the 350 federal government permanent Canada Manpower Centres, branches and university/college offices in Canada was \$47 million in fiscal year 1970-71. The number of offices and their operating costs (in millions of dollars) are distributed by province: Newfoundland, 10 (\$0.9); Prince Edward Island, 3 (\$0.3); Nova Scotia, 29 (\$2.1); New Brunswick, 18 (\$1.7); Quebec, 94 (\$13.1); Ontario, 101 (\$16.2); Manitoba, 16 (\$2.1); Saskatchewan, 14 (\$1.6); Alberta, 20 (\$3.0); British Columbia, 42 (\$5.6); Northwest Territories and the Yukon, 3 (\$0.2).

are subject to systematic evaluation, but no procedures for monitoring the *overall* effectiveness of the Centres have been developed. It is not suggested that such procedures are readily available—quite the contrary. While some interesting approaches have been put forward,¹ this is clearly an area worthy of much more intensive research.

With this caveat in mind, what can be deduced about the effectiveness of the *placement* function of the Canada Manpower Centres? Unfortunately, almost no data are available in the public domain. Until May 1967, the *Labour Gazette* published some information on vacancies notified and registrations received, but since then, publication of such operating data has largely ceased, although at the time it was stated that: "New statistical series are being developed to give more significant information about persons using the services of Canada Manpower Centres. The results will be published as they become available." To date, no new data have been published. The regional *Manpower Reviews* published by the Department of Manpower and Immigration occasionally furnish some information on the operations of the Canada Manpower Centres, but the coverage is not comprehensive. In short, virtually nothing can be said about the effectiveness of the placement function of the Centres at the present time.

It is possible to suggest several indicators that would provide useful information about the operations of such Centres. For example, before 1966, data on the number of job seekers registering with the National Employment Service, the number of vacancies notified, and the number of placements effected, together with information on total hirings from the Survey of Hirings and Separations, provided the basis for constructing indicators, such as registrations as a percentage of unemployment; placements effected through the Service as a percentage of all hirings; vacancies notified as a percentage of all vacancies (or total hires); and placements effected as a percentage of vacancies notified. None of these indicators are perfect measures of effectiveness due to some ambiguity regarding their "optimal" level—which is clearly not 100 per cent—but all would provide relevant information about the operations of the Centres.

¹See, for example, E. P. Durbin, "Manpower Programs as Markov Chains", Rand Corporation Memorandum, October 1968; and Dennis R. Maki, "Joint Products in Canada Manpower Centres", Industrial Relations Research Association, Proceedings of Twenty-Third Annual Winter Meeting, December 1970.

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More recent data on a comparable basis are not available. The operational information from the Centres is not published, and the Survey of Hirings and Separations was discontinued in 1966.¹ Various pieces of information about the labour market are available in the *Annual Reports* of the Department of Manpower and Immigration and its brief to the Special Senate Committee on Poverty, but not on a continuing or consistent basis. Full and detailed reporting on the operations of the Canada Manpower Centres should be resumed on a regular basis as soon as possible, and the Survey of Hirings and Separations, or some similar survey, should be resumed to provide information on total hirings. Without such information, it is impossible to monitor, in any meaningful fashion, the placement activity of the federal employment service in Canada.

CONCLUSIONS AND RECOMMENDATIONS

Two sets of recommendations are included here—those relating to *evaluation* of Canada Manpower Centre placement operations, and those relating to the *operations* themselves. The central thrust of the comments on evaluation is to urge that sufficient information be gathered for the use of the Department and that it be made available to the public to facilitate more effective evaluation of the services being provided. Obviously, until this is done, only a few tentative recommendations can be made about actual operations and policies.

The Canada Manpower Centres appear to have been more successful in serving those occupation groups for which *extensive* information is important than in serving those groups, notably professionals, for which screening and *intensive* information is important. Further, specialized intermediaries have arisen in those areas of the job market where screening is important. Both job seekers and employers make substantial use of informal methods of search.

Canada Manpower Centres do not have a monopoly on extensive information on the job market, nor are they in a position to make a substantial improvement in the availability of *intensive* information. However, we believe that the Centres could, to a greater extent, concentrate upon improving the communication of *extensive* informa-

¹The Survey of Hirings and Separations was discontinued when the Job Vacancy Survey was initiated, in order to reduce the burden of employer response. However, the Job Vacancy Survey will not—at least in its present form—provide information on total hires.

tion. This may imply somewhat less emphasis on the functions of placement, screening, and matching a worker and a vacancy.¹

One means for providing more emphasis on the dissemination of *extensive* information is the use of an "open file system", where lists of vacancies and workers are made freely available to job seekers and employers. Such a system is in operation in Sweden² and, on a more limited basis, in Britain. It is also being applied experimentally in a number of other countries.

Whether an "open file system" would be desirable in Canada—where labour market structures, the rate of growth of the labour force, and a host of other factors are different from those in Western European countries—is an open question. There may be some harmful effects arising from its operation. For example, it may have inherent limitations for disadvantaged workers, or for particular occupations or groups for which *intensive* information is essential. Also, worker "quit" rates may rise to an undesirable extent, or employers may become more reluctant to list vacancies with Canada Manpower Centres due to the increased burden of screening placed upon the employer by the "open file system".

If an "open file system" were to be seriously considered for Canada, it should first be tried experimentally on a small scale.³ Pilot projects, complete with control groups and appropriate data collection and analysis, would provide some indication of the extent to which an "open file system" in Canada Manpower Centres might contribute to additional extensive information and the extent to which such information might improve job market efficiency. It is, of course, entirely possible that additional extensive information is desirable, but that an "open file system" may not be the best way to provide it, in which case alternative techniques should be explored.

A shift of emphasis in the activities of the Centres towards providing extensive information might be accompanied by some decline in

¹This argument roughly parallels that presented by A. Weber in "The Role and Limits of National Manpower Policies", Industrial Relations Research Association, Proceedings of the 18th Annual Winter Meeting, New York, December 28-29, 1965, p. 49.

²See document on the open system prepared for the Organisation for Economic Co-operation and Development by the Swedish National Labour Market Board, May 1970; and also Noah M. Meltz, "Observations on Sweden's Employment Service", Institute for the Quantitative Analysis of Economic and Social Policy, University of Toronto, November 1970.

³See Dennis R. Maki, *Research and Experimentation in Labour Market Search Behaviour*, Economic Council of Canada Special Study No. 21 (Ottawa: Information Canada, forthcoming).

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placement activities. However, the latter may be substantially maintained, or even extended, in markets that would not be well served by an "open file system". Of course, the Canada Manpower Centres should continue to provide testing, counselling, and referral services to all workers requiring them. In fact, these are not mutually exclusive approaches, and varying combinations of them may be possible.

No firm recommendations regarding private agencies are made here because so little information is available on their operations. Certainly the Swedish experience (private employment agencies as such are not allowed to operate in Sweden) indicates that abolition of private agencies will not cause their "share of the market" to accrue to the public employment service.¹ If it is found that private agencies discriminate among job seekers in an undesirable way, this could be handled by enforcement of appropriate regulations.

The effects of private agency operation in limiting the availability of extensive information in the job market could be minimized by compulsory reporting of vacancies by private agencies to the Canada Manpower Centre, perhaps without transmittal of the name of the employer involved. The file in the Canada Manpower Centre offices, open or closed, could list the extensive information on the vacancy, along with the name of the private agency involved. If it is deemed inappropriate to spend public funds to improve the profits of a sector of private industry in this way, consideration could perhaps be given to regulating private agency fee schedules.

In brief, private agencies are viewed as performing their proper function when they serve as an employer's "hiring office". As such, they might be integrated into the job market information system. However, further research into this neglected but important area of labour market activity is required before such a strategy could be developed.

Finally, it is useful to reiterate two previous points about the evaluation of Canada Manpower Centre operations. First, because of the strong interrelationships among their many functions, procedures must be developed to encourage a total or overall approach to evaluation. Second, information on the placement activities of the Centres and related data should be collected and published in a timely and useful manner so as to permit public monitoring of their operations.

¹The Swedish Confederation of Trade Unions, *Labour Market Policy: A Swedish Trade Union Programme, 1967*, Stockholm, p. 21.

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THE ECONOMIC Council has previously devoted considerable attention to the importance of education in Canada for the growth of our economy and the evolution and development of our society. This chapter continues the Council's work in this goal area within the context of the decision-making framework elaborated earlier in this Review.

A large and growing volume of Canada's manpower and capital resources has been devoted to education, particularly over the last decade. There was a general recognition in the early 1960's that our economic and industrial growth depended, in part, upon an adequate supply of people with certain types of skills and education. In addition, a significant portion of the professional and skilled segments of the labour force had been drawn from abroad, and it was felt that we should not have to lean so heavily upon these sources for our trained manpower, particularly since these sources were not certain over the longer term. Consequently, the educational systems in Canada have been considerably expanded, and more Canadians than ever before are receiving formal education, particularly at the post-secondary level. Beyond the formal educational systems, a very rapid growth has also been taking place in educational activities of other types.

Most of the expansion in formal education has been financed through tax revenues; about 90 per cent of the funds for formal education and vocational training in both 1960 and 1967 came from governments. The magnitude of the expansion is indicated by the fact that the portion of total expenditures devoted to education by all levels of

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government rose from nearly 15 per cent in 1960 to about 20 per cent in 1967 and to a still higher proportion by 1970. As expenditures have grown, both the decision-makers in our society and the general public have shown a heightened interest in, and concern about, the objectives of education, the degree to which these objectives are being achieved, and the nature and extent of the benefits derived from education in relation to the mounting costs.

We share these interests and concerns. In the *Sixth Annual Review*, we estimated that educational expenditures might reasonably be expected to increase by about 8.5 per cent a year in constant dollar terms over the period 1967-1975, provided the economy was operating close to potential by the mid-1970's. In fact, the actual rate of growth of expenditures since 1967 has significantly exceeded this figure, even though the economy has been operating below potential. This further underlines the necessity for ensuring that our educational systems are functioning effectively and efficiently.

Discovering the most effective ways to utilize our educational systems has proven to be somewhat difficult, partly because of the lack of adequate data and partly because the role of education in our social system is not fully understood. There is no consensus on the relative importance of the various objectives of education, nor on the extent to which the educational systems contribute to these objectives. Further problems arise from the inadequate development of systematic methods of policy and program formulation and evaluation.

The analysis presented here will not provide any final answers. It is based on highly aggregated data and tends to concentrate on those aspects of education which can be quantified. Much additional information would be required for appropriate policy and program decisions in this complex field. However, this chapter does indicate the influences and interrelationships of some of the factors at work in the educational process. It will assist in raising questions about the relative importance of the objectives of our educational systems in Canada, about the means being employed to achieve these objectives, and about the efficiency, effectiveness, and equitability with which the resources allotted to education are being used. Firmer conclusions on the need for, and efficacy of, various policies and programs await more information and the development of improved analytical methods.

The discussion in this chapter is divided into four sections:
—the general policy objectives of education;

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- the necessity for output measures that can be used to evaluate the effectiveness of policies and programs in relation to the objectives of education;
- the calculation of proxy measures of some economic aspects of educational output; and
- some redistributive aspects of postsecondary educational expenditures.

POLICY OBJECTIVES OF EDUCATION

Education has the potential to enrich the lives of individuals by developing and refining some of their faculties, skills, and attitudes. The public has generally been willing to support educational activities, within reasonable limits, partly because it has come to recognize that certain benefits flow to society as a whole and not merely to the individuals who receive an education. However, what these benefits are and how large they are, become questions of considerable concern when the costs of education rise significantly, as has been the case in Canada in the recent past. The identification and quantification of the benefits of education have proven to be knotty problems. Nonetheless, it seems clear that education can contribute to two fundamental objectives of society—namely, economic growth and cultural development. Moreover, because of its importance in distributing throughout society the skills and attitudes which contribute to economic growth and cultural development, education may significantly affect another fundamental objective of our society—namely, equality of opportunity.

From the viewpoint of economic growth, educational expenditures may be viewed, in part, as an investment in human capital. Education results in the acquisition of knowledge and skills by the individual, and these have a certain value in the labour market. In general, they increase the efficiency of the production process, as well as the earnings of the individual. However, education is not only capable of improving productivity directly; it may also do so indirectly, by facilitating “advances in knowledge”. Education may aid the discovery of new ideas, concepts, and technology; it assists in their diffusion by means of publications and the communications media; and it helps to reduce resistance to the adoption of new ideas and innovations, partly because there appears to be a close association between education and an individual’s ability to adapt to change.

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There are other ways in which education may indirectly benefit economic growth. These often involve benefits to people other than those receiving the education. For example, when children are at school, mothers can more readily enter the labour force. Higher levels of education among managers may result in increased capabilities for effective organization of production. The higher the average level of education in the society, the more options governments may have for policy innovation through more sophisticated and complex mechanisms, sometimes involving public participation.

Cultural development, another objective of education, refers to the training and refining of intellectual abilities, the development of character, tastes, attitudes, and good citizenship, and the fulfilment of the individual. It is widely believed that education can contribute to this objective in a number of ways. For example, from the individual viewpoint, it may develop and hone the intellect, and perhaps permit the individual freer access to personal satisfactions through changes in attitudes, preferences and life styles. From the viewpoint of society, education can aid in the acceptance of certain social values and behavioural norms. Table 9-1 suggests that higher educational attainment (as indicated by socio-economic status) is associated with more interest in government affairs. However, quantifying the contribution of education to cultural development in a consistent and meaningful way has proven to be a very difficult undertaking.

TABLE 9-1—SOCIAL CLASS AND INTEREST IN GOVERNMENT AFFAIRS

Interest in Government Affairs	Socio-Economic Status, as assessed by Interviewer				
	Upper	Upper Middle	Middle	Lower Middle	Lower
Low.....	10%	20%	23%	25%	29%
Fairly low.....	9	7	8	8	11
Moderate.....	25	27	31	33	30
High.....	56	46	38	34	30
Total.....	100%	100%	100%	100%	100%
Number of replies.....	625	3,361	3,823	4,169	974

SOURCE: Reprint of Table 26 from Report of the Task Force on Government Information, *To Know and Be Known*, vol. 2 (Ottawa: Queen's Printer, 1969), p. 73.

Equality of opportunity—a further objective of education—implies equitability of access to the skills and knowledge provided by the

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educational process. "Equitability of access" has been defined in a number of ways. For example, it has been used to signify equal access to noncompulsory education for all those of equivalent ability; equal rates of participation in noncompulsory education by all socio-economic groups in society; equal expenditures per student and access to equivalent resources for all students at particular levels in the educational system; or equal opportunity to realize intellectual potential for students from all socio-economic groups. These different definitions have differing implications for the allocation of resources both to, and within, the educational system.

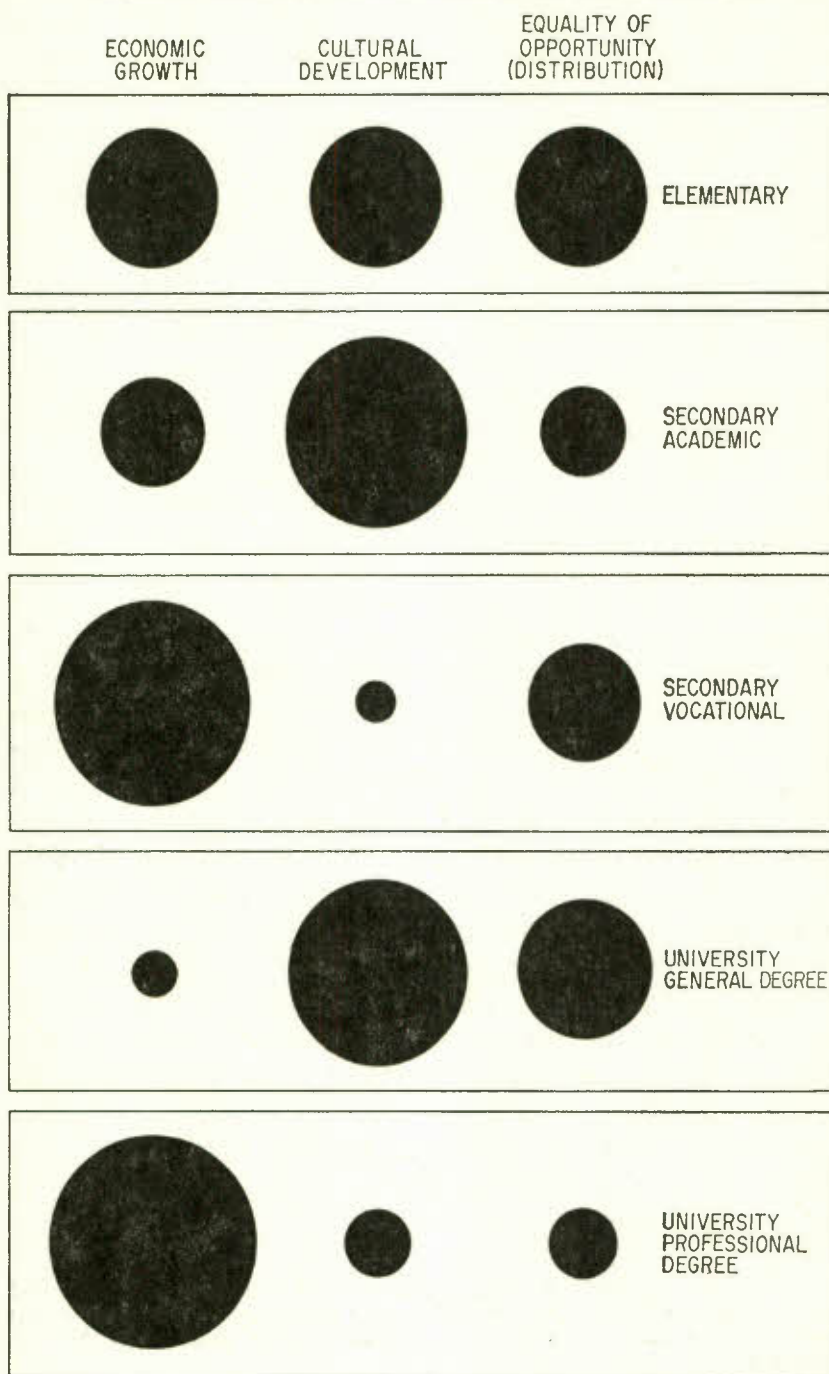
In the various educational systems in Canada, the major efforts to achieve equitability of access have been directed towards reducing financial barriers to attendance,¹ and to removing the differences in the quantity and quality of resources allocated to equivalent institutions. However, these efforts have not been wholly successful, partly because there are many other factors that can also have a significant effect on accessibility. These include motivation, home environment, and previous scholastic achievement. Although these factors are of considerable importance, they are harder to influence.

Obviously, the contributions of education to these three basic objectives—economic growth, cultural development, and equality of opportunity—interact. Sometimes they reinforce one another; sometimes they are in conflict. As an example of the former, the development of certain skills that contribute positively to economic growth is sometimes coincident with the acquisition of knowledge and attitudes that are beneficial to cultural development. As an example of the latter, attempts to provide equality of opportunity may be in conflict with economic efficiency; yet these attempts may still be appropriate for good and sufficient social reasons.

In spite of these and other interactions, the design of appropriate policies and programs requires an awareness of the relative contributions of education to these three objectives for each stage of an educational system. What these relative contributions might look like is illustrated in an impressionistic way in Chart 9-1. What is required to move beyond impressions is improved measurement of educational outputs.

¹However, virtually all financial schemes designed to improve accessibility fail to take into consideration the role that forgone earnings may play in preventing students, particularly in the lower socio-economic groups, from continuing their education.

CHART 9-1
AN IMPRESSIONISTIC VIEW OF
RECENT POLICY OBJECTIVES FOR EDUCATION



Note: The areas of the three circles at each level of education add to the same total size. No comparisons among levels of education should be made.

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TOWARDS OUTPUT MEASURES FOR EDUCATION

To understand our educational systems, one needs to know, among other things, the nature and magnitude of the inputs into, and outputs from, the systems, as well as the way the inputs are combined to "produce" educational outputs. Calculation of the overall net output for a particular increment of education requires that all relevant benefits and costs be properly quantified. This overall net output is made up of a number of partial outputs reflecting various dimensions of an educational system. These various output measures can, in principle, be used as indicators to monitor how well the various programs and policies are functioning.

When analysing the various measures of output from education, one must attempt to distinguish between *effectiveness* and *efficiency*.¹ If, for example, the net benefits from a particular program are low, relative to expectations, this could be the result of various factors: the program may be ineffective in achieving its aims because of its basic nature or design; or it may be suffering from internal inefficiencies (related, for instance, to productivity performance or to the quality of inputs, such as administration, teachers, students, or capital). Since the educational system functions largely apart from market forces, we cannot assume, as we might for the private sector, that inputs will generally be combined in the most efficient way to produce a certain level of output.

In addition, output measures of the type discussed here should be designed to capture adequately the distributional dimensions of education. How, for example, are the benefits of education distributed by age, sex, region, income group, ethnic group, and so on? One may also wish to know the distribution of costs among regions, income groups, individuals, and so on, so that the distribution of costs and outputs can be related.

One of the principal problems in deriving the outputs or net benefits of education is to determine the portion of those achievements and accomplishments that is genuinely attributable to the educational system, as distinct from that which is the result of external factors—such as aptitude or the home environment.² In a fundamental sense,

¹See, for example, Walter Hettich, "Expenditures, Output and Productivity in Canadian University Education", Economic Council of Canada Special Study No. 14 (Ottawa: Information Canada, 1971).

²At least four key sets of data are necessary to attempt the separation of these influences—information on school characteristics; information on the home environment; intelligence, ability and aptitude test scores; and achievement test scores for particular cognitive and motor skills, for personality development, and for social adaptation.

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the *real* output (see Chapter 5) of the educational system is the change in students' cognitive and motor skills, in their personality development, and in their ability to function within the social system—in so far as these changes are the direct result of the educational process. These are the accomplishments or achievements that ultimately contribute to economic growth and cultural development. If one could measure these changes, then one would be able to measure the net benefits of education.¹ This would be a "value-added" measurement. Measures of aptitude and other factors external to the educational process (such as home environment) should not be included in real measures of the output from education, since they are not associated with the "net influence" of the educational process on individuals.

An understanding of these external factors, and measures of the magnitude of their effects on student aspirations and performance, would be of great help to decision-makers. If, for example, the measures of educational output in a region are low, this may be the result of external factors rather than factors within the educational system. Under these conditions, increased allocation of resources to improvement of school facilities or further reduction of student-teacher ratios would be relatively ineffective in improving output, whereas moves to influence certain aspects of the external situation might be quite rewarding.

All that has been said so far in this section underlines the value and necessity of good measures of real output. Unfortunately, however, no really satisfactory real output measures have yet been developed for education, partly because many of the benefits cannot be quantified readily in monetary (or other) terms. As a consequence, various "proxies" for educational output have been deployed in the absence of better measures. These include enrolments at various levels of education, student flows, average number of years of education (or, for some purposes, university degrees granted or other "threshold-crossing" measures), and the costs of education (including the costs of various inputs, such as teachers' salaries, buildings, and equipment).

Improved proxy indicators of output have been sought in many countries over the past decade or so—indicators that would be more closely equivalent to the *Goal Output Indicators* discussed in Chapter 5. An example of a useful proxy measure of output is the estimation of the monetary value to the individual or to society of the market-

¹However, this would require some form of weighting either in monetary or other terms.

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able skills and knowledge developed between two particular levels within the educational system. These are generally derived from the different incomes associated with different levels of education. Later in this chapter, some partial measures of the returns from education in Canada will be discussed.

Proxy or substitute measures indicating the degree to which the educational systems function equitably have also been employed in the absence of real output measures and their associated distributional aspects. Data on the retention of students within the education system, by province and school district, and on the proportion of children of eligible age participating in education, by income, ability, and ethnic group, have been used to derive substitute measures to show the distribution of "intellectual development" provided by the educational system. These data generally show variations in retention rates by province and school district, indicating that the chances of a student gaining "intellectual development" through the educational system may vary with place of residence. Variations in participation rates, by socio-economic class, imply that children coming from lower socio-economic strata have less chance of benefiting from the educational system. U.S. studies, which adjusted for differences in ability, imply that the degree to which skills are developed in the educational system varies positively with the socio-economic class from which the student comes.

In estimating the contribution that various inputs make to educational outputs, certain proxy measures have been used. If the measure of output is a *net* measure, then only those inputs related directly to the formal educational systems are used. If the measure of output is a *gross* measure, then inputs that are concerned with factors external to the educational systems are also included.

Along these lines, we have done some preliminary work on the relationship of certain inputs to two particular proxy outputs for the secondary school systems in Canada.¹ The inputs (which are often "proxy" measures of real input) include factors both *internal* and *external* to the educational systems. The proxy gross output measures employed were the number of students who had passed all their high school years to date (a performance-oriented measure) and the proportion of students who planned to complete high school (an aspirations-oriented measure).

¹The data were obtained from 360 secondary schools in Canada by the Department of Manpower and Immigration, in conjunction with the provincial governments, in the mid-1960's. The selection of the inputs in our work was limited by the design of the survey questionnaires.

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The initial results, which must be considered still tentative and preliminary,¹ indicate that the number of students in a particular school who had passed all their high school years to date was found to be significantly *greater*:

- the higher the educational level of fathers;
- the higher the aspirations of students;
- the larger the size of the students' families;
- the higher the proportion of families with two parents;
- the greater the percentage of students in the academic (as opposed to vocational) program;
- the fewer the average number of subjects taught per teacher; and
- the larger the proportion of female teachers.

Factors such as adequacy of libraries and school equipment, the degree of participation in extracurricular activities, the student's sense of control over his or her own destiny, and the level of education of the teachers, had relatively little impact on the proxy output measure. However, this study is not exhaustive and much remains to be explained.

The proportion of students who planned to complete high school was significantly *larger*:

- the higher the average educational level of the community;
- the greater the participation in extracurricular activities;
- the better the library facilities;
- the greater the student's sense of control over his or her own destiny;
- the higher the aspirations of the parents; and
- the higher the proportion of families with two parents.

Those inputs which had little effect on student aspirations to complete high school include the student-teacher ratio, the education of the parents, the education of the teachers, the experience of the teachers, the size of the community, the sex of the teachers, and the average number of subjects taught per teacher.

The initial indications from this analysis are that the influence of factors *external* to the school systems may now be weighing more heavily on performance and aspirations (as measured here) than those factors *internal* to the educational systems. If so, our secondary school systems may, in general, have reached a certain level of maturity at which significant further improvements in the performance

¹The analysis and results will be presented in more detail in J. B. Lacombe, *Some Economic Aspects of Education in Canada*, Economic Council of Canada Staff Study No. 34 (Ottawa: Information Canada, forthcoming).

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or aspirations of students may not be best obtained by further considerable build-up of resources in the secondary school systems (although this may not hold true for all provinces). Rather, efforts to improve performance and aspirations should focus on those relevant facets of the social system external to the formal educational process.

We mention this analysis, even though it is still in a very preliminary form, mainly because it serves to illustrate what must be done to obtain a broad understanding of how the educational systems function. If more effective programs and policies are to be developed, it is important to determine more clearly the relationship between the various inputs and the resulting output. However, it is important to go beyond this and quantify the full costs and benefits of a particular program or activity (taking into account the determined relationships between the various inputs) so that better judgments can be made to guide the allocation of resources among various educational programs. Obviously, much work remains to be done to achieve this.

SOME MEASURES OF RETURNS FROM EDUCATION

One of the proxy measures of output, widely employed in studies of education in the absence of better measures, is an estimate of partial monetary returns from education. To obtain these returns, certain benefits that can be put in monetary terms and that are associated with the achievement of a particular level of education over a lower level (for instance, the completion of secondary school over the completion of elementary school) are compared with the related costs of obtaining that increment of education. These particular benefits are derived from skills that have a market value. In general, the higher the level of education, the more the skills are valued (as indicated by higher average earnings).

The market valuation of the skills developed in the educational system is assumed to be a portion (defined below) of the differences in lifetime earnings associated with the attainment of various levels of formal education. As indicated above, the benefits thus calculated are used in the estimation of the partial returns from education. These returns can be determined either from society's or the individual's viewpoint, and in this section some estimates are presented from both viewpoints. In addition, the value of the option created by education "to receive additional education" is briefly examined.

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Estimates of the partial returns from education are of value in the examination of policies and programs in education. However, the returns presented here are highly aggregated and deal only with certain types of education (high school and university); hence, they should be employed with considerable care and should not be used to draw hasty conclusions. Effective policy and program decisions require some knowledge of the returns from other types of education, particularly non-university postsecondary education, and some idea of the relative returns associated with different fields of study.¹ These latter measures, in combination with other indicators of the supply-demand situation for various types of manpower, would be of considerable help in determining where, for growth purposes, the emphases should be put in our educational systems.

The returns presented in this section are subject to another limitation—not all the benefits of education are included in the market valuation. Examples of those omitted are: a greater sense of individual and community identity, responsible citizenship, and more effective consumer activity and satisfaction. As a result, the benefits of education suggested by earnings differentials may somewhat understate the full benefits of education. Nonetheless, the portion of the earnings differentials that is associated with the marketable skills acquired through additional education may represent a reasonable lower-limit approximation of the full benefits of that increment of education if various market imperfections, such as the artificially high earnings that may arise in certain monopoly or supply situations, are relatively small in their effect.

As indicated above, the earnings differentials between particular levels and types of education can only be partially assigned to those marketable skills developed within the educational system. Natural intelligence, ambition, home environment, social connections, informal education, and nonacademic training also affect earnings differentials. In addition, the diploma, certificate, and degree can act as a screening device for employers. In so far as they convey information to the employer on skills acquired in the educational system, they affect the portion of the earnings differentials associated with a particular increment of formal education; in so far as they convey information to the employer on ability and drive, they affect the portion of the earnings differentials associated with these other aspects.

¹*Ibid.*

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Some studies have attempted to assess the portion of the earnings differentials associated with skills and knowledge developed in the formal educational systems. These have generally concluded that perhaps 60 to 75 per cent of the differences in earnings between individuals with different levels of education are a result of these skills and knowledge. We have employed the 60 per cent figure in our work and believe that this adjustment improves these estimates of the returns from education. However, we recognize that this division is somewhat arbitrary, since the information necessary to establish the actual proportion related to formal education and the proportion related to ability, ambition and so on, is simply not available. The best method for deriving such information is through longitudinal surveys (see Chapter 4), which compare the earnings and work experience of samples of people with differing levels of education.

In the following analysis, we consider the returns from education in terms of both the *returns to society* and the *returns to individuals*. These estimates are presented as *internal rates of return*, which is a type of benefit-cost calculation.¹ The higher the internal rates of return, the better the investment.

The returns to society and to individuals from a high school education—that is, from the increment of education representing the completion of secondary schooling over the completion of primary schooling—are shown for 1961 and 1967 in Chart 9-2. Returns are given for the country as a whole and for certain provinces and regions. The earnings differentials have been adjusted for mortality, for the probability of labour market participation, for a long-run productivity increase in the economy, and, with respect to the private returns, for the additional taxes paid. The cost figures used to determine the returns to society include instructional costs (operating costs, and capital consumption allowances and imputed interest), the value of municipal services provided to the relevant institutions, the forgone earnings of students, and incidental expenditures such as books and travel. The cost figures used in calculating private returns are those expenses incurred by individuals (tuition, forgone income, books,

¹Since the costs and the benefits occur over a number of years (the benefits occurring over the longer time period), they are discounted to the present so as to make them comparable. The internal rates of return associated with education represent the discount rates at which the present values of the calculated benefits equal the present values of the costs.

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travel, and other incidental expenditures) in pursuing this increment of education.¹

The results presented in Chart 9-2 suggest that the highest returns to society and to individuals from expenditures associated with a completed secondary education occurred in the Atlantic Region and Quebec, in 1961 and in 1967. In both years, the private returns exceeded the returns to society in all parts of Canada. The results further indicate that the returns appeared greater in 1961 than in 1967 and that the differences were most marked for Ontario, the Prairies, and British Columbia.² In other words, secondary education appeared as a better investment in 1961 than in 1967.

The explanation for this apparent change may lie partially in the increase in costs per student experienced by secondary school systems during the 1960's. These increasing costs were associated with a number of developments—including, for example, the growing need for relatively sophisticated equipment, and the inevitable inefficiencies that occur in a rapidly expanding system. A further factor in the change may be the increase in the proportion of the labour force with postsecondary educational experience—creating a displacement of those with a secondary education to lower positions in the labour force, and thereby decreasing the apparent returns. However, many corrective actions can be, and are being, taken to increase the efficiency and effectiveness of the secondary educational system. Therefore, the fact that secondary education appeared to be a less favourable investment in 1967 than in 1961 should not necessarily be taken to represent a long-term trend.

The greater change in these returns in some regions or provinces relative to others between 1961 and 1967 may be partially explained by mobility. Migration, both internal and international, by influencing the supply side of the labour market, may have depressed earned incomes in some regions (lowering the earnings differentials and hence the returns) and increased such incomes in others.

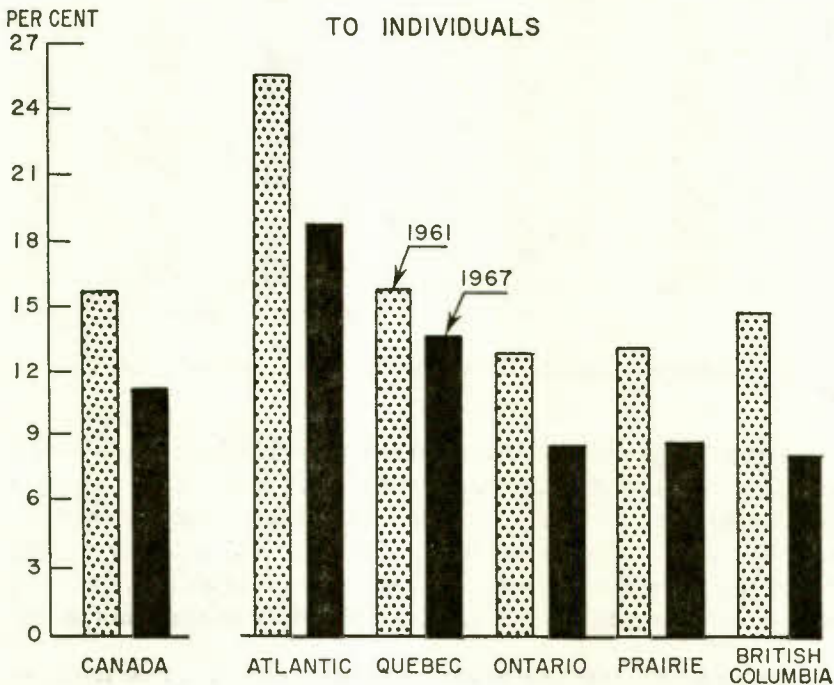
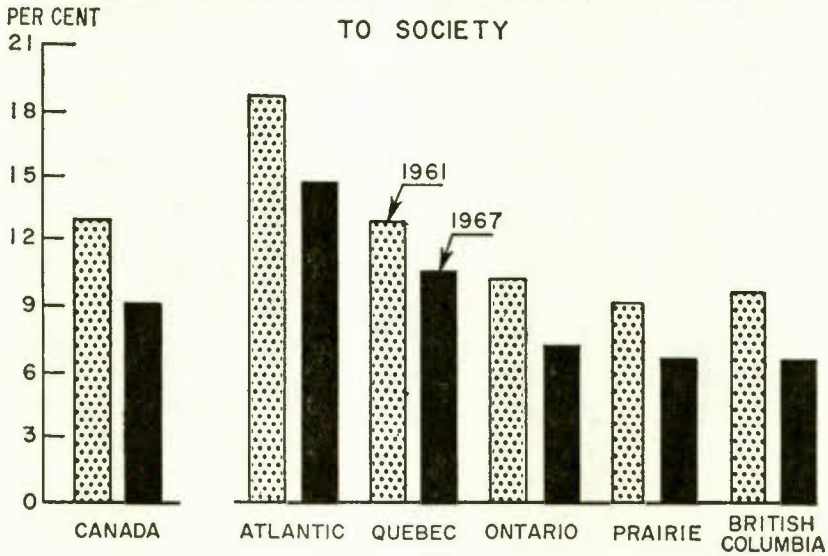
¹The cost figures do not take into account the amount of private investment (and hence the returns from this investment) forgone as a result of expenditures on education. To this extent, the cost figures may understate the opportunity cost of providing various levels of education.

²The differences in coverage between the data for 1961 and the data for 1967 may account for some of the differences between 1961 and 1967 observed in both Charts 9-2 and 9-3. The 1961 data exclude farm families, while the 1967 data include such families. Further, the 1961 data are from the Census and the 1967 data are drawn from a sample of the population. Generally, however, the differences between the results for 1961 and 1967 would seem to be greater than could reasonably be attributed to any discrepancies.

The Changing Educational Scene

CHART 9-2

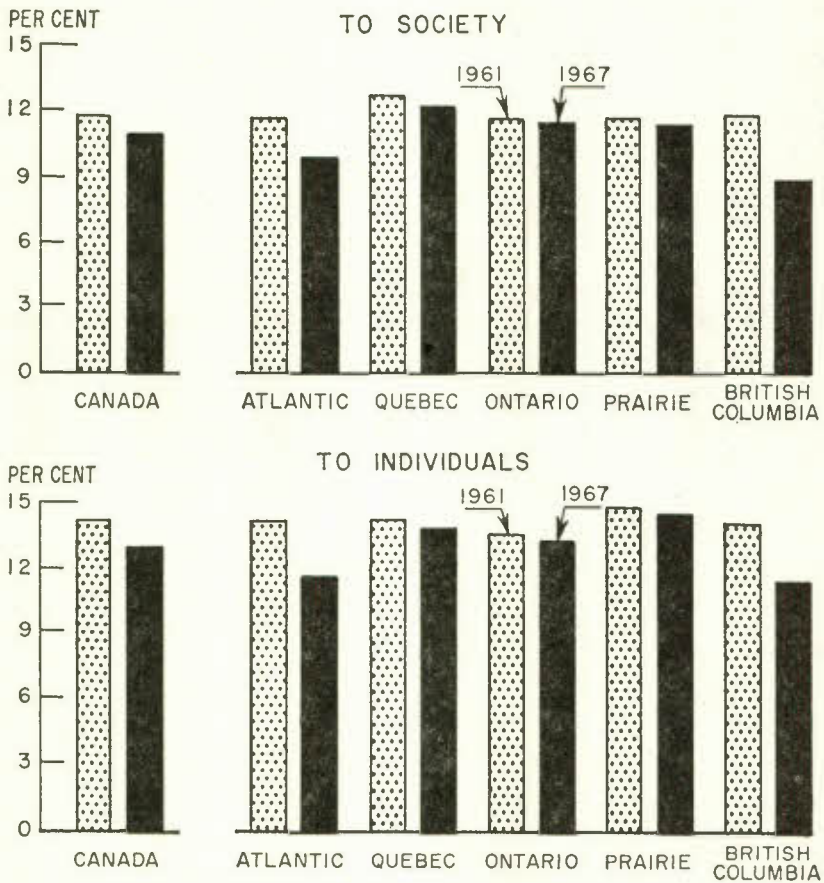
INTERNAL RATES OF RETURN FROM HIGH SCHOOL EDUCATION, MALES, BY REGION



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

CHART 9-3

INTERNAL RATES OF RETURN FROM
UNIVERSITY EDUCATION, MALES, BY REGION



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

Chart 9-3 shows rates of return to society and to individuals from a completed university education—that is, from the increment of education representing the completion of a university education over the completion of secondary schooling—for 1961 and 1967.¹ For both years, the private returns exceeded the returns to society. In 1967, the largest returns to the individual and to society occurred in Quebec,

¹Similar corrections and assumptions were made in calculating these returns as were made in calculating the returns in Chart 9-2.

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Ontario, and the Prairies, and the differences in returns between 1961 and 1967 were relatively small in these provinces (although one might expect the differences to be somewhat greater between 1967 and 1970). Larger differences between 1961 and 1967 in the returns from completed university education (those returns calculated on a 1961 basis appearing greater than those calculated on a 1967 basis) were experienced by the Atlantic Region and British Columbia, suggesting that in these regions university education appeared to be a better investment in 1961 than in 1967.

The explanations for these larger changes are similar to the explanations for the changes in the returns from secondary education between 1961 and 1967. They lie partly in the growing proportion of people with postsecondary education in the labour force in these regions, and in various inefficiencies that tend to grow, at least temporarily, within a rapidly expanding system. However, the differences in the returns from a completed university education were less between 1961 and 1967 than the differences in the returns from a completed secondary education.

With the exception of the Atlantic Region, the rates of return to society from a university degree were higher in all parts of Canada than the rates of return from high school completion in 1967. This suggests that the Atlantic Region may have overemphasized postsecondary education relative to secondary education during the 1960's.

We reiterate that these rates of return must be treated with caution. Education must serve the goals of cultural development and equality of opportunity, as well as the objective of economic growth. However, these returns relate strongly to economic growth.

There are also certain problems inherent in the use of earnings differentials. For example, current earnings differences are unlikely to represent lifetime patterns accurately. The observed differences are based upon current demand and supply conditions in the labour market; postulating that these conditions will hold in the future poses certain difficulties. There are difficulties, too, in interpreting the costs side of these calculations; differences in the efficiency with which the educational systems operate in the various provinces and regions are not explicitly taken into account. Nonetheless, these calculations of the returns from education serve as useful indicators of the relative value of investments in the various educational systems across the country.

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Returns to society from education are of interest to those concerned with the formulation of policies and programs in education; private returns are more relevant to the choices an individual will make in pursuit of an education. However, a greater disaggregation of private returns than is shown here is needed before these will be of any real value to an individual in making choices with respect to his or her education. Indications are that private returns can vary considerably from field to field, particularly those from higher education. For example, in Ontario the private rates of return for males in 1961 ranged from about 24 per cent for dentistry to virtually zero for social work.¹ From the viewpoint of public policy, if full private returns (with *all* costs and benefits taken into account) from certain fields of postsecondary study were found to be consistently higher than the full returns to society, then the question would arise as to whether public subsidies of these fields should be continued at the present levels or whether individuals should contribute more in some manner. However, various other considerations would also need to be taken into account in answering any such question.

Another factor has an effect on the returns from all levels of education and, in particular, on the returns to society.² This is the value of the "option" for additional education created by having a specific educational attainment. The value of lower education lies partly in the option that it provides to go on to higher educational levels. Thus, part of the returns to society from higher educational levels are attributable to lower educational levels. This results in a shift of benefits down the educational ladder—with primary education "gaining", university education "losing", and secondary educa-

¹D. Stager, "Monetary Returns to Post-Secondary Education in Ontario", unpublished Ph.D. dissertation, Princeton University, 1968. Formal education was assumed to account for 67 per cent of the observed earnings differentials.

²The intergeneration effects—that is, the influence of the education of the parents on the educational accomplishments of the children—have a relatively small impact on the rates of return. Although a small part of the returns to an individual should thus be taken away from him and ascribed to his father, the same must be done with respect to the returns from the education of the individual's son. Thus the returns to the individual will be diminished by the amount that should be ascribed to the returns from the father's education, and increased by the amount that should be ascribed to his returns from his son's returns; and the difference this would make is very small. The amount that should be transferred from a son's returns to his father's returns, with respect to the father's completed secondary education, was about 2½ percentage points in 1967 (on the assumption that the father's expenditures on his son's education come out of family income in the same year). The full intergenerational effects, however, taking into account preceding and later generations, would be a fraction of this.

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tion holding about even (some benefits being lost to primary education and some being gained from the university level). To illustrate the general order of magnitude of this effect in Canada, the option to attend university is estimated to have decreased the internal rate of return to society from university education by about three percentage points for 1967.

This section has attempted to provide an indication of the kinds of analyses necessary to study the efficiency of the educational systems. The economic growth aspects of education discussed here provide a useful framework for asking questions about policies and programs in education. But much additional work must be done, particularly with respect to quantifying the other benefits of education and disaggregating the returns. Only then will it be possible to make considerably more effective use of analysis of the returns from education for policy and program formulation.

FISCAL TRANSFERS

We turn now from the economic growth aspects of education to a consideration of certain distributional aspects. Since education is financed largely by taxes, education programs have the effect of distributing the benefits and costs of education among income groups and regions. Greater equity in the society would be promoted by a neutral distribution of the benefits of education. A "neutral" distribution of these benefits is usually taken to imply that access to educational opportunity should be in accordance with the distribution of "ability" in the society.

Although ability is probably the best criterion against which to assess the degree of access to the educational systems, unfortunately such information is not readily available at present. Nonetheless, there are some indications that access to the educational systems (and hence to the benefits that are derived from education) is not as equitable as one might wish. For example, children from low-income families still have problems financing their postsecondary education. More important, the effects of family background and community values on the motivations and aspirations of children produce the observed intergenerational links between the educational levels of parents and children, and these links tend to perpetuate certain barriers to mobility between socio-economic classes. Also, the individual's access to education appears to differ considerably among regions in ways that appear to have no relationship to ability.

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The merits of the present distribution of the *benefits* of education through access to the systems cannot be precisely determined. But it is possible to examine certain aspects of the distribution of the *costs* of education in relation to the patterns of use of the educational systems. The degree to which various socio-economic groups or regions make use of educational systems (and benefit thereby) is not judged, but taken as given for the purpose of this discussion. The distribution of costs is then related in this pattern of use to see if the distribution is *progressive* or not—in other words, to determine whether the costs are distributed among income groups and regions in such a manner that the higher-income groups and regions pay proportionately more, relative to their participation rates, than the lower-income groups and regions. In what follows, we focus on the distribution of the costs of postsecondary education in Canada.

The costs of postsecondary education are distributed among regions and income groups mainly through the collection of taxes by governments, on the one hand, and the payments of subsidies for postsecondary education, on the other—in other words, by *fiscal transfers*. Currently, the payment of subsidies by the federal government occurs explicitly in accordance with the terms of an agreement undertaken in March 1967 by the federal government in which it agreed to pay 50 per cent of the operating costs for postsecondary education (excluding assisted research) or to pay a base figure corresponding to \$15 per capita to the provinces.¹ This agreement replaced the federal government's previous method of supporting the costs of postsecondary education, which entailed a fiscal arrangement with the provinces involving, by fiscal year 1966-67, a per capita grant of \$5 to them.

¹Under the federal-provincial Fiscal Arrangements Act, 1967, three provinces chose the option of receiving the base payment of \$15 per capita—Newfoundland, Prince Edward Island and New Brunswick. In subsequent years the transfer to these provinces was increased over the previous transfer by a percentage equal to the rate at which national postsecondary expenditures grew relative to the preceding year. Eligible operating expenditures for the other provinces include academic, library, administrative, plant and miscellaneous costs. Among the items excluded are student financial aid; capital, debt or depreciation (except for the purchase of books, periodicals and related items such as films and tapes); alterations; auxiliary enterprises; overhead expenditures of provincial government departments; assisted, sponsored or contract research; and all rental charges except those for computers, data processing, and photocopying equipment. To the resulting operating costs (except for senior matriculation expenses) are added the expenditures for furniture, equipment, and building repair, renewal, renovations and alterations up to 8.5 per cent of the total operating expenditures. The federal government pays 50 per cent of this final total.

This agreement is scheduled to expire early in 1972 and the question of revision of this agreement is currently under consideration by the federal and provincial governments.

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This section examines, first, the regional effects of federal fiscal transfers for postsecondary education, and then the distributive impact on different income groups of federal and provincial financing of postsecondary education. Under the terms of the present agreement between the federal government and the provinces, postsecondary education includes: universities, community colleges and CEGEP's (Collèges d'enseignement général et professionnel),¹ teachers' colleges and classical colleges, as well as senior matriculation in high schools. The data in this section refer principally to academic year 1968/69, and they are generally in line with the corresponding data for 1967/68.

Regional Effects of Federal Fiscal Transfers

The size of the federal subsidy to a province for postsecondary education depends upon the combined operating costs of the relevant institutions and upon the province's choice of the basis of payment (50 per cent of operating costs or \$15 per capita). These subsidies totalled over \$525 million in academic year 1968/69 and ranged from \$2.0 million for Prince Edward Island to nearly \$200 million for Ontario—mainly, of course, as a result of large provincial differences in enrolment.² However, operating costs per student also show a considerable variation among both provinces and types of institutions (Chart 9-4). The operating costs per student (full-time equivalent) in the universities varied from about \$2,700 for Ontario to under \$1,600 for Prince Edward Island and New Brunswick in 1968/69. To illustrate the variations in operating costs per student among different types of institutions within a single province, the costs in Nova Scotia ranged from over \$2,350 for the universities to about \$1,300 for the community colleges, with about \$850 for senior matriculation.

The operating costs per full-time equivalent *university* student in each province are shown in Chart 9-5 for 1968/69, and these are broken down into the sources of the funds—federal subsidies, provincial subsidies, tuition, and other sources. The federal subsidies are often thought to be provincial subsidies because the funds flow from the federal government to the universities through the provincial government, in accordance with the agreement reached in 1967.

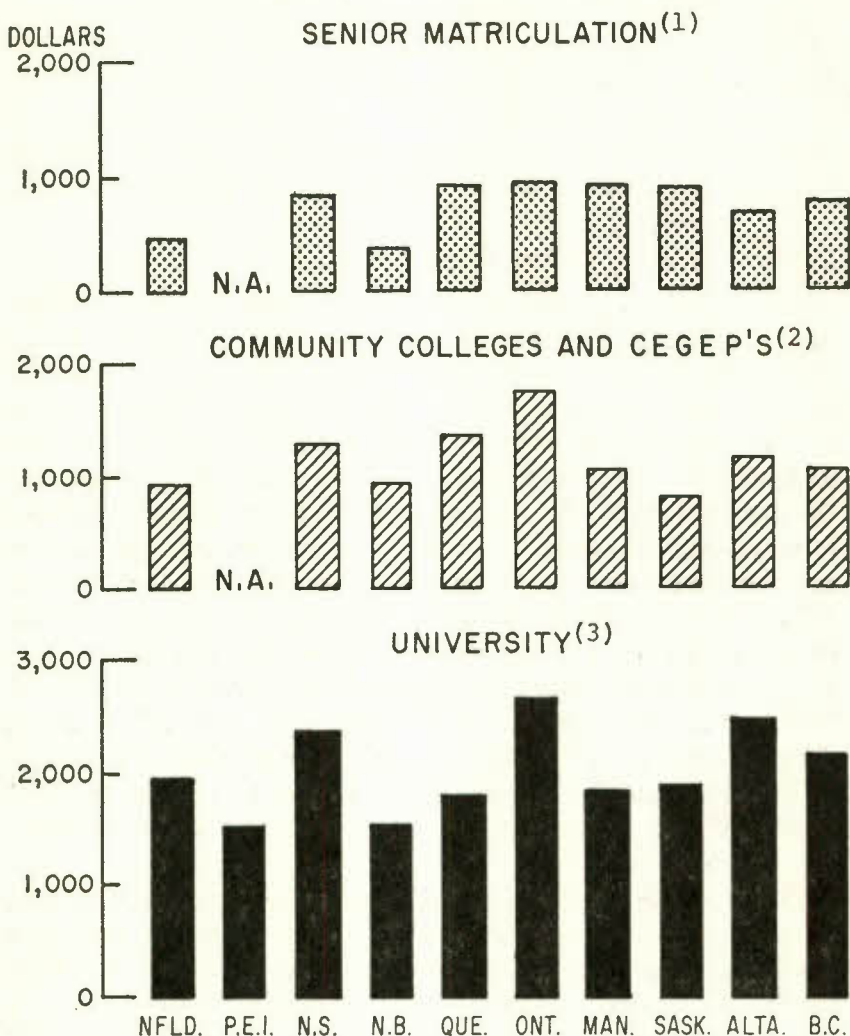
¹The term "community colleges" is defined here to include such non-university postsecondary institutions as junior colleges, regional colleges, institutes of applied arts and technology, and agricultural colleges.

²Calculated on the basis of province of study, as opposed to province of residence.

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CHART 9-4

OPERATING COSTS PER STUDENT IN POSTSECONDARY EDUCATION, BY PROVINCE, ACADEMIC YEAR 1968/69



⁽¹⁾The senior matriculation enrolment is minute (less than 100) for Newfoundland, Prince Edward Island, and New Brunswick. It is somewhat larger, but still relatively small, for British Columbia (about 1,500 versus 25,000 for Alberta).

⁽²⁾Part-time students are included in terms of full-time equivalents. These estimates need to be used with caution in the light of the effects in 1968/69 of the emergence of new institutions and the rapid expansion and changes taking place in many existing ones.

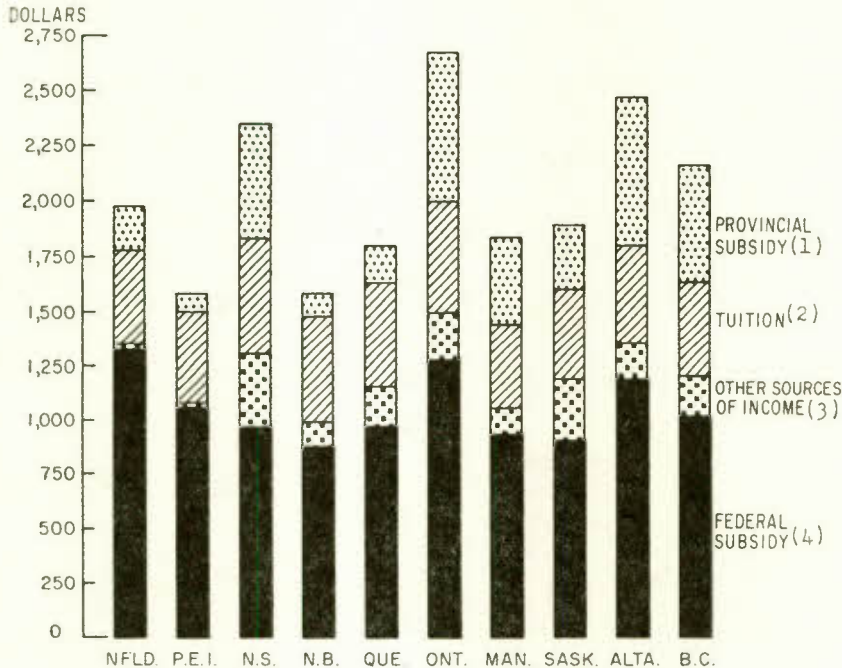
⁽³⁾Assisted research is excluded. Summer students and part-time students are included in terms of full-time equivalents. Classical colleges are included in the university sector.

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

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CHART 9-5

SOURCES OF FUNDS FOR UNIVERSITY OPERATING COSTS ON A PER-STUDENT BASIS, BY PROVINCE, ACADEMIC YEAR 1968/69



Note: Classical colleges are included. Part-time and summer students are included on a weighted full-time basis. Assisted research is not included in the operating costs.

(1) Calculated as a residual.

(2) Both the provincial and federal governments give various stipends to university students, some of which are bursaries and grants intended for tuition. On the average in Canada, these stipends amounted to \$58 per student from the federal government, and \$118 per student from the provincial governments in 1968/69 for undergraduates. Some of the total tuition may go towards paying a portion of the capital depreciation costs, but this would not significantly affect these results.

(3) These include municipal governments, endowments, alumni contributions, and business, industry and church contributions.

(4) These are the funds transferred specifically by the federal government to the provinces in accordance with the 1967 agreement.

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

The direct provincial subsidies range from about 25 per cent of the operating costs per full time equivalent student for Alberta and Ontario, to around 6 per cent for New Brunswick and Prince Edward Island. The provinces, however, pay the largest share of the capital

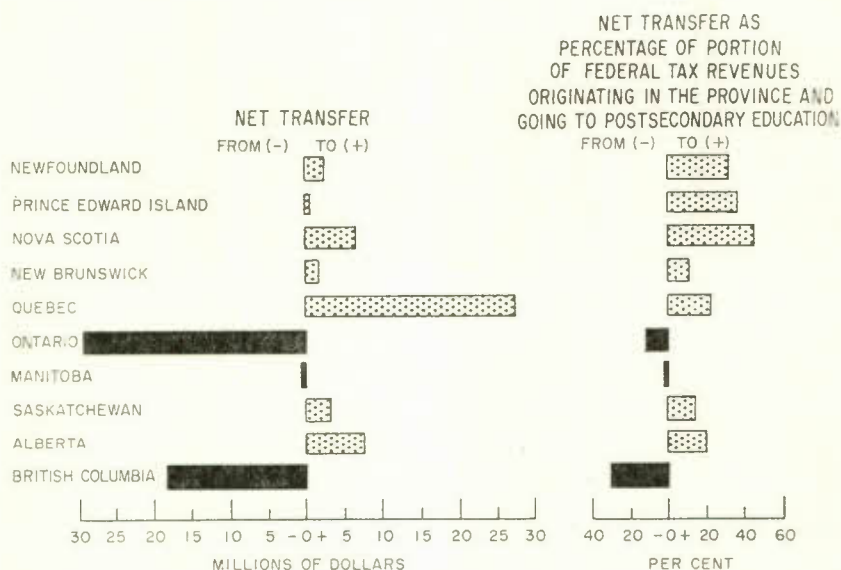
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costs. Although depreciation of capital is, on the average, less than 10 per cent of the operating costs, new capital investment in recent years has been large, creating considerable financial strains for the provinces. Further, the provinces also provide various forms of student assistance.

For the non-university postsecondary sector, the situation is different. Here the provincial governments pay much closer to 50 per cent, since the tuition fees and other sources of funds contribute a relatively smaller proportion of total expenditures (although tuition fees in some community colleges are quite high).

CHART 9-6

FEDERAL FINANCING OF POSTSECONDARY EDUCATION: NET FISCAL TRANSFERS AMONG PROVINCES, FISCAL YEAR 1968-69



Note: These transfers occurred in accordance with the Federal-Provincial Fiscal Arrangements Act of 1967. Postsecondary education includes universities, community colleges and CEGEP's, teachers' colleges, and classical colleges, as well as senior matriculation in high schools.

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

For the postsecondary sector as a whole, a considerable fiscal transfer is occurring among provinces through the federal government. Thus Chart 9-6 shows the difference between the federal subsidies

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to all postsecondary education for each province and the estimates of the federal tax revenues (originating in each province) that are used to finance such subsidies.¹ As in earlier chapters, these are termed net fiscal transfers. The chart also shows these in relative terms—that is, such transfers as a percentage of the relevant federal tax revenues from each province. As may be seen, fiscal transfers are made, on balance, from British Columbia, Ontario and, to a very small extent, Manitoba to all other provinces—with Quebec the largest absolute recipient, and Nova Scotia, Prince Edward Island, and Newfoundland the largest relative recipients. It should be remembered, however, as shown in Chapter 7, that the main flows of migration from the lower-income provinces go to British Columbia and Ontario; in other words, such fiscal transfers are at least partly offset by return flows of human capital.

To some extent, revenues are transferred from provinces with above-average incomes to provinces with lower-than-average incomes. However, this relationship is not strong. For example, Alberta, which has allocated relatively large resources to the development of postsecondary education, is a net beneficiary of these fiscal transfer payments, even though it is a relatively high-income province.

The interprovincial mobility of students—students going outside their province of residence to study—results in the transfer between provinces of a small, but significant, portion of their federal postsecondary subsidies. As a “donor province”, Alberta, for example, spends more on students from all the other provinces than all the other provinces, taken together, spend on students from Alberta. In fiscal year 1968-69, the “donor provinces” were Nova Scotia, New Brunswick, Ontario, Alberta, and British Columbia. Prince Edward Island and Saskatchewan were the largest “recipients” in relative terms.

Access to Postsecondary Education, by Income Group

An indication that the postsecondary system in Canada is used to a greater extent by students from the higher-income groups is given in Table 9-2, which shows the distribution of postsecondary students, by parents' income, for academic year 1968/69.² Of the

¹A full explanation of the estimation procedures used for such calculations will be published in a forthcoming study by D. M. Paproski and J. Cousin, *The Incidence of Selected Taxes, by Province and Income Groups*, for the Economic Council of Canada, mimeo.

²Income is defined here as gross money income from all sources before taxes, but does not include capital gains or losses.

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total in postsecondary education (excluding senior matriculation students), more than a third came from families with annual incomes over \$10,000; less than a fifth came from families with incomes under \$5,000. By comparison, less than a fifth of the families most likely to have children in the 16-25 age group had incomes of more than \$10,000, while the incomes of about a third of such families were less than \$5,000.

A closer examination of the data in Table 9-2 reveals that less than a quarter of those enrolled in community colleges and CEGEP's came from families with incomes over \$10,000. On the other hand, nearly two-fifths of those enrolled as undergraduates in universities came from families of this latter income group. This indicates that there may be greater barriers to universities than to community colleges for students from the lower-income groups. However, until more is known about the distribution of ability (that is, the capacity for absorbing education) by income groups, this remains an open question.

TABLE 9-2—DISTRIBUTION OF POSTSECONDARY STUDENTS BY PARENTS' INCOME, ACADEMIC YEAR 1968/69*

Family Income Group	University Graduate	University Under- graduate	Community Colleges and CEGEP's	Total
(Per cent)				
Less than \$2,000.....	1.4	1.0	0.9	1.0
2,000 — 2,999.....	5.1	4.1	4.3	4.2
3,000 — 3,999.....	6.7	4.9	6.3	5.2
4,000 — 4,999.....	4.8	6.2	8.8	6.5
5,000 — 6,999.....	21.1	20.7	29.7	22.0
7,000 — 9,999.....	21.7	24.6	27.0	24.8
10,000 and over.....	39.2	38.5	23.0	36.3
	100.0	100.0	100.0	100.0
Median family income.....	\$8,502	\$8,600	\$7,003	\$8,349

*Excluding senior matriculation and foreign students.

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

Fiscal Transfers, by Income Group

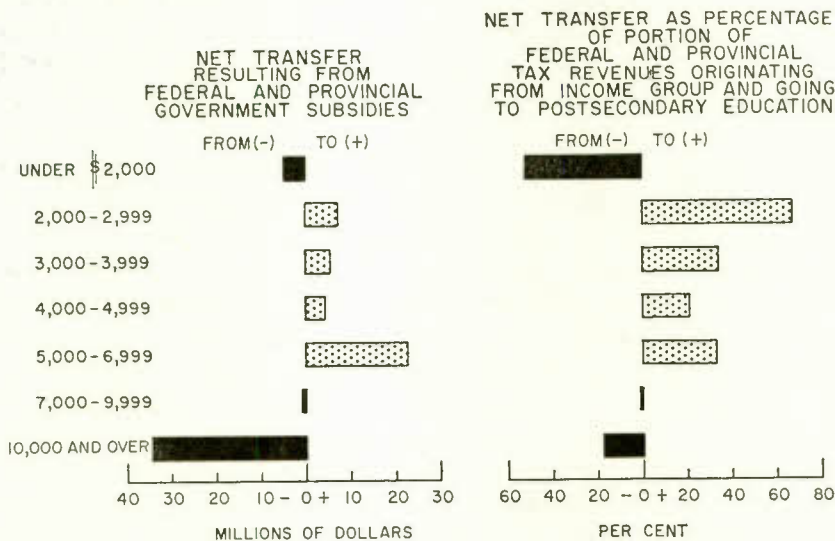
Some insight can be gained into the extent of fiscal transfers among income groups—that is, the differences between the federal and provincial educational “subsidies” received by various income groups and

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the federal and provincial tax revenues collected from these groups for financing these "subsidies".¹ Such fiscal transfers are shown in Chart 9-7 for fiscal year 1968-69; they are also shown in relative terms—that is, as a percentage of the relevant federal and provincial tax revenues. These transfers are essentially "progressive"—that is, the lower-income groups receive greater amounts in subsidies than they pay in taxes for postsecondary education, while the opposite is true for the higher-income groups. A significant exception to this is the group with incomes of less than \$2,000; for this group, the subsidies

CHART 9-7

FEDERAL AND PROVINCIAL FINANCING OF POSTSECONDARY EDUCATION: NET FISCAL TRANSFERS AMONG FAMILY INCOME GROUPS, FISCAL YEAR 1968-69



Note: The revenues collected were calculated from 1967 data. Only operating costs were considered, and assisted research was excluded. Classical colleges and teachers' colleges were included. Part-time university and part-time community college or CEGEP students, senior matriculation students and students from the Territories were excluded.

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

¹The term "subsidies", as used here, means the resources allocated by federal and provincial governments for postsecondary education operating purposes.

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received are below their taxes for postsecondary education. This is partly the result of the tax structure and, in particular, of the relatively heavy impact on this income group of various regressive taxes (such as sales tax, taxes on tobacco and alcohol, and so on). It is also partly due to the relatively large proportion of pensioners and unattached persons in this income group.

Although fiscal transfers among income classes are basically progressive, one might ask whether they are progressive enough or whether they are progressive in all fields of study.¹ If the lower-income groups have greater ability than is suggested by their present representation in the postsecondary system (which is probably the case), then fiscal transfers among groups should perhaps be more progressive than at present.

CONCLUSIONS

Within the framework laid out earlier in this Review, this chapter has explored certain facets of the formal education systems in Canada. It has emphasized the need, first to specify the fundamental policy objectives of education, and then to decide on their relative importance. It has emphasized the need for better measures to determine the effectiveness and efficiency of the means being used to achieve these objectives. And it has examined aspects of the interrelationships between the educational process and the economy—including some partial returns from education, and certain distributional aspects of the financing of postsecondary education.

There are many reasons for underlining the need for further studies and better measures of the way in which education interacts with society and the economy. Among these is the fact that the educational scene in Canada has undergone a considerable transformation during the 1960's; this transformation is continuing, and an understanding of the directions of change and the forces at work is a prerequisite to good decision-making. Expenditures on education have reached a level such that continued growth at the rate experienced during the 1960's is no longer possible or appropriate, particularly in the light of the growing volume of other demands on our limited productive resources. Consequently, it is becoming increasingly important, as

¹Systems Research Group, "Cost and Benefit Study of Postsecondary Education in the Province of Ontario: School Year 1968-69", Toronto, 1971. This study was sponsored by the Commission on Post-Secondary Education in Ontario. It shows that fiscal transfers by income groups are highly regressive for certain fields of study.

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we emphasized in our last Annual Review, to improve the efficiency and effectiveness of our educational systems and to seek less costly alternative approaches to upgrading the educational level of our population and labour force.¹ Cost controls or constraints on education should avoid damage to essential facets of our educational systems and, despite uncertainties about the future, have careful regard to longer-term considerations.

Searching for less costly ways of improving the educational process is primarily a responsibility of educators. However, even more important responsibilities associated with education fall both inside and outside the educational systems themselves. These include searching for more effective and efficient strategies to satisfy the demand for various types of educated manpower and to achieve the other objectives of education.

During the 1960's, the premium on education grew more rapidly in many respects than the premium on experience. However, the large growth in the output of graduates from postsecondary institutions is already shifting this balance in certain fields (although there are still notable shortages in some areas). Consequently, the 1970's may see a higher value being placed on experience—on “learning by doing”—than was the case in the recent past. This possibility is reinforced by the fact that there will be a decline in the proportion of the population in the prime age group for middle management during the next decade. It may be that educational systems will have to adapt to the needs of individuals with inadequate formal education but valuable experience in the labour force.

With the growing abundance of highly educated people in our work force, postsecondary education must not be sold to students and the public as an unfailing means to a good job and a comfortable income. Too many people are emerging from the educational systems to find that their knowledge and skills are not as marketable as they had been led to expect. This inevitably results in frustration. The focus of our postsecondary systems of education must be largely (though not completely) on those aspects which reflect, as adequately as information and analysis will permit, the actual and potential needs in the community. Education for education's sake will always be a *part* of formal education (to the good of our culture), but there are limits on how much of this a society can afford at a given stage in its development.

¹See the chapter entitled “Higher Education” in our *Seventh Annual Review*.

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To conclude, education must serve the needs of our society and must be prepared to undergo transformation as our society changes. This suggests the need to explore a number of policy alternatives for education. For example, further attention might be given to the possibility that the same amount of formal education could be condensed without loss of quality into a shorter space of time. Another policy alternative that might be given greater emphasis is the mixing of periods of work experience and periods of formal education, so as to ease effective entrance into the labour force. Again, various financial policy alternatives need to be considered, as more is learned about the nature and distribution of the full returns from postsecondary education, by field of study. In those cases in which the returns to the individual markedly exceed the returns to society—where the individual is benefiting far more than society from the knowledge and skills he or she obtains from the educational process—and in cases in which substantial income transfers may be taking place from those with relatively low incomes today to those with potentially very high incomes in the future, the possibility that individuals should pay more for their education in some appropriate manner should be examined. In considering these and other possible policy alternatives, experimental projects may be needed to determine whether these approaches are really feasible and effective.

Conclusions and Recommendations

THIS REVIEW is, in many ways, not a Review like its predecessors. Its concern is less with the outcome or result of government policies, and more with the evolution and evaluation of these policies. And yet if it is a departure, it is also a development of our former work. We have stepped back from particular public policies to examine their formulation and implementation, in the belief that good public decisions can be facilitated by a wider understanding of the essential processes of decision-making.

When it comes to government policy, criticism is everyone's game. Throughout history, the armchair politician has asked: Why did "they"—the town council, the provincial legislature or the federal government—do this, or that? The question is usually rhetorical, for no simple answer exists. Such decisions result from the interaction of many factors: social and individual values and priorities; political judgment and insight; pressures reflecting special interests; and knowledge and information. And the participants in the process include politicians (cabinet members, representatives of the party in power, those in opposition, and those in provincial governments and municipal councils), public servants, and a wide range of private groups, institutions, and individuals.

In this Review, we have discussed only briefly the *political* role and its task of weighing values and balancing interests. The allocation of authority and responsibility among levels of government and between the public and the private sectors—that is, the distribution of power—is also a political question. The "economically efficient" constitution is not, therefore, the same as, or even necessarily a

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reliable guide to, the 'politically efficient' constitution... There can thus be no unique solution in economic terms... concerning the 'optimal' structure of government."¹ In Canada, constitutional questions have recently been going through a phase of particularly active examination and re-evaluation, but even if they had not, it is clear that these basically political issues are not within the terms of reference or the competence of the Economic Council. Our Review is concerned, however, with a process of decision-making that recognizes the importance and complexity of decisions at each level of government, as well as the special opportunities and difficulties created by these institutional and jurisdictional relationships.

In dealing with a subject of so many parts, it was also necessary to be selective in choosing particular aspects to emphasize. A number of critically important elements, such as the working of the parliamentary system and the role of the media, have not been dealt with. Rather, we have focused in this Review on some of the principles of decision-making that are relevant at all levels of government and public activity. We believe that a wider application of these principles and approaches would, in the long run, induce better public decisions.

In this final chapter of the Review, we wish to draw some conclusions and set out certain specific recommendations. The major emphasis has been on the use of a systematic and forward-looking approach to policy-making. In addition, and because public decisions are *everyone's* concern and responsibility, we have also emphasized the need for a wider dissemination of knowledge and information about these issues to all segments of the public.

We wish also to pay a special tribute to the federal Department of Manpower and Immigration for their close co-operation in providing us with relevant data and analytical information which were particularly helpful in the preparation of Chapters 6 to 8. This Department has played a pioneering role in developing a framework and data for analysis and evaluation. We have used these data to suggest how principles of policy-making and techniques of evaluation can actually be applied.

SYSTEMATIC POLICY-MAKING

Significant management and policy-making advances have taken place in recent years in Canadian governments. Although all levels of

¹Douglas J. Hartle and Richard M. Bird, "Criteria for the Design of Government Decision-Making Units", Working Paper Series Number 6905, Institute for the Quantitative Analysis of Social and Economic Policy, University of Toronto, 1969, mimeo., p. 18.

Conclusions and Recommendations

government departments and agencies have not participated equally in the application of these new approaches, there is wide appreciation of the need for better decision tools to meet today's problems.

There are literally thousands of government decision-making bodies across Canada. They vary enormously in resources and expertise. Nevertheless, we believe that the view of decision-making presented in this Review is relevant. It does not essentially depend on an extension of the size or cost of government. As was suggested earlier, institutional and organizational changes may facilitate the implementation of such an approach. Alternatively, some realignment, or even some increase in analytical capabilities may be desirable. What is fundamental is an *open, responsive, and systematic* view of public policy. This view will, we hope, encourage governments and other public bodies to examine the process and structure of their policy-making systems and to assess carefully their present procedures.

The decision-making system discussed in Chapter 5 emphasizes a few strategic elements. The first relates to the evolution of policy objectives and the choice of *policies* or *strategies* from various alternatives. Recent developments in decision-making have been largely concentrated on the *program* or *tactical* level, and on evaluation techniques that focus on the *efficiency* with which resources are being used in particular projects. Less attention has been directed to judging the relevance or *effectiveness* of these projects in relation to policy objectives. Our emphasis on explicit *policy objectives* is intended to strengthen the latter process, and to encourage the clarification of *strategic* issues.

The "feedback loops" into policy design, analysis, and evaluation are a crucial element in this policy-making system. In Chapter 4 we discussed ways in which the techniques of experimentation and analysis add new dimensions to knowledge about the inputs, outputs, and interrelationships of public policies and programs.

GOAL INDICATORS

If policy issues are not visible, they are unlikely to be associated with a significant level of public awareness or involvement. Without some means of monitoring social conditions on a continuing basis, priorities may depend on "ad hocery", and objectives may lack relevance. There does not now exist an adequate basis for assessing the strengths and shortfalls in many important areas of social, economic and political life, such as states of health, degrees of pollution,

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and levels of education and participation. By and large, there is also a need for much greater attention to critical distributional aspects of many of these conditions—distributions by region, income class, ethnic group, age or sex. In order to provoke wider and more pertinent discussion of goals, priorities, objectives, and effectiveness of government policies, we recommend:

- that, on a national scale, a high priority be given to producing key *Goal Output Indicators* and *Goal Distribution Indicators*, as described in Chapter 5.

Much of the conceptual and statistical development of these *Goal Indicators* would take place at the Dominion Bureau of Statistics (now Statistics Canada). In order to provide a broad multidisciplinary framework, the Bureau should seek co-operation from, and co-ordinate activities of, public and private organizations. The development of *Goal Indicators* involves formidable problems. We therefore urge that expert private groups and individuals participate in the difficult conceptual work required for the development of meaningful indicators. Because of the complexity of some of these measures, they cannot be produced easily or quickly. We therefore suggest that work proceed in three directions *simultaneously*:

- to publish existing relevant output and distributional data;
- to extend these data by preparing and publishing “proxy” indicators where nothing else is available at this time; and
- to proceed to develop the conceptual and statistical base for a widening range of “real” output measures.

The responsibility for responding to many of the aspirations and problems of contemporary society is located at provincial and local levels of government. Particularly in Canada, the dispersed locus of decision-making means that concern for objectives, policy evaluation, and feedback mechanisms must exist at *all levels of government*. The build-up of policy-oriented data systems by provincial and municipal governments is an essential and integral part of their decision-making structure. We therefore recommend:

- that provincial and local governments also consider the need for developing output and distributional indicators relevant to their responsibilities.

Data development in the form of *Goal Indicators* is not a dramatic recommendation. Yet such development is vital for reducing dependence on hunch, guess, and intuition. For decisions in complex social areas these approaches are no longer adequate.

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EDUCATION, KNOWLEDGE, AND INFORMATION

The above recommendations concern the way in which decisions are made—the application of policy-making principles to public decisions, and the development and use of *Goal Indicators* to provide insight into the choice of policy objectives. The second, and we believe more important, set of recommendations to which we now turn concerns the decision-makers themselves—not the few individuals who take the final decision to act, but all those who, in the whole process of policy formulation, contribute to the shaping of the decision. In the light of the pervasive influence of governments on modern societies, government decisions are increasingly perceived to be everybody's business. A number of important implications flow from this.

Education in Policy Science

Recognition of the growing impact of public decisions on the social and economic system should give rise to increased interest and training in the policy and decision sciences. There are many ways in which the processes and structure of policy-making institutions may be improved. Many policy sciences, such as management and organization theory, systems analysis, and the behavioural sciences, are playing an increased role in business education. A considerable strengthening of this type of education is essential to provide high-quality professional manpower for all levels of government service. These branches of education and knowledge must be linked in a multidisciplinary way to, and focused much more effectively on, the issues and problems of government decision-making. We recommend:

- that universities include more courses on the principles, processes, and structures of government decision-making in their curricula, and also that special training courses for policy participants be provided within the educational systems. These courses should combine theoretical, conceptual, and practical elements by drawing on the knowledge and experience of academic, business, and public service decision-makers.

Training in Policy Analysis

There is, at every level of expertise, a need for politicians, public servants, journalists and other media people, and policy analysts inside and outside governments, to understand the tools of policy analysis—their relevant uses and their limitations. Education

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facilities could be provided by governments, universities or research institutes, but training in the application of policy analysis techniques would, in our view, be particularly effective when combined with research on actual public policy issues. To help fill this gap, we recommend:

- the establishment of an *independent* research institute concerned (at least in part) with the analysis of *public policy issues*, essentially along the lines sketched briefly in the Speech from the Throne in September 1968¹. We have in mind here a different and much broader institution than that suggested in our *Third Annual Review* where we proposed an institute for short-term analysis and forecasting. We do not believe that a proliferation of institutions is necessarily desirable, but we are convinced that there are some serious gaps in the panoply of Canadian research institutions that urgently need filling. A *policy-oriented institution* of the sort indicated by this recommendation would be directed to multidisciplinary research and commentary on economic and social policy issues arising at any level of government. Such an institute would also provide an ideal environment for training courses in the role, relevance, and techniques of policy analysis.

Private Policy Research and Analysis

It would be difficult to prove that the occasional "sound and fury" of collective response to public issues implies larger or wider citizen participation than in less noisy days. Nevertheless, groups representing the poor, the consumer, minorities, students, and workers are pressing for increased involvement in public policy-making. These developments are raising new questions about how to maintain the essential elements of a democratic system in an increasingly vocal and pluralistic world.

The call for "participatory democracy" will indeed have a hollow ring if, under this banner, citizens limit themselves to the negative aspects of protest. As governments increase their use of sophisticated techniques of decision-making, private interest groups must counter in the same language. Leaders of interest groups should therefore

¹A special study to consider the design of an institution of this kind for Canada was subsequently commissioned by the federal government. The study was published just as this Review was going to press, along with a statement that the federal government was prepared to support the development of a public policy research institute.

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seek to broaden their basis for exerting effective influence on public decisions by developing knowledge and information about policy issues and the complex realities of policy-making and policy analysis.

Sophisticated methodologies and techniques are an integral part of much policy analysis. It is therefore a game in which even the most serious participant is unlikely to play well without some training. To minimize the dangers of a centralized or technocratic approach to decision-making, private institutions and organizations should, whenever possible, create a professional capability in this area.

Since power is associated with an ability to apply knowledge effectively, the focusing of knowledge in a few select units of government has strong centralizing tendencies. We do not believe that such a trend would be in the public interest. A few private interest groups have traditionally played an important countervailing role, but in most cases they represent a minority view. Informed leadership and response from all sectors of society on matters that concern them is called for. As we emphasized earlier, policy analysis is not free of subjective and value content, and no one approach can be counted on to provide a "best" or perhaps even a "preferred" solution. A larger body of publicly available policy analysis as the basis for open dialogue and discussion about policy objectives, alternatives, and results would provide public safeguards against elitist or bureaucratic bias. We therefore recommend:

—that private interest groups, wherever possible, create or strengthen their analytical capacities to generate policy alternatives, to evaluate policy options, and to comment knowledgeably on government proposals and performance.

In this general context, we believe that the media have an important role to play in initiating and stimulating informed and objective debate on important national and local issues.

Public Access to Policy Information

In Chapter 5, we emphasized the need for a more open approach by all governments, and public boards and agencies, particularly in relation to information about government policy issues. This point was made by the Task Force on Government Information which asked for new government policies reflecting "the right of Canadians to

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full, objective and timely information and the obligation of the State to provide such information about its programmes and policies . . ."¹

One of the important considerations reinforcing "the right of the people to know" is that many Canadians, singly and in groups, are making it clear that they want to play a larger, more active and direct role in influencing the decisions made by their governments. As governments at all levels become increasingly sensitive and responsive to this development in the democratic process, the need for more factual and analytical information as a basis for constructive and relevant public comment becomes more urgent. In past years, the timely publication of commission and task force reports, the use of "White Papers", and studies containing factual and analytical appraisals of alternative policy options have contributed to the quality of discussion about public policy. Much more can be done, however, at every level of government to use published official documents.

To generate discussion about important policy issues, we therefore recommend:

—that governments regularly publish, and make widely available, documents discussing current public policy issues and alternatives, and that they also provide increased access to analytical and other relevant background information (perhaps in the form of the "Green Papers" mentioned in Chapter 5).

The Report of the Task Force on Government Information noted that "the press, the public, opposition political parties, and even government back-benchers frequently find that they have only the most inadequate means for getting information about the administrative activities of the government".² There remains a vital need to clarify the rights of private individuals and groups to policy-relevant information.

The Task Force discussed practices in a number of countries. They did not, and we do not wish to, make specific legislative recommendations in this regard. We would, however, endorse their conclusion that "Canada must devise some federal-provincial means to guarantee that the citizens get unvarnished facts about the activities of their governments [and] . . . clarify rules for fast and efficient access to

¹Task Force on Government Information, *To Know and Be Known*, Report of the Task Force on Government Information, vol. 1 (Ottawa: Queen's Printer, 1969), p. 54.

²*Ibid.*, vol. 2, p. 25.

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government information".¹ This is clearly a difficult and delicate subject, but one to which governments must give increased attention. We therefore recommend:

—that governments proceed as quickly as is prudently possible to clarify the rights (and limitations) of the public to access to government information, and to ensure that bureaucratic or political constraints do not operate so as to inhibit such access.

CONCLUSION

Our main conclusion in this Review is that improvements *can* be made in ways of approaching public decisions, in the tools for analysing and evaluating public policies and programs, and in knowledge and information not only about the processes and structures of decision systems but also about the issues of policy. We believe that these improvements could help strengthen the bridge between the needs and aspirations of Canadians, on the one hand, and the results of public policy, on the other.

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¹*Ibid.*, vol. 2, pp. 42-43.

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