Economic Impact of Selected Government Programs Directed Toward the Labour Market

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COUNCIL OF CANADA

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ECONOMIC COUNCIL OF CANADA

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Preface

This study was commissioned by the Economic Council of Canada in August 1973. The authors have benefitted considerably from discussions with members of the Council's staff and with other persons engaged by the Council to undertake research in connection with the ECC Labour Market Study. We wish to acknowledge as well the assistance and encouragement offered to us by Professor Frank T. Denton, McMaster University, Mr. Brian McCoy, Unemployment Insurance Commission, Professor A. Leslie Robb, McMaster University, Ms. Louise Robert and Mr. Doug Upex, Department of Manpower and Immigration, and Mr. Michael Veall. Dr. Allan Stewart of the Economic Council of Canada generously assisted us in meeting our computer requirements.

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"(This Budget) is intended to show that we really mean business in the fight against inflation."
(Minister of Finance, Budget Speech, June 1969)

"It is the policy of the government to restrain the growth of total spending in the economy, for that is a necessary condition for achieving our primary economic objective."
(Minister of Finance, Budget Speech, March 1970)

"The government's economic policy objective is to give to the economy the maximum stimulus that can be provided without unleashing another and inevitably more damaging round of inflation."
(Minister of Finance, Statement to House of Commons, October 1970)

"The first economic objective of the government is a steady and substantial improvement in the real income of Canadians everywhere."
(Minister of Finance, Budget Speech, December 1970)

"The government is determined to do what governments can do to ensure that the expansion in real income and employment now underway shall be vigorous and broadly based."
(Minister of Finance, Budget Speech, June 1971)

"I would like now to propose to the House measures to reinforce the economic expansion and to provide jobs for Canadians who want to work and who have no work to do."
(Minister of Finance, Statement to House of Commons, October 1971)

"My first words to this House as Minister of Finance last February were that my most urgent priority was jobs. This remains my first priority."
(Minister of Finance, Budget Speech, May 1972)

"A $500 million federal Winter Job Expansion Plan to help combat seasonal unemployment was announced today...."
(Announcement by the Minister of Finance and the Minister of Manpower and Immigration, December 1972)

"The purpose of this budget is – first and foremost – to bring about a substantial reduction in unemployment."
(Minister of Finance, Budget Speech, February 1973)

Economic Impact of Selected Government Programs Directed Toward the Labour Market

1 Introduction

The period 1969-73 saw the Canadian economy experience a complete business cycle. The period opened and closed with inflation as the principal concern of stabilization policy; in the middle part of the period, attention was focused primarily on unemployment – on how to reduce it and alleviate its effects.

The slowdown of the economy in late 1969 and 1970 and its subsequent strengthening and return to strong growth in 1971 and 1972 caused substantial public attention to be focused on both the record of economic performance and on the important measures of performance. Some ambiguity of the record fostered differing interpretations of economic performance and the appropriateness of the stance of policy. The policy debate went beyond the usual questions of the suitability of the fiscal stance to questions about the impact of a variety of "social" or, in large part, redistributive measures or programs. Questions were raised about the adequacy and reliability of certain economic statistics, particularly those relating to the number of unemployed.

In the course of the debate, the Economic Council of Canada announced, in December 1972, the intention to

> undertake a comprehensive study of the characteristics and structure of the labour force and labour market. The review will be made of sources of information in these matters and an analysis will be conducted into how employment opportunities and the evolving system of social programs affect the supply of labour.

The Council's announcement referred to a "growing public concern about the present nature and extent of unemployment". This paper reports on one of a series of research enquiries undertaken as part of the Economic Council's Labour Market Study.

Public discussion and debate over the state of the economy usually tend to centre around two numbers: the seasonally adjusted unemployment rate and the year-to-year rate of increase in the all-items consumer price index. One of these, the unemployment rate, is of particular importance in this study. The monthly record of the unemployment rate since 1969 is shown in Chart 1-1.

The rate was on a gently rising trend through the 4.5 to 5 per cent range in 1969 from which it shot up to 6.5 per cent by mid-1970. It then fluctuated in the 6.5 per cent range through the remainder of 1970 and most of 1971. In early 1972, there was a widely held view that the worst was over, that the economy was in an expansion phase strong enough to re-employ many of the unemployed.

Chart 1-1

Unemployment Rate, Canada, Seasonally Adjusted,
Monthly, 1969-73

(Per cent)
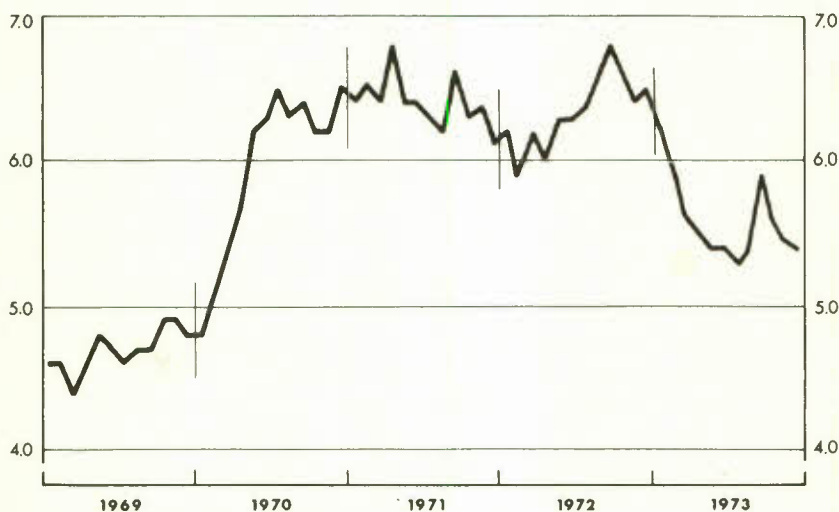
Source: Statistics Canada.

For example:

> The economy begins 1972 launched on a healthy growth path, though there are some rocky patches ahead which have dampened business confidence. . . . The forecast growth of 6% in gross national product for 1972 will gradually reduce the seasonally adjusted unemployment rate through 1972. But the average for the year will be 6%.
> (Judith Maxwell, *Financial Times of Canada*, January 1972)

> With real growth expected to be in the 6% range in 1972, there should be a moderate improvement in the unemployment rate throughout the year. However, it is still likely to average close to 6% for the year as a whole. . . . (The unemployment rate) may decline to the 5.5% level by the latter half of 1972.
> (E. Wayne Clendenning and George Kosarych, Richardson Securities, *Annual Review and Outlook*, January 1972)

The path of the unemployment rate at the turn of the year gave credence to that general assessment. From 6.6 per cent in September 1971 (first published at 7.1 per cent), the rate dipped below 6 per cent in February 1972. The trajectory appeared distinctly downward.

At the mid-point of 1972, there was still a widespread understanding that developments in the economy were going well. For example:

> The forecasts of buoyant growth made earlier this year seem generally on track. In fact, continued recovery into 1973 seems almost a sure bet.
> (Bank of Montreal, *Business Review*, July 1972)

However, the unemployment figures had another story to tell. Between April and September, the seasonally adjusted unemployment rate moved from 6.0 up to 6.8 per cent (first published at 7.1 per cent). Two sizable jumps occurred in August and September, in the course of the federal election campaign, which heightened the amount of publicity given the numbers.

While the unemployment rate averaged 6.3 per cent for 1972 as a whole, it began to drop sharply after September, declining to 5.5 per cent by March 1973. Another bubbling up of the rate towards 6 per cent, in September 1973, was followed by a return to figures of about 5.5 per cent.

This study is directed towards federal economic policy during the 1969-73 period and particularly with a number of policy measures intended to deal with circumstances in the labour market. It is less concerned with the specific benefits and costs associated with particular programs than it is with their overall net economic impact.

To provide a suitable background for the study, Chapter 2 reviews a number of aspects of economic performance during the period under review and summarizes the main shifts that occurred in federal fiscal policy. Chapter 3 is the first of three policy chapters. It focuses on two of the direct employment-creation programs introduced during the period under review: the Local Initiatives Program (LIP) and the Opportunities for Youth Program (OFY). Chapter 4 reviews the Canada Manpower Training Program, and Chapter 5 examines the Unemployment Insurance Program and important changes in it that were introduced. Chapter 6 introduces a quarterly econometric model which is the tool used in the study for analysing the macro-effects of the different programs. Simulation results from the model for Canada Manpower Training Programs and direct employment-creation programs are summarized in Chapter 7. Simulation results for the changes in the Unemployment Insurance Program are shown in Chapter 8. Finally, in Chapter 9 there is a summary of the study as a whole and some conclusions are drawn.

2 Important Features of the Canadian Economy During the Period 1969-73

A Economic Performance Record

This section reviews a number of aspects of the Canadian economic performance record over the 1969-73 period. It is not intended to be a complete and thorough review of performance over the period; instead, its purpose is to point to features of overall performance particularly of relevance to labour market developments.

The growth of real output weakened in 1969, weakened still further in 1970, started to rebound in 1971 and rose rapidly thereafter. The profile of real output changes is shown in Chart 2-1. The top panel shows percentage differences from long-run trend in constant dollar gross national expenditure (GNE); the bottom panel shows percentage differences from trend in the index of industrial production.[1] The two profiles are very similar in respect of turning points although the industrial production series, as always, exhibits a wider degree of variance.

Over the longer term (we have used the 1963-73 period) growth in constant dollar GNE has averaged 5.25 per cent per annum. From one year to the next, and from one quarter to the next, real GNE has tended to fluctuate around that trend. The three-quarter moving average curve in Chart 2-1 reveals the underlying cycle in those fluctuations.

The relative contributions to total output growth of changes in the number of employed persons and changes in average productivity (output per employed person) tends to vary over the course of a business cycle. The trend growth rate of real output of 5.25 per cent may be accounted for in the following manner: about 3 per cent was attributable to growth in the number of persons working and 2.25 per cent to increased productivity.

In Chart 2-2, it is shown that diminishing rates of real output growth through 1969 and 1970 reflected both a weakening of productivity growth and of employment growth. In the top panel of Chart 2-2, productivity is

[1] Long-run trends were calculated by fitting an exponential time-trend to actual quarterly observations, 1963 to 1973. The fitted equations were of the form:

$$\text{trend } X = \alpha \, e^{\beta t} \, .$$

measured by constant dollar GNE per employed person. The annual growth in productivity is measured by comparing each quarter with the same quarter a year earlier. A three-quarter moving average highlights the basic cyclical pattern. The bottom panel of Chart 2-2 shows the percentage differences from trend for total employment, as measured in the Labour Force Survey.

Chart 2-1

**Cyclical Changes in Real Output,
Quarterly, 1969-73**

(Percentage differences from 1963-73 trend)
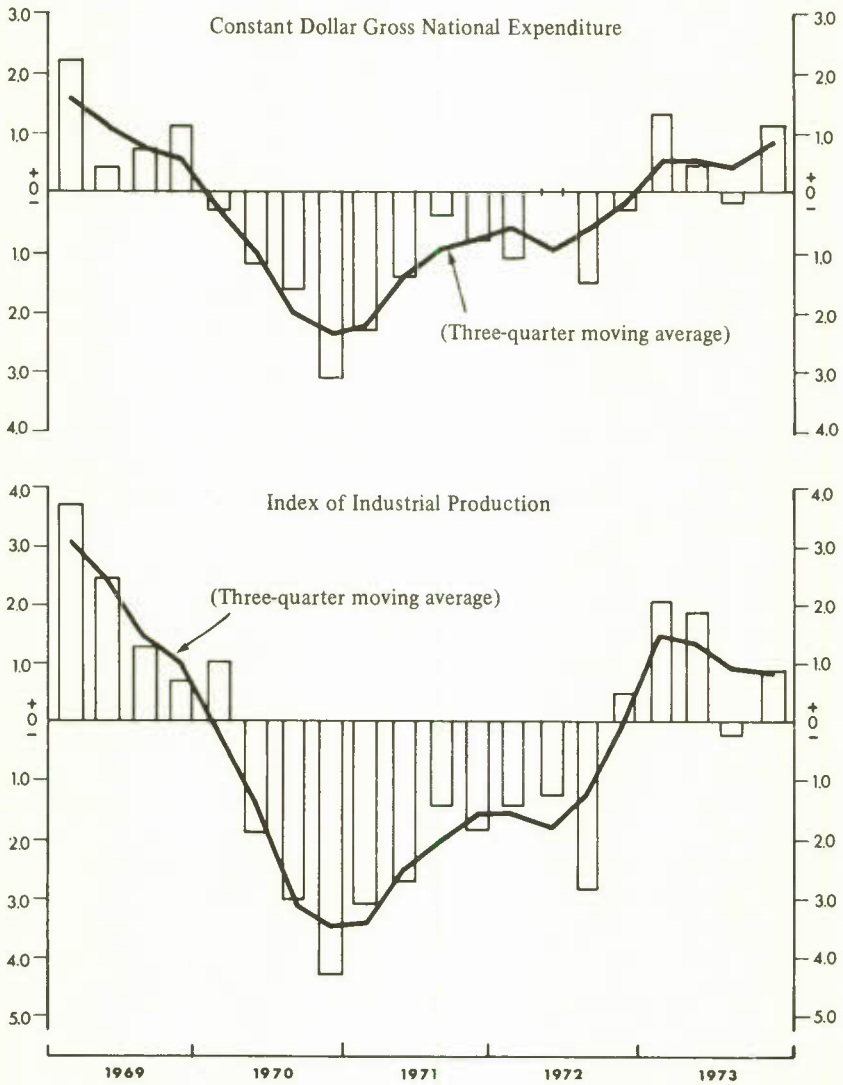
Source: Statistics Canada.

Chart 2-2

**Cyclical Changes in Productivity and Employment,
Quarterly, 1969-73**

Productivity
(Percentage differences from same quarter year earlier)

Employment
(Percentage differences from 1963-73 trend)
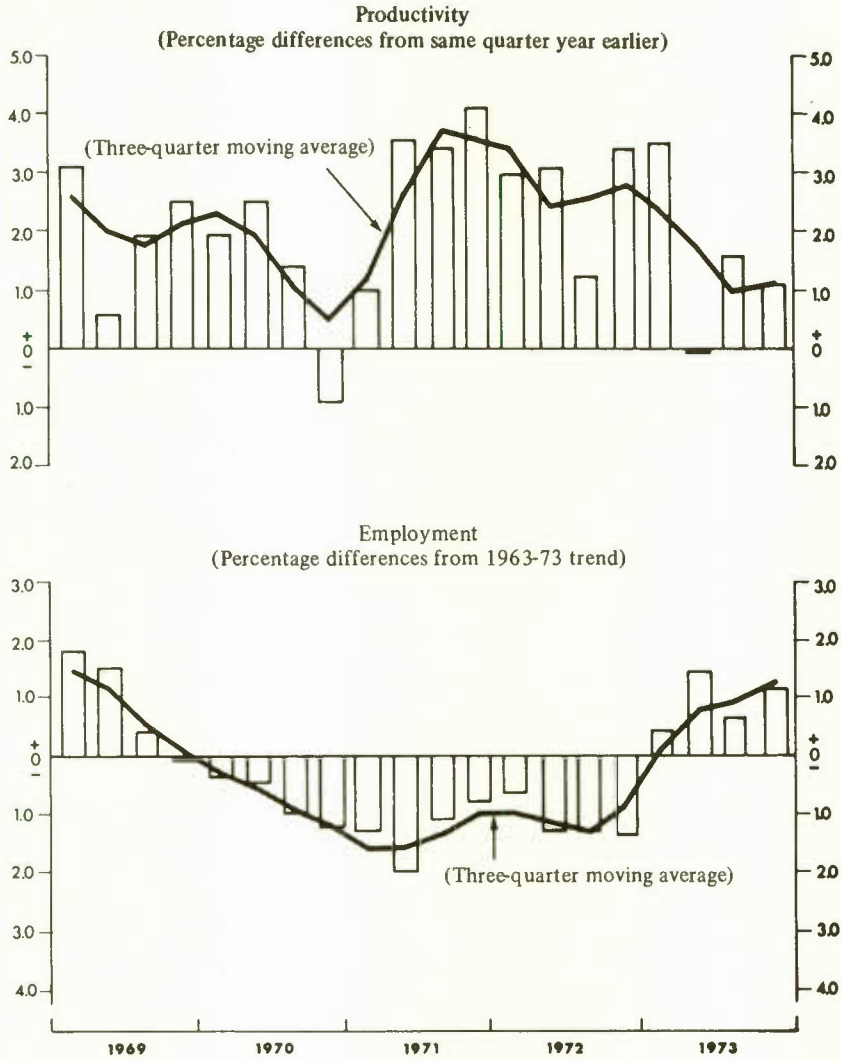
Source: Statistics Canada.

In usual fashion, the early part of the recovery period (all four quarters of 1971) were characterized more by a strengthening of productivity gains than by any substantial increases in employment. Increased demand for a firm's products first become manifest in more effective utilization of labour resources already on the payroll; it may then show up in longer hours being worked by the staff on hand and only later in new hirings and increased numbers of persons employed. Thus, as the expansion of demand and production continued and matured through 1972 and 1973, the relative contribution of employment gains to output growth became much more pronounced. A surge in employment growth materialized in late 1972 and throughout 1973.

The composition of total employment changed in a number of ways over the 1969-73 period. Table 2-1 shows the distribution of employment by major industry groups. It can be seen, for example, that the period of relative weakness in total demand and output fell especially hard on the goods-producing sectors of the economy. Those sectors, combined, employed fewer persons in 1971 than they did in 1969. Only the continued growth of service sector jobs in 1970 kept total employment moving upward during the slow-growth quarters. In subsequent quarters, the rebound of job growth in goods production (notably manufacturing and construction) appeared all the greater because of some diminution in the advance of employment in an important part of the service sector.

In the community, business and personal service sector employment had been increasing at a very substantial rate through the late 1960s. In fact, more than 50 per cent of the change in total employment over the five-year period 1967-71 could be accounted for by jobs in that sector. Rapid growth in education and in hospital and health care were important contributors to that growth. Chart 2-3 shows that the share of community, business and personal services in total employment was rising rapidly through to 1971.

And then the picture changed. The relative importance of the service sector as a source of job growth waned, making all the more important the recovery of demand and production in the goods-producing sectors. One reason for the change was the drastic slowing down in the growth of jobs in the field of education and education services. This is illustrated in Chart 2-4. Education experienced substantial employment increases through the 1960s; in 1968 and 1969, these amounted to more than 10 per cent per year. The ready availability of teaching jobs during that period was attracting tens of thousands of young persons into college and university courses in education. But for many of them who graduated in the early 1970s, those teaching jobs were not available. The impact of declining rates of enrolment increase, caused by underlying demographic factors, and of the actions of cost-conscious provincial governments on student-teacher ratios, resulted in employment growth in education dipping below 2 per cent in 1973. The

Table 2-1

Employment, Canada, 1966-73

	Average 1966-68	1969	1970	1971	1972	1973
	(Thousands of persons)					
Agriculture	549	535	511	510	481	467
Other primary industries	221	217	218	224	217	228
Forestry	78	80	72	72	71	80
Fishing and trapping	25	21	20	22	22	29
Mines, quarries and oil wells	117	116	125	129	125	123
Manufacturing	1,752	1,819	1,790	1,795	1,857	1,968
Construction	481	482	471	495	501	549
Subtotal, goods-producing industries	3,003	3,053	2,991	3,024	3,056	3,211
Transportation and communication	568	600	603	615	637	674
Electric power, gas and water utilities	82	93	89	87	93	99
Trade, retail and wholesale	1,221	1,292	1,320	1,330	1,410	1,498
Finance, insurance and real estate	314	350	365	385	385	410
Community, business and personal services	1,728	1,918	2,025	2,118	2,195	2,284
Public administration	440	474	486	520	553	582
Subtotal, service-producing industries	4,354	4,728	4,888	5,055	5,273	5,548
	(Annual percentage change)					
Agriculture	0.2	−1.8	−4.5	−0.2	−5.7	−2.9
Other primary industries	−0.4	−1.9	0.5	2.8	−3.1	5.1
Forestry	2.6	0.6	−9.7	0.1	−2.1	12.7
Fishing and trapping	−3.9	−12.2	−4.3	10.3	−2.6	13.6
Mines, quarries and oil wells	−1.6	−1.5	8.4	3.2	−3.8	−1.6
Manufacturing	0.3	3.7	−1.5	0.3	3.5	6.0
Construction	−2.9	2.6	−2.2	5.0	1.3	9.6
Subtotal, goods-producing industries	−0.3	2.1	−2.0	1.1	1.1	5.1
Transportation and communication	3.6	3.0	0.7	1.9	3.6	5.8
Electric power, gas and water utilities	8.2	3.4	−4.9	−2.2	6.8	6.5
Trade, retail and wholesale	3.3	2.5	2.2	0.7	6.0	6.2
Finance, insurance and real estate	4.1	7.2	4.2	5.4	0.1	6.5
Community, business and personal services	6.2	4.8	5.6	4.6	3.6	4.1
Public administration	4.6	3.6	2.4	7.1	6.3	5.2
Subtotal, service-producing industries	4.8	4.0	3.4	3.4	4.3	5.2
Total, All Industries	2.7	3.2	1.3	2.5	3.1	5.2

Source: Statistics Canada, Labour Force Survey.

community, business and personal service share of total employment actually fell in that year.

Chart 2-3

**Community, Business and Personal
Services Sector Share of Total Employment,
1966-73**

Per cent
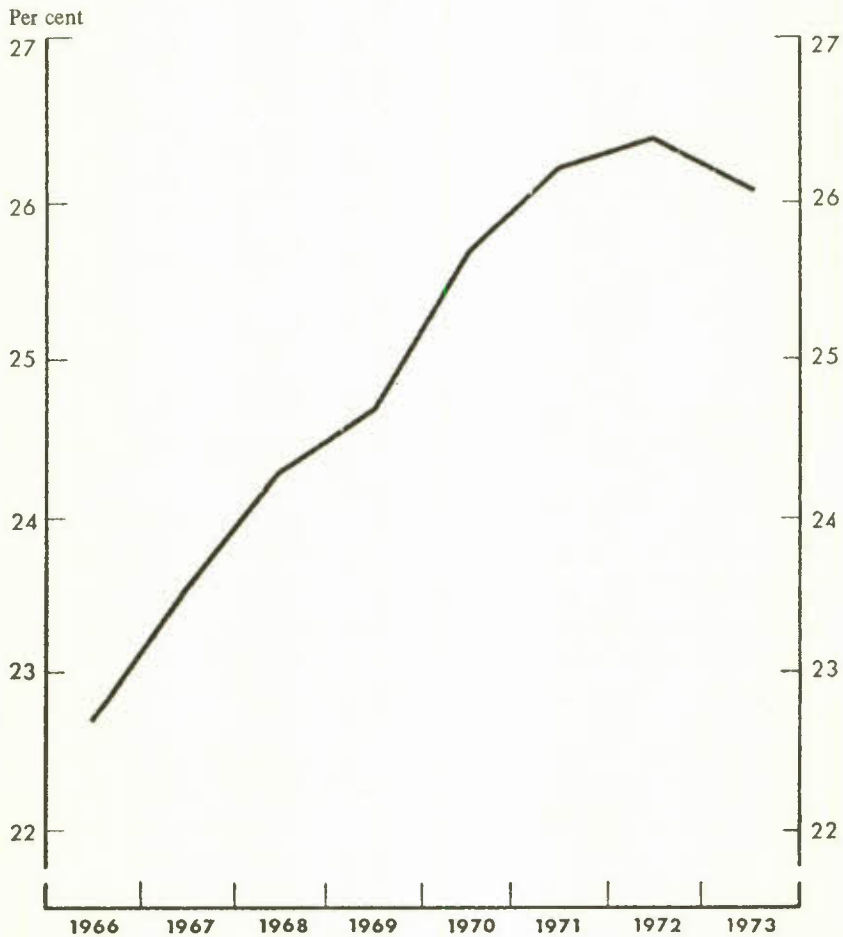
Source: Statistics Canada, Labour Force Survey.

A compositional shift in employment demand, such as the one just described, can have important implications for the nature of a country's cyclical unemployment problem and the types of policy measures which attempt to deal with it.

Chart 2-4

**Employment in Education and Education Services,
Rate of Increase, 1967-73**

Per cent
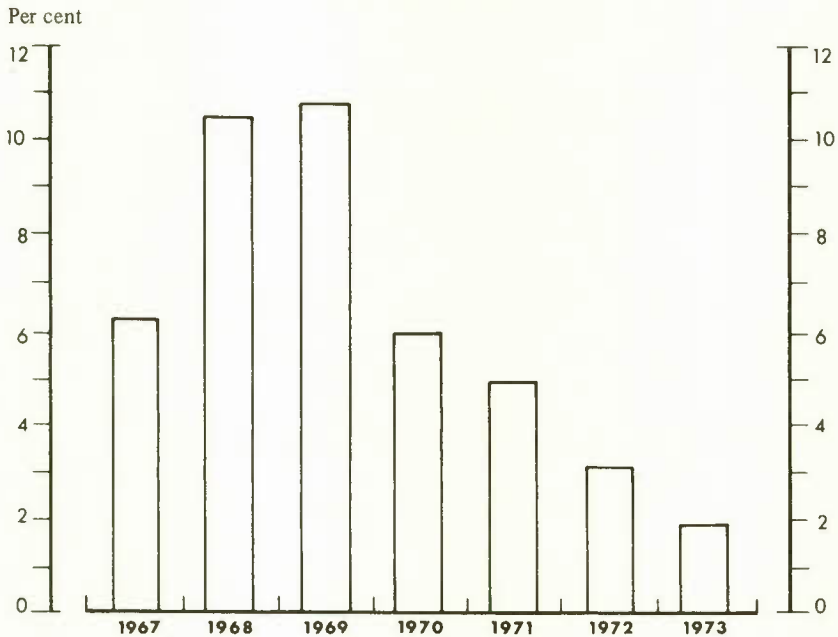
Source: Statistics Canada, Labour Force Survey.

At the other end of the employment spectrum from community, business and personal services, which had been rising rapidly through the 1960s, is the farm sector, which has been declining as an employer of labour for as long as statistics have been kept. It may be worth noting that the combination of relatively high unemployment in the industrial sectors of the economy in the early 1970s and substantial increases in farm incomes due to rising food prices in 1972 and 1973 did not arrest the exodus of workers from the farms. The number of self-employed farmers in 1973 averaged 75,000 (or 17 per cent) fewer than it did five years earlier. The preceding five years had seen a drop of 18 per cent (or 100,000 persons). The farm employment trend is shown in Chart 2-5.

An important part of Canada's average annual unemployment (and, therefore, of the seasonally adjusted unemployment rate) is attributable to seasonal unemployment. This in turn tends largely to be due to seasonal changes in employment. As will be evident in section B of this chapter, many of the job-creating initiatives of the federal government in recent years were motivated by a concern for high seasonal unemployment rather than, or perhaps in addition to, cyclical unemployment. In this study we do not deal explicitly with the seasonality question. It is worth noting, however, that the measured seasonality appeared little different in 1973 than it was in 1969 in

Chart 2-5

Agricultural Employment, Self-Employed,
1961-73
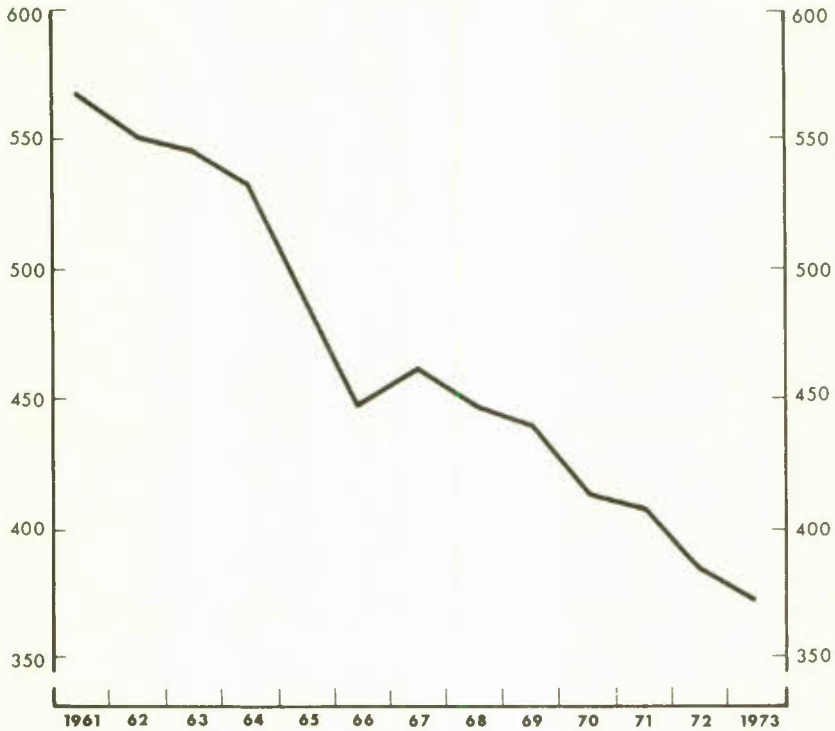
Source: Statistics Canada, Labour Force Survey.

spite of the fact that some government measures had an improved seasonal performance as an objective.

The degree of seasonality of total employment is shown in Chart 2-6. The absence of any seasonal pattern would be represented in the chart by a series of seasonal factors in each month having a value of 100. The factors used by Statistics Canada vary from a low of about 96 in the winter months to a high of about 106 in the summer. The thing to note, from the point of view of this study, is that the 1969 pattern was little changed by 1973. But expenditure measures designed to improve the seasonal profile of employment may have had important cyclical effects. It is these which will be sought in the simulations.[2]

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2 It may well have been the case that seasonality in employment changed much more than is apparent from Chart 2-6. Current techniques for measuring seasonality are based on moving average principles; hence, a shift in seasonality must persist for a number of years before it will be fully reflected in measured seasonal factors. A detailed examination of the procedures used to determine seasonal factors is presented in J. Kuiper, *Assessment of Seasonal Adjustment Techniques*, a study prepared for the Economic Council of Canada, 1974.

Chart 2-6

**Monthly Seasonal Adjustment Factors,
Total Employment,
1969 and 1973**
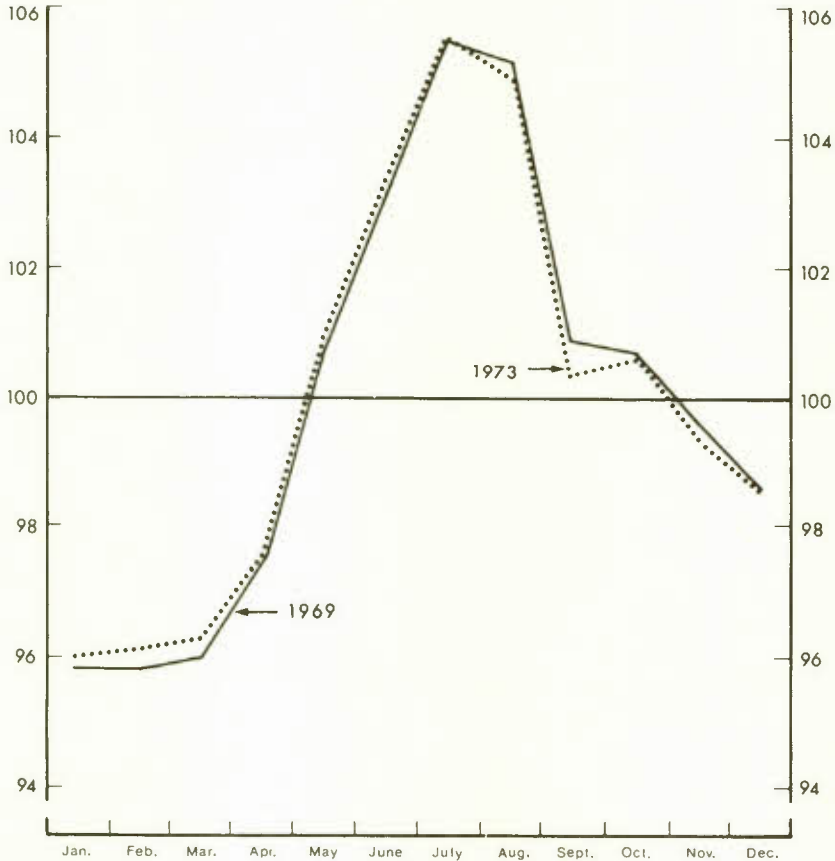
Source: Statistics Canada, Labour Force Survey.

Employment is a measure of filled labour demand. It is not a measure of labour demand in total because of the existence of job vacancies. Of course, the existence of unemployment does not imply that there are no jobs available. On the one hand, the location, skill and education attributes, for example, of those persons who are available for work must match the requirements of the available jobs. On the other hand, it is also necessary that working conditions and wage rates must at least be commensurate with alternative sources of income in order for them to be an appropriate incentive for available jobs to be taken. A change in the relationship between job vacancies and unemployment may be attributable to changes occurring either in the former or in the latter conditions.

For most of the period since 1962, the relationship between job availability and unemployment was as one might expect. That relationship is illustrated in Chart 2-7. When job availability was high, unemployment tended to be relatively low. Such was the case in the mid 1960s, for example. Similarly, when job availability was low, unemployment tended to be relatively high, as in both the early 1960s and early 1970s.

Chart 2-7

Job Availability–Unemployment Relationship, 1962-73
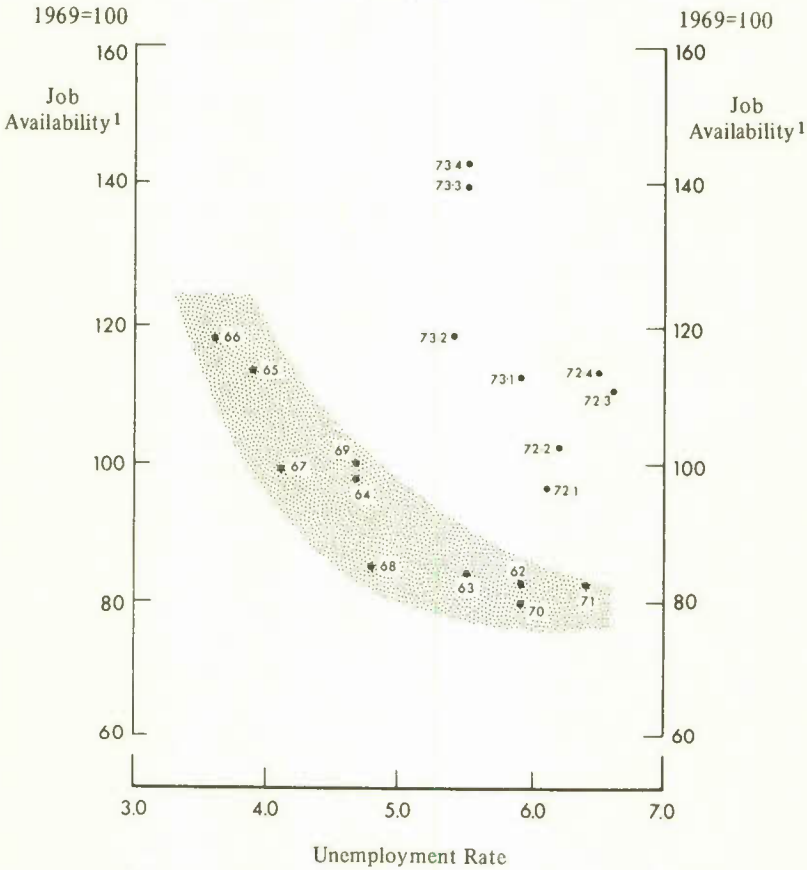
1 Job availability is measured by the Canada Help Wanted Index adjusted for changes in the number of non-agricultural paid workers. All quarterly observations have been adjusted for seasonal factors.

Starting in 1972 there appeared a departure from the historical pattern. Increased demand in the economy was showing up in substantial gains in the number of available jobs. However, increasing job availability was not translating into decreasing amounts of unemployment — at least not to

anywhere near the degree evident in earlier years. The reasons behind this departure from the normal pattern are being explored by other researchers connected with the ECC Labour Market Study.

Before leaving the subject of labour productivity and labour demand, it is worth observing that the distinction between people employed and people at work has become increasingly important. The Statistics Canada Labour Force Survey defines employment as all persons having a job even though in some circumstances they may not be at work. For example, a person who has a job but who is not at work because of an industrial dispute (a strike or a lockout) is counted as employed. However, a person in a related firm or industry who is laid off because of that strike (for example, key component parts may not be available) is counted as unemployed.

Over the last ten years, there has been a sharp increase in the impact of work stoppages due to industrial disputes. The number of man-days, directly lost because of work stoppages, has grown at more than a 16 per cent annual rate — that is to say, at about three times the real rate of growth of the economy. In 1972 and 1973, the number of man-days lost was equivalent to about 28,000 persons being away from work for one full year because of industrial disputes; this is 0.33 per cent of total employment. The corresponding figures for 1963 were 4,000 full-time equivalent employees for a full year and 0.06 per cent of total employment. The full extent of the spin off effect of increased work stoppage in terms of layoffs and lost production in related industries, in terms of additions to the numbers of unemployment insurance beneficiaries, and so on, has not been estimated. We simply note here that such effects are much greater now than they have ever been before.

Turning from employment and labour demand to labour supply, it should be noted that important new developments occurred on this side of the labour market as well during the period under review.

Growth of the labour force may be broken down into two major parts: that which is attributable to increases in the population of labour force age and that attributable to changes in the proportion of the population who are either employed or who are actively seeking work (the labour force participation rate). Percentage growth of the labour force attributable to these two factors is illustrated in Chart 2-8.

Labour force growth due to population increases eased off during the period 1969-72 but picked up a bit in 1973. Much of that pattern may be traced back to changes in net migration. Labour force growth attributable to participation rate changes increased markedly in 1971, 1972, and particularly in 1973. In 1973, the average participation rate jumped a full percentage point (to 57.5 per cent) contributing to the sharpest rate of labour force growth ever recorded in Canada.

There was a time when participation rate changes were related to economic conditions. The data used to suggest that when the economy is buoyant and jobs abundantly available, persons tend to be encouraged to enter the labour

force. Similarly, when the economy is soft and jobs are scarce, persons tend to be discouraged from entering the labour force. Using the overall unemployment rate as a broad indicator of economic conditions, one can get a fairly tight relationship between economic performance and participation rate change – at least until 1971.

Chart 2-8

**Labour Force Growth,
Canada, 1963-73**

Percentage Growth of the Labour Force Attributable
to Growth of the Population

Percentage Growth of the Labour Force Attributable to Changes
in the Labour Force Participation Rate

Chart 2-9 illustrates this point. From the early 1960s until 1970, the relationship between participation rate changes and the unemployment rate is shown by the shaded area on the left. For the period 1971 on, that relationship has apparently shifted sharply to the right. However, it is not yet clear what the nature of the new relationship is.

Chart 2-9

Labour Supply Response in Relation to Unemployment
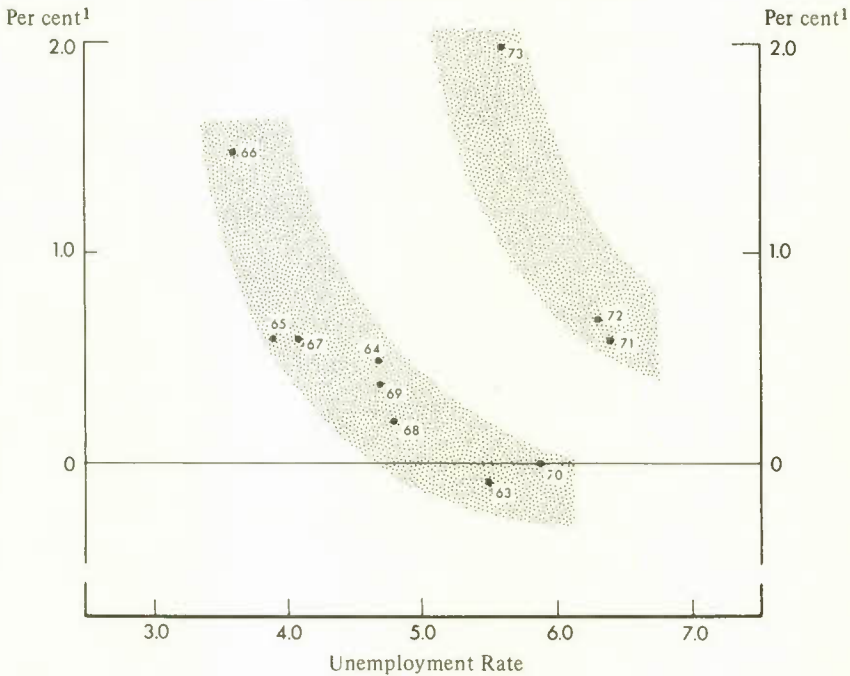
1 Percentage growth in the labour force attributable to changes in the labour force participation rate.

In a statement to the House of Commons in October 1971, the Minister of Finance mentioned that something unusual seemed to be happening to labour force participation rates:

> Our unemployment rate does not derive from a failure of employment to grow. . . . The overwhelming fact behind the increases in the unemployment figure is the increased proportion of Canadians of working age who have jobs or who respond to in the sample survey as being without a job and looking for work. . . . To my knowledge, no one – in government, in business or in the universities – predicted such a phenomenon.
> (*Hansard*, October 14, 1971)

In its *Ninth Annual Review,* the Economic Council of Canada foresaw average annual rates of increase in the labour force of some 2.6 per cent in the first half of the decade of the 1970s. The experience thus far has been well above that pace, with the 1970-73 average annual increase being about 3.3 per cent.

Table 2-2 portrays the composition of the labour force by major age-sex groups over the 1969-73 period. In 1969, the fastest growing segment of the labour force was the group of men and women in the 20-24 year age group. In 1973, the fastest growing segments were teenagers and women in the 25-54 year age group.

Table 2-2

Labour Force, Canada, 1969-73

		1969	1970	1971	1972	1973
		(Thousands of persons)				
A Labour Force						
Men	20-24	731	760	795	827	864
Men	25-54	3,505	3,572	3,645	3,716	3,816
Women	20-24	509	526	558	580	614
Women	25-54	1,432	1,502	1,574	1,662	1,770
Both sexes	14-19	840	861	895	952	1,041
Both sexes	55 and over	1,146	1,153	1,164	1,154	1,174
Total		8,162	8,374	8,631	8,891	9,279
B Change from Preceding Year						
Men	20-24	41	29	35	32	37
Men	25-54	60	67	73	71	100
Women	20-24	34	17	32	22	34
Women	25-54	71	70	72	88	108
Both sexes	14-19	6	21	34	57	89
Both sexes	55 and over	31	7	11	-10	20
Total		243	211	257	260	388
C Percentage Change from Preceding Year						
Men	20-24	5.9	4.0	4.6	4.0	4.5
Men	25-54	1.7	1.9	2.0	1.9	2.7
Women	20-24	7.2	3.3	6.1	3.9	5.9
Women	25-54	5.2	4.9	4.8	5.6	6.5
Both sexes	14-19	0.7	2.5	3.9	6.4	9.3
Both sexes	55 and over	2.8	0.6	1.0	-0.9	1.7
Total		3.1	2.6	3.1	3.0	4.4

Source: Statistics Canada, Labour Force Survey.

Sorting out the factors behind increased labour force growth is important. Table 2-3 shows percentage changes in the labour force attributable to participation rate movements. The one pattern which stands out as having changed the most during the period under review is that for teenagers. In

1973, substantial increases in the participation rate for women in the 20-24 and 25-54 year age groups added considerably to overall labour force growth.

Table 2-3

Labour Force Changes Attributable to
Participation Rate Changes, 1969-73

		1969	1970	1971	1972	1973
		(Per cent)				
Men	20-24	−0.1	−1.2	0.3	0.8	1.5
Men	25-54	−0.2	−0.1	−	−0.2	0.1
Women	20-24	1.9	−1.4	2.5	1.1	3.3
Women	25-54	3.4	2.9	2.7	3.4	4.2
Both sexes	14-19	−1.8	−	1.5	4.1	7.1
Both sexes	55 and over	−	−2.0	−1.6	−3.3	−0.5
Total		0.5	−	0.5	0.7	1.8

Source: Statistics Canada, Labour Force Survey.

The number of persons unemployed at any point in time is the net result of the interaction of all of the forces at work on the demand and supply sides of the labour market. Some of those forces have been described above. The percentage distribution of unemployment by major age and sex groups is shown in Table 2-4 for selected years over the period 1953 to 1973. Looking over a span of 20 years, one notes that the compositional changes have been considerable. Over the five-year period which is the focal point of this study, compositional changes can also be seen: a decreased share of unemployment among prime-age males and among persons over 55; and an increased share for other groups, particularly for women 20-24 and 25-54 years.

Table 2-4

Percentage Distribution of Unemployed Persons
by Age and Sex, Selected Years,
1953-73

		1953	1963	1969	1970	1971	1972	1973
		(Per cent)						
Men	20-24	14.2	13.4	14.4	16.2	16.3	17.1	16.5
Men	25-54	47.5	43.6	34.8	35.0	34.1	32.6	30.2
Women	20-24	3.1	3.5	5.0	5.5	6.2	6.8	7.7
Women	25-54	5.0	6.2	9.4	8.7	10.0	11.4	12.3
Both sexes	14-19	18.5	20.6	23.8	23.6	23.7	23.0	24.0
Both sexes	55 and over	12.4	12.8	12.6	11.1	9.8	9.3	9.2
Total unemployed		100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Statistics Canada, Labour Force Survey.

Shifts in the composition of total unemployment, and therefore in the component factors behind the unemployment rate, indicate a need for considerable caution in the uses to which one puts any single summary indicator of idle labour resources. In its *Tenth Annual Review,* the Economic Council of Canada noted that "it is... questionable whether the aggregate unemployment rate, alone, is adequate as a measure of the state of the labour market or of the well-being of the population".

Chart 2-10

**Inflation—Unemployment Relationship,
1961-73**
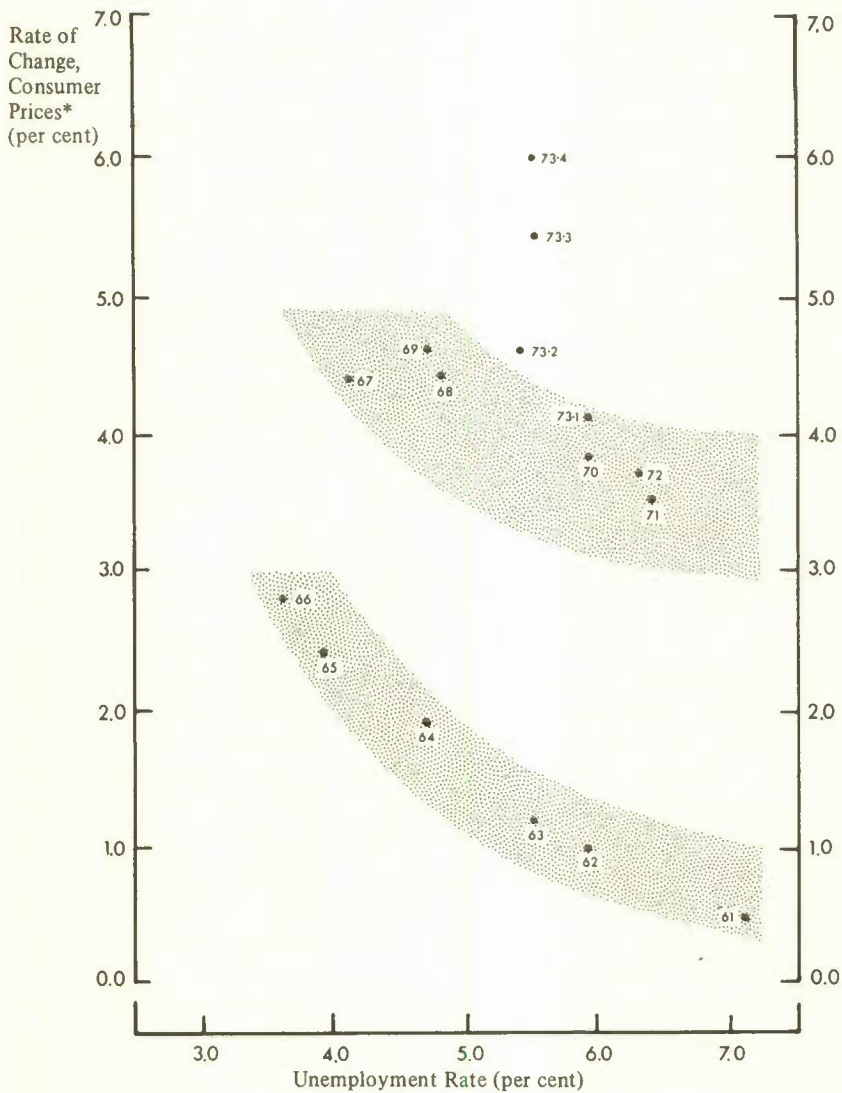
*Consumer Price Index, all items excluding food.

The changed composition of unemployment in recent years may have had something to do with the fact that the traditional relationship between the rate of unemployment and the rate of inflation appears to have shifted. However, the relationship between unemployment and price inflation depends upon a great deal more than the composition of the labour force. In Chart 2-10, the rate of unemployment is shown on one axis while the rate of change in consumer prices, excluding food, is shown on the other. The food component of the index was excluded because of the many weather-oriented special factors, which influence its behaviour from one period to the next.

Data in the chart seem to suggest that one pattern existed in the relationship between inflation and unemployment from 1961 to 1966 and another pattern between 1967 and early 1973. Since mid-1973, prices have increased considerably with no substantial change occurring in the unemployment rate.

The circumstances surrounding recent price developments are not only complex but international in scope. They fall well beyond the reach of the present study. In the simulation results that appear below, the impact of various alternate programs and policies on both the unemployment rate and a measure of the rate of inflation are presented.

In summary, this section of the paper has focused on a number of developments in the Canadian economy over the period 1969-73, giving special attention to certain features of the labour market. For most of the period, unemployment was the central and primary concern of economic policy-makers. In the following section, the record of federal fiscal policy is reviewed.

B   Fiscal Policy Record

In fiscal year 1968-69, federal government budgetary revenues were $10.2 billion; five years later they were $19.4 billion, an increase of 90 per cent. Over the five-year period ending in fiscal year 1973-74, the government cumulated a financial requirement for net non-budgetary transactions, excluding any requirement for foreign exchange transactions, of $4.9 billion. A portion of the growth of revenues and of the government's borrowings over the past five years were for the purpose of financing a variety of initiatives for dealing with the problem of unemployment. In this section the main elements of the fiscal policy as it evolved are reviewed and summarized. The objective is to characterize the overall posture of fiscal policy during the period, in terms of the degree to which it was contractionary or expansive, and to catalogue the array of measures designed to deal explicitly and directly with the problem of unemployment.

There are a number of measures available for quantifying the fiscal posture: the budgetary surplus or deficit; the national accounts basis surplus or deficit; the high-employment budget surplus or deficit; the overall financial requirement; and so on. In this section, use is made of two of these: the total cash

requirement and the national accounts basis surplus or deficit. Our purpose is to characterize the intent of the government in regard to overall fiscal impact so that the exact choice of measure is not all that important. Our choices were conditioned primarily by the government's own practice:

> The fiscal stance of the government is best expressed by the government's total cash requirement, budgetary and non-budgetary. For several years now, we have followed the practice of determining our fiscal policy on the basis of total cash requirements and, indeed, this is the practice of most modern states in presenting their overall financial position.
> (Minister of Finance, *Budget Speech*, February 1973)

The general thrust of fiscal policy over the 1969-73 period may be discerned from the six budgets over the period together with two "Statements" on economic policy which introduced new programs and summarized the government's financial position. The main categories of income, expenditures and the deficit as projected and presented on each of those occasions are described in a statistical appendix at the end of this chapter. The intended changes in the government's fiscal position, as revealed in those tables, are summarized in Table 2-5. The intended *changes* in position are a good statistical indicator of the direction and degree to which fiscal policy is impacting on the economy.

Interpretation of the data in Table 2-5 is as described in the table footnote. The figures in Table 2-5 show the *difference* between the cash requirement (or the national accounts basis surplus or deficit) in the fiscal year immediately past and as projected for the fiscal year current or immediately ahead. A change from a deficit to a surplus (or from a large deficit to a smaller one) shows up as a positive number. Such a change would be intended to restrain the growth of aggregate demand. Similarly, a change from a surplus to a deficit (or from a small deficit to a larger one) shows up as a negative number. Such a change would be intended to encourage the growth of aggregate demand.

The figures for the *actual* change in the government's posture are shown in brackets below those for the *intended* change. Since the government does not publish projections of expected financing required for foreign exchange transactions, the intended changes in financial requirement shown are net of foreign exchange transactions. The necessary purchase or sale of foreign exchange (which, of course, has to be financed) may account for some of the discrepancies between intended and actual figures in the table. For example, if in a particular year the requirement for foreign exchange transactions is substantial, the circumstances of the government's cash balances and the state and needs of the credit markets may necessitate some reduction in the intended financial requirement for purposes other than foreign exchange.

The message of Table 2-5 is quite clear. In mid-June of 1969, the government was acting to restrain the growth of demand in the economy. The

Table 2-5

Intended Changes in Federal Government Fiscal Position

(Actual changes shown in brackets)

	Intended Change in Fiscal Position	
	Total Cash Requirements Excluding Foreign Exchange*	National Accounts Basis Position
	(Millions of dollars)	
1968-69 to 1969-70		
June 1969 Budget	491	642
	(1,084)	(903)
1969-70 to 1970-71		
March 1970 Budget	−775	−390
October 1970 "Statement"	−1,417	−1,098
December 1970 Budget	−1,652	−1,201
	(−1,363)	(−1,069)
1970-71 to 1971-72		
June 1971 Budget	−1,248	−275
October 1971 "Statement"	−1,418	**
	(−364)	(−166)
1971-72 to 1972-73		
May 1972 Budget	−397	−400
	(−75)	(−108)
1972-73 to 1973-74		
February 1973 Budget	−	435
	(−227)	(141)

* Based on financial statements pertaining to the latest fiscal year past and the fiscal year immediately ahead, from the 1969-73 Budgets. For example, in the Budget of June 1969, the preliminary estimate of federal cash requirements (excluding foreign exchange transactions) for 1968-69 was $891 million; the forecast figure for 1969-70 was $400 million. The intended reduction in cash requirement was, therefore, $491 million. A reduction in financial requirement is indicated by a positive number in the table while an increased requirement is shown by a negative number.

** Not included with the Minister's Statement.

Source: Department of Finance, Statistics Canada.

extent to which it did so was even greater than intended. By the early part of 1970, the intention had clearly changed in the direction of providing stimulus. As the year progressed, that intention changed towards providing a still larger degree of stimulus. Through 1971, the intention to provide stimulus to the economy was still there to a substantial degree, although the actual result proved to be less than had been anticipated. The intention to add to the expansionary thrust of fiscal policy was continued into 1972, although to a lesser degree than in the preceding two years. In early 1973, the government expected no change in the size of its overall financing

requirement (net of foreign exchange); the requirement by 1972-73 had reached a level of $2 billion and it was intended that it stay at that high level through 1973-74. Changes in the basic thrust of fiscal policy over the period, as measured by financing requirements, are mirrored in the picture provided by the national accounts basis government position.

The evolving federal fiscal position was the net result of numerous revenue and expenditure changes as well as of the performance of the economy in general. We turn now to a brief description of some of the more important fiscal policy decisions which had been taken with the state of the Canadian labour market foremost in mind.

The Budget of June 1969 was oriented towards the perceived persistence of excessive demand in the economy and the need to provide restraint:

> The very strength of the current expansion clearly aggravates the threat of intensified inflationary pressure, with all of its attendant evils.
> (*Budget Speech*, June 1969)

In view of that diagnosis, the Minister of Finance extended by one year surtaxes which had been in effect on personal and corporate incomes, reduced tariffs and announced a two-year deferral of capital cost allowances on newly constructed commercial buildings in urban centres in Ontario, Alberta, and British Columbia. The latter measure was intended to take some demand pressure out of the construction industry.

By March of 1970, the Minister of Finance was able to acknowledge that the pace of economic activity was "somewhat reduced" and it was expected

> ... that the economy will continue to move upward in 1970, but at a lower rate than in 1969.... Employment will continue to rise, but more slowly than in 1969, and I anticipate some increase in unemployment.
> (*Budget Speech*, March 1970)

In regard to objectives, the Minister stated that

> it is the policy of the government to restrain the growth of total spending in the economy, for that is a necessary condition for achieving our primary economic objective.
> (*Budget Speech*, March 1970)

However, the overall posture of the Budget indicated clearly a shift towards the easing of restraint. While some degree of inflation precaution was maintained (a one-year extension on the program to defer capital cost allowances for commercial construction was brought in and authority was sought for the introduction of controls over consumer credit) substantial amounts of new funds were being infused into the economy, such as an additional $150 million for the Central Mortgage and Housing Corporation budget to give more emphasis to the construction of low-cost rental housing.

Through the remaining nine months of 1970, there was a rapid succession of reports of a deteriorating unemployment situation and almost as rapid a series of statements about changes in the fiscal policy. Important announcements about expenditure measures were made in June, August, October and December. Through that period, the Minister of Finance stressed the government's "continuous review" of economic performance and a corresponding "continuous adaptation" of fiscal policy, bringing forward "further measures as we conclude they are warranted".

In a statement on economic policy to the House of Commons in October 1970, the Minister noted that

> the government's economic policy objective is to give to the economy the maximum stimulus that can be provided without unleashing another and inevitably more damaging round of inflation.
> (*Hansard*, October 1970)

Between March and October, the government had

- dropped the proposed control over consumer credit;

- increased outlays to the provinces of some $350 million to cover accelerated transfers of tax revenues, accelerated payments of technical and vocational school grants, and made higher equalization payments;

- allotted $60 million "to be directed very specifically to the alleviation of unemployment where the unemployment conditions are especially severe". About one-third of that sum was for "an extension of the manpower training programs. The new trainees who will benefit under this program extension will be drawn from the unemployed members of the labour force";

- allotted a further $100 million to the CMHC budget for low-income housing in high unemployment areas; and

- added a summer employment program for students and expanded social assistance programs at a cost of $73 million.

In a Budget Speech in December 1970, still further measures were introduced. These included:

- a 10 per cent increase in rates of unemployment insurance benefit in anticipation of the introduction of the new UIC Act in mid-1971;

- a $150 million provincial loan fund for new capital projects that would otherwise not occur. Distribution of funds by province was based on the distribution of unemployment;

- an additional $23 million to federal departments and agencies "to undertake further capital improvements in regions where unemployment is most severe";

- an allotment of $20 million to accelerate the development of access roads and necessary local services in the area surrounding the new ·Montreal International Airport;

- a further $40 million for the CMHC budget for more moderate cost homes in areas of high unemployment;

- extension of incentive grants to new areas and other changes to the program of the Department of Regional Economic Expansion at a cost of $130 million "over the period of the next few years";

- an allotment of $60 million "over the next several years" in aid to the Canadian shipbuilding industry and the extension of special assistance to the footwear industry; and

- a supplementary capital cost allowance benefit for the manufacturing and processing industries.

The data in Table 2-5 illustrate the degree to which the intended thrust of fiscal policy was relaxed as a consequence of the series of measures announced between March and December of 1970. An intended change in net cash requirement of $775 million as of March became one of more than $1.6 billion by the end of the year. A change in requirement of almost $1.4 billion was realized.

The expansive thrust of policy during this period was heavily concentrated in new expenditures rather than tax cuts. The government was of the view that only expenditures could be directed "to the particular points in the economy where stimulus and relief of economic hardship are most required". The attempt to differentiate the impact, notably the regional impact, of fiscal policy was an important feature of the period. It was felt such differentiation could only be done through government spending. To finance all of the announced new programs and at the same time not run up an excessively large net financial requirement, the government announced, in the December 1970 Budget, its intention of extending by one additional year the surtaxes imposed earlier on personal and corporate incomes. The yield of those surtaxes over a twelve-month period was estimated to be $245 million.

Some new initiatives on the revenue side were brought forward, however, in the Tax Reform Budget of June 1971. By mid-1971, it was the government's view that the turning point had been reached in late 1970:

> I am confident as we move on through the second half of 1971 and into 1972, the performance of the economy will be strong and gaining momentum.
> (*Budget Speech*, June 1971)

However, in order to ensure that the expansion under way would be "vigorous and broadly based", new measures were brought in to encourage "confident spending in the private sector of the economy". The measures included:

- removal of the surtaxes on personal and corporate incomes, effective July 1, 1971;

- elimination of the lowest rates of federal income tax, effective July 1, 1971 rather than January 1, 1972 as envisaged under tax reform;

- exemption from taxes of the guaranteed income supplement paid to pensioners, effective January 1, 1971; and

- reductions in commodity taxes (margarine, anti-pollution equipment, home entertainment equipment).

These measures on the revenue side and the expenditure measures announced through 1970 combined to push the intended net financial requirement in 1971-72 up to $2.4 billion from $1.2 billion the preceding year. Not all of that requirement was in fact realized.

In August 1971, the President of the United States adopted an "activist" role in trying to wrest the U.S. economy from the slowdown it was in. Some of the measures adopted by the President had important implications for the Canadian economy. Thus, in October, while the Minister of Finance was able to report that "the Canadian economy is on the course I envisaged for it at the time of my June budget", it was still felt necessary to bring in new, additional measures

> to reinforce the economic expansion ... to provide jobs for Canadians who want to work and who have no work to do ... (and to offset) the growing feeling of concern in the economy deriving from the unsettled state of the international trade and payments system and from the uncertainty concerning the duration of the United States economic measures and the extent of their impact upon the Canadian economy.
> (Minister of Finance, *Statement to the House of Commons*, October 1971)

The measures announced included both new spending programs and tax cuts:

- a $100 million Local Initiatives Program;

- a $20 million On-the-Job Training Program "with special emphasis on unemployed young people who are ineligible for the existing manpower training programs";

- a $15 million expansion of the Canada Manpower Training Program;

- a "new and improved $160 million special program of loans to provinces and their municipalities to finance additional job-creating capital projects". Under the program, 75 per cent of on-site labour costs incurred up to May 31, 1972 would be forgiven;

- an allocation of $80 million for federal labour-intensive and capital works;

- a $10 million loan fund for construction of multi-purpose exhibition buildings;

- an acceleration of $113 million in loans for public, home-owner and student housing, for sewage treatment facilities and for land assembly projects;

- a reduction in taxes payable by Canadian corporations by 7 per cent, effective July 1, 1971 until December 31, 1972; and

- a reduction in federal tax payable by persons of 3 per cent over the period July 1, 1971 to December 31, 1972.

The intended impact on the government's net financial requirement in 1971-72 (excluding foreign exchange transactions) of these measures, on top of those previously announced, was $2.6 billion. About $1.5 billion of that requirement was realized.

In late 1971 and early 1972, there appeared to be some improvement in the unemployment trend. As noted in Chapter 1, this and other evidence gave rise to the widely held view that the economy was indeed firmly established in an expansion phase. In that Budget of May 1972, the Minister of Finance drew attention to the improving unemployment trend but went on to say that the unemployment rate

> is still unacceptably high, and the first priority of this government
> is to bring about a further substantial reduction in unemploy-
> ment.
> (*Budget Speech*, May 1972)

The principal thrust of the Budget, however, was not aimed at a short-run reduction in numbers of unemployed persons. The Minister proposed a two-year fast write-off for machinery and equipment used in the manufacturing and processing industries and a 40 per cent top rate of tax on corporation profits for manufacturers and processors. These were policy measures that were "medium and long-term in their nature and structural in their impact".

A second set of measures was also introduced in that Budget "to promote greater social justice by relieving the financial burden that is borne by particular groups or individuals". These measures included:

- escalation of the old-age security pension and pensions and allowances of veterans by the full amount of the increase in the consumer price index during the preceding year, effective January 1, 1972;

- an increase in the guaranteed income supplement; and

- increased exemptions and deductions for particular groups of tax-payers (students or their families, those persons confined to their bed who require a full-time attendant, and others).

Thus, the basic thrust of the May 1972 Budget was towards improving the relative competitive position of the Canadian manufacturing sector over the medium and longer term and increasing the flow of transfer payment to persons, in part to offset the erosion of incomes due to inflation.

The Minister did draw attention to two government programs which were considered important in connection with certain aspects of the unemployment problem:

> The government this year will expand its program of summer employment for young people .... For a second year a diverse range of programs in the federal opportunities for youth plan, aided by a number of similar provincial programs, will help to fill gaps in the supply of jobs this summer.
> (*Budget Speech*, May 1972)

He also drew attention

> to the significant improvements which the government has now proposed to the manpower training program .... In that connection, the experimental program of on-the-job training introduced last fall was enthusiastically received, and the government has provided a total of $50 million for this purpose.
> (*Budget Speech*, May 1972)

As the year 1972 drew on, the unemployment trend deteriorated. A seasonally adjusted unemployment rate of more than 7 per cent was issued for the month of September in the final weeks of the federal election campaign. Another expenditure program was prepared.

In early December 1972, the Minister of Finance and the Minister of Manpower and Immigration issued a joint statement announcing a $500 million federal Winter Job Expansion Plan "to help combat seasonal unemployment". The plan consisted of four parts:

- an additional $80 million allocated to the 1972-73 Local Initiatives Program, bringing the total allocation for that program year up to $165 million;

- an increase of $10 million in grants for on-the-job training, raising the total funding for the program for winter 1972-73 to $50 million;

- provision of $60 million to federal departments for labour-intensive works and activities over the winter months; and

- a $350 million provincial-municipal Winter Capital Projects Fund for loans and grants to provinces and municipalities to finance capital projects in the winters of 1972-73, 1973-74 and 1974-75.

The program was specifically directed at dealing with the problem of *seasonal* unemployment:

> (While) the pace of economic expansion began to revive strongly early this fall (after a brief levelling out of the growth of

> production and incomes during the third quarter) ... it is
> nevertheless apparent that winter seasonal unemployment will
> continue to be a difficult problem, especially in certain parts of
> the country.
> (*Press Release*, Department of Finance, December 6, 1972)

Having said that the program was specifically directed at the problem of
seasonal unemployment, the Ministers also acknowledged

> that there are limits to the capacity of direct government
> measures to reduce winter unemployment. The adverse effects of
> our rigorous Canadian winters inevitably force shutdowns or
> slowdowns in construction and in many basic industries in
> Canada.
> (*Press Release*, Department of Finance, December 6, 1972)

Once again, the government's choice of expenditure (rather than tax
measures) was dictated by the belief that the spending instrument could be
pointed directly at where the problem was greatest – "by region, by age
group and by the skills of unemployed persons".

Two and a half months after the Winter Job Expansion Plan was
announced, the Minister of Finance brought down another Budget, the
principal purpose of which was "first and foremost to bring about a
substantial reduction in unemployment". In the Budget Speech, the Minister
drew attention to the anomaly described earlier in this chapter – the
persistence of high unemployment levels in the face of mounting evidence of
a substantial rise in job availability:

> It is a fact that while unemployment has remained high,
> employers are reporting difficulty in filling the growing number of
> vacancies.
> (*Budget Speech*, February 1973)

It was indicated by the Minister that at least part of the explanation may be
found in the revision of the Unemployment Insurance Program which had
been implemented over the preceding 18 months.

> Certainly more generous provisions for the unemployed and the
> availability of support for many unemployed persons from
> spouses or parents permit people to take more time in finding the
> jobs that suit them best.
> (*Budget Speech*, February 1973)

However, the fact that the numbers of unemployed continued to be "high"
dictated the need for "adding a further strong thrust to the present pace of
expansion".

The measures announced in the budget included the following:

– an increase in old-age security pensions and veterans' allowances;

– a reduction of 5 per cent in the basic federal tax on personal incomes
and an increase in personal exemptions;

- indexing of the principal personal income tax exemptions according to the rate of increase in the consumer price index;

- temporary cuts in the tariffs on a wide range of consumer products;

- removal of the sales tax on confectionaries, chocolate bars, children's clothing and other articles; and

- a broadening of the basis for general equalization to include new grants on account of municipal taxes imposed for local school purposes.

Despite a forecast increase in budgetary revenues in fiscal year 1973-74 of $1.7 billion (or 10.4 per cent), the proposed fiscal program was still expected to require an additional $2 billion in net financing (excluding foreign exchange transactions), unchanged from the projected outcome for 1972-73.

The continuing high levels of measured unemployment through the latter part of 1972 resulted in the government maintaining an overall posture of substantial deficit. It was recognized that there was possible danger ahead in following that course:

> We recognize that we are running a risk, and that the risk is on the side of over-shooting. That is a risk worth taking at this time in the interests of dealing more effectively with unemployment.
> (*Budget Speech*, February 1973)

The seasonally adjusted unemployment rate did come down, of course, but only into the 5.5 per cent range where it has remained for about three-quarters of a year. To some degree, at least, the expansion of demand, employment and production over the 1971-73 period and the eventual easing-off of the unemployment rate can be attributed to the various fiscal initiatives described above. The extent to which this was so for some of the new measures introduced over the period is the principal concern of this study. The specific measures selected for analysis include two direct employment creation programs (Local Initiatives and Opportunities for Youth), the Canada Manpower Training Program and the new Unemployment Insurance Program. Each of these is described in greater detail in the following three chapters.

STATISTICAL APPENDIX TO

CHAPTER 2

Evolution of the Net Financing Requirement
of the Federal Government, over the Period
1968-69 to 1973-74

Table A2-1

Government of Canada Financial Requirements,
1968-69 and 1969-70

	June 1969 Budget		1968-69 Actual	1969-70 Actual
	1968-69 Preliminary	1969-70 Forecast	1968-69 Actual	1969-70 Actual
	(Millions of dollars)			
Budgetary transactions:				
Revenues	10,169	12,025	10,191	12,324
Expenditures	10,735	11,775	10,767	11,931
Surplus or deficit (−)	−566	250	−576	393
Net non-budgetary transactions:				
excluding foreign exchange	−325	−650	−319	−204
Subtotal	−891	−400	−895	189
Foreign exchange transactions:				
source or requirement (−)	−1,048	−	−681	−347
Total Requirements	−1,939	−400	−1,576	−158
National accounts basis:				
surplus or deficit (−)	−67	575	75	978

Source: Department of Finance, Statistics Canada.

Table A2-2

Government of Canada Financial Requirements,
1969-70 and 1970-71

	March 1970 Budget		1969-70 Actual	1970-71 Actual
	1969-70 Preliminary	1970-71 Forecast	1969-70 Actual	1970-71 Actual
	(Millions of dollars)			
Budgetary transactions:				
Revenues	12,270	13,150	12,324	12,803
Expenditures	11,915	12,900	11,931	13,182
Surplus or deficit (−)	355	250	393	−379
Net non-budgetary transactions:				
excluding foreign exchange	−105	−775	−204	−795
Subtotal	250	−525	189	−1,174
Foreign exchange transactions:				
source or requirement (−)	−310	−	−347	−1,255
Total Requirements	−60	−525	−158	−2,429
National accounts basis:				
surplus or deficit (−)	570	180	978	−91

Source: Department of Finance, Statistics Canada.

Table A2-3

Government of Canada Financial Requirements, 1969-70 and 1970-71

| | October 1970 Statement on Economic Policy | | | |
	1969-70	1970-71 Forecast	1969-70 Actual	1970-71 Actual
	(Millions of dollars)			
Budgetary transactions:				
Revenues	12,313	13,100	12,324	12,803
Expenditures	11,938	13,250	11,931	13,182
Surplus or deficit (−)	375	−150	393	−379
Net non-budgetary transactions:				
excluding foreign exchange	−293	−1,185	−204	795
Subtotal	82	−1,335	189	−1,174
Foreign exchange transactions:				
source or requirement (−)	−335	−1,222	−347	−1,255
Total Requirements	−253	−2,557	−158	−2,429
National accounts basis:				
surplus or deficit (−)	648	−450	978	−91

Source: Department of Finance, Statistics Canada.

Table A2-4

Government of Canada Financial Requirements, 1969-70 and 1970-71

| | December 1970 Budget | | | |
	1969-70	1970-71 Forecast	1969-70 Actual	1970-71 Actual
	(Millions of dollars)			
Budgetary transactions:				
Revenues	12,313	13,035	12,324	12,803
Expenditures	11,938	13,355	11,931	13,182
Surplus or deficit (−)	375	−320	393	−379
Net non-budgetary transactions:				
excluding foreign exchange	−293	−1,250	−204	−795
Subtotal	82	−1,570	189	−1,174
Foreign exchange transactions:				
source or requirement (−)	−335	−1,216	−347	−1,255
Total Requirements	−253	−2,786	−158	−2,429
National accounts basis:				
surplus or deficit (−)	631	−570	978	−91

Source: Department of Finance, Statistics Canada.

Table A2-5

Government of Canada Financial Requirements,
1970-71 and 1971-72

| | June 1971 Budget | | | |
	1970-71 Preliminary	1971-72 Forecast	1970-71 Actual	1971-72 Actual
	(Millions of dollars)			
Budgetary transactions:				
Revenues	12,769	13,660	12,803	14,227
Expenditures	13,187	14,410	13,182	14,841
Surplus or deficit (−)	−418	−750	−379	−614
Net non-budgetary transactions:				
excluding foreign exchange	−764	−1,680	−795	−924
Subtotal	−1,182	−2,430	−1,174	−1,538
Foreign exchange transactions:				
source or requirement (−)	−1,255	−13	−1,255	−506
Total Requirements	−2,437	−2,443	−2,429	−2,044
National accounts basis:				
surplus or deficit (−)	−375	−650	−91	−257

Source: Department of Finance, Statistics Canada.

Table A2-6

Government of Canada Financial Requirements,
1970-71 and 1971-72

| | October 1971 Statement to the House of Commons | | | |
	1970-71 Preliminary	1971-72 Forecast	1970-71 Actual	1971-72 Actual
	(Millions of dollars)			
Budgetary transactions:				
Revenues	12,769	13,580	12,803	14,227
Expenditures	13,187	14,580	13,182	14,841
Surplus or deficit (−)	−418	−1,000	−379	−614
Net non-budgetary transactions:				
excluding foreign exchange	−764	−1,600	−795	−924
Subtotal	−1,182	−2,600	−1,174	−1,538
Foreign exchange transactions:				
source or requirement (−)	−1,255	*	−1,255	−506
Total Requirements	−2,437	*	−2,429	−2,044

* Figures not included in the Minister's statement.
Source: Department of Finance.

Table A2-7

Government of Canada Financial Requirements,
1971-72 and 1972-73

	May 1972 Budget			
	1971-72 Preliminary	1972-73 Forecast	1971-72 Actual	1972-73 Actual
	(Millions of dollars)			
Budgetary transactions:				
Revenues	14,145	15,670	14,227	16,602
Expenditures	−14,745	−16,120	14,841	16,121
Surplus or deficit (−)	−600	−450	−614	481
Net non-budgetary transactions:				
excluding foreign exchange	−1,003	−1,550	−924	−1,944
Subtotal	−1,603	−2,000	−1,538	−1,463
Foreign exchange transactions:				
source or requirement (−)	−485	24	−506	73
Total Requirements	−2,088	−1,976	−2,044	−1,390
National accounts basis:				
surplus or deficit (−)	−400	−800	−257	−365

Source: Department of Finance, Statistics Canada.

Table A2-8

Government of Canada Financial Requirements,
1972-73 and 1973-74

	February 1973 Budget			
	1972-73 Forecast	1973-74 Forecast	1972-73 Actual	1973-74 Actual
	(Millions of dollars)			
Budgetary transactions:				
Revenues	16,300	18,000	16,602	19,367
Expenditures	−16,300	−18,975	16,121	20,040
Surplus or deficit (−)	−	−975	481	−673
Net non-budgetary transactions:				
excluding foreign exchange	−2,000	−1,025	−1,944	−1,017
Subtotal	−2,000	−2,000	−1,463	−1,690
Foreign exchange transactions:				
source or requirement (−)	83		73	296
Total Requirements	−1,917	−2,000	−1,390	−1,394
National accounts basis:				
surplus or deficit (−)	−1,075	−640	−365	−224

Source: Department of Finance, Statistics Canada.

3 Selected Direct Employment-Creation Programs

A Introduction

In this study the use of the expression "direct employment-creation program" implies a policy measure in which government spending is largely for wages and salaries. Under such a program, government revenues or borrowings are expressly directed towards putting persons on a payroll, giving them something "useful" to do. At one extreme, this could involve expenditures to have one individual digging holes while another individual filled them up. In such a case, the objective of creating jobs for the sake of having more people employed would be achieved. Of course, the value of the product produced would fall far short of the real cost of production. On the other extreme, there are products or services of substantial social importance ("community betterment") but for which the actual market value is impossible to establish.

Direct employment-creation programs tend to be highly controversial largely because of differences in interpreting the value of the product or service provided. The programs we have selected to analyse are no exception: they are the Local Initiatives Program (LIP) and the Opportunities for Youth Program (OFY). In neither case is it our objective to undertake a thorough benefit-cost analysis of these programs. That is to say we have not attempted in any way to assess the quality or quantity of "output" from them. Our principal concern is with the overall economic impact of the expenditures incurred.

In Chapter 2, it was noted that in the period 1970-72 a number of direct employment initiatives were brought in. In addition to LIP and OFY, the government committed substantial amounts of funds for labour-intensive capital projects under the direction of federal government departments and agencies, on the one hand, and provincial and municipal governments, on the other. We chose to focus our attention on LIP and OFY because the funds spent under these programs were substantial and because they attracted large numbers of participants and much public attention. Given the time constraints for completing our research, inclusion of all direct employment-creation programs was not feasible.

The Local Initiatives Program, discussed in detail below, was expressly oriented towards the high unemployment winter months. To this extent, it had a lot in common with the Municipal Winter Works Incentive Program (in short, Winter Works) which was in effect from 1958 to 1968.

The objective of Winter Works was to stimulate winter employment by encouraging municipalities, by means of an incentive payment, to carry out needed public works which in the ordinary course of events would not be undertaken in the winter. The federal government contributed 50 per cent of project payroll costs. Administration of the program rested with the provincial governments who approved projects and monitored project activities. Most provinces also contributed funds to cover project costs. The number of man-months of work provided under the program and the federal government share of costs are shown in Table 3-1. Federal government spending for Winter Works peaked in 1965-66 at $41 million.

The Opportunities for Youth Program, in contrast to LIP, was expressly oriented towards the summer months when student unemployment tends to be greatest. Prior to the introduction of OFY in 1971, job-creation programs for students had been limited to additional special hiring on a short-term basis by government departments and agencies. In August 1969, the Secretary of State appointed a Committee on Youth to investigate "the aspirations, attitudes and needs of youth" and "the government's present role in this area". The final report to the Secretary of State by the Committee on Youth, entitled "It's Your Turn . . . .", was presented in 1971, the year OFY was announced.

Table 3-1

Municipal Winter Works Incentive Program, 1958-69

Year	Man-Months of Work Provided	Estimated Cost of Projects	Federal Government Contributions
		(Millions of dollars)	
1958-59	44,374	63	6
1959-60	55,373	75	8
1960-61	139,964	213	23
1961-62	161,347	247	26
1962-63	177,916	293	31
1963-64	186,536	283	33
1964-65	223,545	317	40
1965-66	207,939	336	41
1966-67	154,013	268	32
1967-68	108,499	223	26
1968-69	89,121	183	22

Source: Department of Manpower and Immigration.

B Local Initiatives Program

LIP was announced in October 1971 to meet the dual objectives of job creation and community betterment.

> In the Local Initiatives Program we are providing substantial amounts of money which we believe will generate projects providing income and satisfaction for the persons employed while adding to the quality of the communities where the projects are carried out.
> (Minister of Manpower and Immigration, October 1971)

The main features of the program were as follows:

- projects had to be of a basically non-profit nature and had to be capable of being put into effect quickly so that the main employment impact occurred within six months after November 1971;

- projects had to provide at least 30 man-months of work in employment which would not normally have taken place that winter;

- applicants were normally expected to hire unemployed workers through Canada Manpower Centres; and

- the maximum amount of federal support per project was $500,000. The maximum average weekly wage that could be paid was $100 and labour costs had to be a minimum of 85 per cent of total project costs.

Funds were allocated on a provincial basis in proportion to the numbers unemployed by province in excess of 4.5 per cent of provincial labour forces, adjusted to take into account estimated unemployment on Indian reserves. In allocating funds within provinces, the unemployment situation at local levels was taken into account.

Many of the projects started during the original program period were extended beyond May 31, 1972. A new program was announced for the winter of 1972-73, and many of those projects were extended beyond May 31, 1973. A third program, somewhat reduced in scope, was introduced in the winter of 1973-74. The main change in the program as it evolved was in regard to the maximum federal contribution to each project. This went from $500,000 in 1971-72, to $200,000 in 1972-73, down to $75,000 in 1973-74.

Table 3-2

Local Initiatives Program, Applications Received and Projects Approved

	Program Year		
	1971-72	1972-73	1973-74
Applications for grants	13,738	15,291	14,881
Projects approved	5,579	5,845	3,401

Source: Department of Manpower and Immigration.

The flow of applications for LIP grants was considerable, as seen in Table 3-2. The proportion of applications approved was about 40 per cent in the first year, but only 23 per cent in the third year.

When first announced by the Minister of Finance in his Statement on Economic Policy in October 1971, LIP was to cost $100 million. Actual expenditures that year turned out to be $178 million. Over the three years that the program has been around, total expenditures were in the neighbourhood of $440 million. Over an eleven-year period, the cumulative federal government contribution to the Winter Works Program was under $300 million.

Table 3-3

Local Initiatives Program, Budget and Expenditures by Program Year*

	1971-72	1972-73	1973-74	Total 1971-74
	(Millions of dollars)			
Original target period (Dec. 1st – May 31st)	150	160	73	383
Extension period (June 1st – Oct. 31st)	41	36	–	77
Total budget	191	196	73	460
Actual expenditures	178	190	71**	439

 * Note that the years are "program years", not government fiscal years.
** Expenditures to date as of mid-1974.
Source: Department of Manpower and Immigration.

Table 3-4 summarizes the amount of employment creation involved with LIP. The amount of employment provided each year is measured in man-months. Thus, if a project having a life of four months opened up 10 jobs, it would have created 40 man-months of employment, provided all jobs were filled over the life of the project. If persons hired to fill the 10 jobs stayed on through the life of the project, the number of participants on the project would be 10. However, to the extent that there is some turnover, the number of participants will exceed the number of jobs.

A significant portion of LIP activity was concentrated in the area of construction. For example, in the 1971-72 program year, 60 per cent of the total man-months worked were on construction projects. Table 3-5 shows the distribution of projects by type of activity for the 1971-72 program.

Sample data drawn from the universe of LIP projects reveal that a substantial portion of the construction projects tended to be concentrated in small communities whereas the service-oriented projects were generally concentrated in large communities.

Table 3-4

Local Initiatives Program, Employment-Creation Summary

	1971-72	1972-73	1973-74*
Number of man-months of employment provided:			
− original target period	310,929	325,000	145,000
− extension period	60,749	58,950	−
Total	371,678	383,950	145,000
Number of jobs created	90,000	86,000	31,000
Number of jobs affected by the LIP extension period	17,585	15,600	−
Average length of job (number of man-months)	3.5	3.8	3.8

* Estimated.
Source: Department of Manpower and Immigration.

Table 3-5

Local Initiatives Program, Distribution of Man-Months Worked and
Expenditures, by Type of Project, 1971-72

	Man-Months Worked	Expenditures
	(Per cent)	($ millions)
Construction		
− building and engineering	45	80
− lands, parks, forestry	15	20
Subtotal	60	106
Other		
− artistic and cultural	5	9
− social and health services	23	42
− sports and recreation	4	7
− research	8	14
Subtotal	40	72
Government sponsor	30	54
Private sponsor	70	124
Total	100	178

Source: Department of Manpower and Immigration.

LIP participants were given a questionnaire to complete which sought information about, among other things, the labour force status (i.e. employed, unemployed, not in the labour force) and source of income of the participant immediately prior to LIP. A sample of participants was also given a questionnaire approximately three months after the LIP project was completed, from which current labour force status and source of earnings were learned. These sources of information reveal that:

— about 70-75 per cent of all participants were male which is approximately the same as the share of males in the overall labour force;

— just over two-thirds of male participants had been unemployed immediately prior to LIP and about 10 per cent had been outside the labour force;

— about one-third of female participants were drawn into LIP from outside the labour force whereas one-half came from the unemployed; and

— about 60 per cent of all participants surveyed claimed to be unemployed three months after the LIP project terminated.

Participation in a LIP project was classified as regular employment from the point of view of establishing the right to draw benefits from the Unemployment Insurance Fund following project termination.

C   Opportunities for Youth Program

OFY was announced in March 1971, with the objective

> to encourage and create student employment and activities which would be socially useful and personally satisfying and would reduce the predicted rate of student unemployment.

The main features of the program were as follows:

— projects could have a maximum duration of four months (from May 15 to September 15);

— projects generally had to create approximately 10 to 15 jobs; and

— the wage for the summer for postsecondary students could not exceed $1,000 and that for secondary students not more than $800.

The desired ratio of postsecondary to secondary students on individual projects was 4:1 with the emphasis being on postsecondary students so as to enable them to finance the continuation of their education. The allocation of funds among provinces was based on the estimated provincial distribution of student unemployment.

The number of OFY projects approved relative to the number of applications received, during the first two years, was considerably lower than the corresponding proportion for LIP. Data on applications, approvals and jobs are summarized in Table 3-6. The proportion of projects approved rose to almost 40 per cent in 1973, in part because of a drop in the number of applications received.

Table 3-6

Opportunities for Youth Program, Applications, Projects, and Jobs, 1971-73

	1971	1972	1973
Application received	8,050	20,679	11,467
Projects approved	2,312	3,041	4,329
Jobs created	27,832	29,954	37,368

Source: Department of the Secretary of State and Department of Manpower and Immigration.

The average size project, in terms of the number of jobs created, steadily declined over the last three years. In 1971, the average size was twelve jobs whereas in 1973 it was just under nine jobs.

Expenditures for OFY projects increased considerably in 1972 and 1973 from their original 1971 level. Table 3-7 contains the budget data for each of the last three years.

Table 3-7

Opportunities for Youth Program, Allocation of Funds, 1971-73

	1971	1972	1973
	($ millions)		
Authorized	24.3	34.0	39.4
Program grants	23.1	31.1	35.4
Administrative costs	1.2	2.9	4.0
(% of budget)	(4.8)	(8.6)	(10.2)
	(Dollars)		
Average total cost per job created	831	1,037	947

Source: Department of the Secretary of State and Department of Manpower and Immigration.

The types of projects undertaken with OFY financing were varied. The ground rules were laid down in quite general terms.

> We are saying, in effect, to the youth of Canada that we are impressed by their desire to fight pollution; that we believe they are well motivated in their concern for the disadvantaged; that we have confidence in their value system. We are also saying that we intend to challenge them and see if they have the stamina and self-discipline to follow through on their criticism and advice.
> (Prime Minister, March 1971)

About three-quarters of all OFY projects fell into the categories cultural, recreational and social service. The remaining projects came under the headings environmental, research and information.

4   Canada Manpower Training Program

A   Introduction

The Canada Manpower Training Program (CMTP) was instituted in fiscal year 1967-68 when the Act for the Occupational Training of Adults (OTA) was passed by Parliament. The OTA replaced an array of shared cost federal-provincial programs that came under the Technical and Vocational Training Assistance Act of 1960. These earlier programs consisted of six-year agreements between the federal and provincial governments whereby the provinces would retain the responsibility for training in regard to type, structure, location, and administration while the federal government provided assistance in financing buildings, equipment, and current expenditures. The federal government agreed to pay a uniform 75 per cent of the amount allotted by provinces regardless of the program involved. Once a certain earmarked figure was reached, the federal share was reduced to 50 per cent. The bulk of federal expenditures for the program consisted of grants towards the capital cost of new facilities built by the provinces (mainly technical and vocational high schools).

Four major changes were brought in with the introduction of CMTP in 1967. These were:

1 discontinuation of the shared-cost feature of the program (the federal government now bears the entire cost);
2 confinement of the program to adults (i.e., to retraining those already in the labour force);
3 payment of living allowances during the period of training; and
4 certain transitional arrangements for capital grants.

In fiscal 1967-68, federal government expenditures on operating costs for manpower training amounted to $180 million; a further $130 million was allotted for capital costs.

B   Summary of the Program

CMTP has three main objectives:

1 to improve the rate of economic growth through improving the efficiency of labour markets and enhancing the skills of employees;

2 to improve the distribution of income through upgrading the employability and, therefore, the earning capacity, of those whose contribution to the economy is low; and

3 to contribute towards improved economic stabilization through the provision of training and allowances at times when seasonal and cyclical unemployment is high.

The federal government purchases courses for upgrading and retraining from the provinces (in public institutions, in private trade schools or in industry). The cost, paid by the federal government, includes all salary expenses plus administrative overhead and an amount for the use of facilities. Canada Manpower Centres select the candidates for training and spell out the course requirements. To qualify for training, a person must be at least one year past the regular school-leaving age and either have been out of school for one year or have been in an apprenticeship course. The prospective trainee must be considered capable of benefitting from training.

A trainee may be eligible for a training allowance. Living allowances are paid to trainees with dependents and to single persons who have been in the labour force for three years prior to training. The size of the allowance varies according to the number of dependents and, to some extent, by region. The amount is adjusted annually in accordance with changes in average hourly earnings in the manufacturing sector. In 1968-69, the allowance varied from $37 per week for a person with no dependents to $75 per week in some areas to persons with three or more dependents, with an additional $21 per week available for persons training away from home. In 1973-74, the regular allowance for persons with no dependents was $55 per week and as much as $95 per week was available to trainees in some areas who have four or more dependents. A further away-from-home allowance of $27 per week was also available. (In the Yukon and Northwest Territories, it was $33.)

The overall Canada Manpower Training Program consists of two main parts. These are as follows:

1 *Institutional training* is training in private or public institutions. It consists of skill training, language training, "basic training for skill development" (which is preparatory upgrading in mathematical and scientific skills), and apprenticeship training (but only the classroom portion of apprenticeship training programs).

2 *Training in industry* is, as the name implies, training in plants, factories or offices but purchased by the government.

Full-time training under CMTP may last for a maximum of 52 weeks; part-time training may be for as much as 1,820 hours. Courses in trade schools commonly run for as much as 10 months whereas courses in relatively less skilled occupations are quite short in duration. The overall average duration of training is in the range of 16 to 22 weeks.

As noted in Chapter 2, a new On-the-Job Training variant of CMTP was announced in October 1971. That program was directed towards private employers and some public agencies who are financed primarily by fees or sales. A federally financed wage subsidy allows employers to hire trainees and pay them a going wage even though the trainee's productivity may be minimal during the learning period. Subsidies take either of two forms: (a) a tax incentive of a 150 per cent write-off of trainee wage costs, which permits a 75 per cent recovery of wages for firms at about a 50 per cent income tax rate; and (b) a direct payment by the Department of Manpower and Immigration of 75 per cent of trainees' wages for firms that are unable to take advantage of the tax incentive.

There is an important distinction, in addition to a financial one, between On-the-Job Training and Training in Industry. Under the former, the trainee is actually on the job and contributing to production. Under the latter, the trainee observes and learns but does not contribute to the production process. Employers are encouraged to hire their trainees on a permanent basis once the period of training is over.

The number of trainees in training under the programs for full-time institutional training and training in industry is shown by quarter, for the period 1969-73, in Table 4-1. The table shows clearly the distinct seasonal pattern of enrolment under CMTP. It also shows the relative increase in numbers of participants during the 1970-72 period as large amounts of funds were being added into the CMTP budget in the course of the series of programs to deal with unacceptably high unemployment.

Table 4-1

Canada Manpower Training Program, Trainees in Training*,
Full-Time Institutional Training and Training in Industry

Quarter	1969	1970	1971	1972	1973
I	51,800	80,087	91,766	90,068	79,005
II	46,197	47,151	52,668	47,062	46,000
III	27,736	34,148	34,587	33,457	32,531
IV	58,716	68,286	68,520	66,256	67,642

* Quarterly averages of end-of-month figures.
Source: Department of Manpower and Immigration.

The number of trainees participating in the On-the-Job Training Program are shown in Table 4-2. The relative importance of On-the-Job Training grew very rapidly shortly after the program was announced and until the first quarter of 1973. However, from the second quarter of 1973 onward, the number of trainees in training fell below corresponding year-earlier levels.

The relative importance of the different elements of the overall training program are worth noting. These are summarized in Table 4-3. The

Table 4-2

**Canada Manpower Training Program,
Trainees in Training, and On-the-Job Training**

Quarter	1971	1972	1973
I	–	22,562	41,865
II	–	35,158	29,655
III	–	10,842	7,716
IV	544	4,341	2,550

* Quarterly averages of end-of-month figures.
Source: Department of Manpower and Immigration.

dominance of the institutional training program is apparent, both in regard to number of trainees and expenditures.

Table 4-3

**Canada Manpower Training Program, Distribution of Trainees Enrolled and
Expenditures by Program, Fiscal Year 1972-73**

	Trainees	Expenditures
	(Per cent)	
Skill	25.4	
Language	2.9	
Basic training for skill development	16.0	
Apprenticeship	9.6	
Part time	18.8	
Total institutional training	72.7	82.4
Training in Industry	10.7	2.6
On-the-Job Training	16.6	15.0
Total	100.0	100.0

Source: Department of Manpower and Immigration.

Federal government expenditures under CMTP increased markedly during the period under review – a rise of more than 100 per cent over the four years, up to 1972-73. Expenditure data are summarized in Table 4-4. Growth in training cost (attributable to increased numbers of trainees and to higher costs per trainee) exceeded the rise in the allowances cost over the period.

The Department of Manpower and Immigration maintains a fairly complete information system to support ongoing efforts to assess the adequacy and measure the return from expenditures on CMTP. Computerized data files exist which contain information about trainees, including their pre-training labour force and occupational status. A series of follow-up surveys is conducted to ascertain the post-training labour force status of graduate trainees about three months after the program is complete.

Table 4-4

Canada Manpower Training Program, Federal Government Expenditures

| Fiscal Year | Institutional Training and Training in Industry | | On-the-Job Training | Total |
	Training Cost	Allowance Cost		
	(Thousands of dollars)			
1968-69	81,665	108,301		189,966
1969-70	113,893	131,147		245,040
1970-71	133,014	156,563		289,577
1971-72	167,104	161,333	2,391	330,828
1972-73	197,331	146,167	41,396	384,894
1973-74*	188,835	155,240	30,976	375,051

* Preliminary.
Source: Department of Manpower and Immigration.

Data on pre-training labour force status indicate that about 55 per cent of trainees (institutional training and training-in-industry programs) were unemployed prior to starting their period of training. Another 30 to 35 per cent were employed while the remainder were outside the labour force prior to training.

The follow-up survey information on post-training labour force status shows that about three-quarters of graduate trainees are employed when surveyed, about one-fifth are unemployed, and the remainder leave the labour force. Because of the seasonality of enrolments in CMTP, with annual peaks reached in the winter months and troughs in the summer months, the data on post-training labour force status have to be interpreted with care. Any group of persons of labour force age would show a larger share of persons employed in the spring of the year, when seasonal employment is growing, than in the fall or the winter. A part of the change in composition of trainees by labour force status, pre-training as compared to post-training, is attributable to the seasonality of the program as well as to the impact of the training on a person's employability.

5 Unemployment Insurance

A   Introduction

Canada's first unemployment insurance program was implemented in 1941, one of many programs intended to prevent recurrence of the hardship suffered during the Depression. It was a relatively stable piece of legislation for almost thirty years, with the only significant changes being in some of the amounts. For example, when first introduced, only those earning under $2,000 a year were covered. By 1970, the ceiling had been raised to $7,800.

The Gill Report of 1962 recommended extensive changes in unemployment insurance, but none were forthcoming until 1968. Then, while Parliament was approving an increase in contributions, benefits and ceilings, it also instructed the Unemployment Insurance Commission (UIC) to study the program and to make recommendations towards its complete overhaul.

The result was a white paper, called "Unemployment Insurance in the Seventies". After study in the House of Commons Committee on Labour, Manpower and Immigration during the fall of 1970, the Unemployment Insurance Act of 1971 was drafted, with only minor changes made in the original white paper proposals. The bill's first reading in the House of Commons was on March 10, 1971. It passed on June 14, 1971 and was given royal assent on June 23, 1971. With a few exceptions, this Act governs the unemployment insurance plan we have today.

B   Operation of the Unemployment Insurance Program, 1969-73

The focus of this study is on the period from 1969 to 1973, a time of very considerable change for unemployment insurance in Canada. The following notes describe the principal adjustments made.

Before 1971, the program did not cover about 20 per cent of the labour force, including teachers, civil servants, the self-employed and all salaried workers earning over $7,800 per year. Employees covered under the plan contributed about 40 per cent of its cost, their employers contributed another 40 per cent while the federal government paid the remainder and all administration expenses.

To be eligible for benefits, one had to have contributed for 30 weeks of the previous 104, eight of which had to be in the last 52. Benefits were not

payable to those who left their jobs due to illness or pregnancy. However, if one became ill while on claim, the benefit was payable for the same duration as a regular claim. There was a waiting period of one week before benefits could be received.

In 1969, while this plan was in effect, there was an average insured population of about 5.5 million persons. Of these, there was a monthly average of approximately 410,000 claimants but only about 307,000 beneficiaries. The average weekly payment per beneficiary was about $32.

During the fiscal year 1969-70, the total revenue of the plan was $620 million (including a $100 million federal contribution). Benefits paid out under the plan were about $540 million, not including administration costs which were paid separately by the federal government. The Unemployment Insurance Fund had a balance of $458 million as of March 31, 1970.

In the Budget Speech of December 1970, the Minister of Finance announced an increase of approximately 10 per cent in all unemployment insurance benefits in the form of a supplement. Before this was introduced, a beneficiary without dependents received $13 a week while the most a beneficiary with dependents could receive was $53. The new supplements added $1 and $5 to these sums respectively. Because of these changes, the average payment per beneficiary in 1971 rose to $35, up $3 from the previous year.

The higher benefit rate and an increased rate of unemployment affected the status of the Unemployment Insurance Fund. In the fiscal year 1970-71, the total amount of benefits paid climbed about 40 per cent to $760 million. This helped to create a deficit of $135 million over the year, causing the fund's balance to decline to about $323 million.

The government felt that even with the increases that had been put into effect, unemployment insurance benefits could not maintain many families on a subsistence level. It was also felt that the time had come to make some basic changes in the concept of the program. It was for these reasons that the Unemployment Insurance Act of 1971 was introduced. The Minister of Labour said the purpose of the bill was twofold:

> the provision of temporary income support through a new and improved benefit structure in order to offset the short term financial effects of unemployment; and
>
> the establishment and re-structuring of services to assist claimants in becoming employed as quickly as possible.
> (*Statement to the House of Commons Committee on Labour,* Manpower and Immigration, November 3, 1970, p. 2)

The major provisions of the new program were:

1 Coverage of the program was extended to all but the self-employed. However, those over age 70 or those who received benefits under the Canada Pension Plan were excluded.

2 There were to be two types of claimants. Minor claimants must have had 8-20 weeks insurable employment in the previous year while major claimants must have had over 20 weeks. Besides a longer potential duration of normal benefits, major claimants could also receive a lump-sum prepayment of three weeks of regular benefit for work-shortage layoffs, benefits during illness or pregnancy (to maximum of 15 weeks) and a special three-week retirement benefit. Minor claimants were not eligible for these benefits.

3 Length of benefit depended on the number of weeks attachment to the work force in the qualifying period, the national unemployment rate and the regional unemployment rates. The criteria for length of claim are described in the Appendix to Chapter 5. Briefly outlined, minor claimants could get up to 15 weeks initial benefits depending on the national unemployment rate and up to 18 more weeks depending on the regional rate of unemployment. According to the schedule, a claimant with the minimum 8 weeks attachment could claim up to 44 weeks. Major claimants could receive a three-week lump-sum payment after two weeks, an additional 12 weeks of initial benefits, 10-18 weeks of extended benefits depending on the national unemployment rate and up to an additional 18 weeks depending on regional unemployment. The maximum duration of any claim was 51 weeks.

4 The benefit rate would usually be two-thirds of the average weekly insurable earnings in the qualifying period with a minimum of $20 per week. If the recipient's average qualifying earnings were $50 or less and he or she had at least one dependent, the benefit rate would be increased to 75 per cent. In both cases, the weekly maximum was $100 per week.

   Work-related income was now to be deducted when in excess of 25 per cent of the weekly benefits instead of 50 per cent as in the old plan.

5 When the national rate of unemployment was 4 per cent or less, the program (including administration costs) was to be financed by employees and their employers, the employer contribution rate being 1.4 times the employee rate. After three years of data collection, employer contributions were to be adjusted according to "experience rating", a system evaluating the job security an employer offered to his employees. The implementation of this part of the plan has since been delayed. The federal government was to pay for all extended benefits plus those initial benefits due to a national unemployment rate of over 4 per cent.

6 The Unemployment Insurance Commission was to develop and administer a claimant assistance program to assist claimants in obtaining employment.

Most of the changes took effect on June 27, 1971. However, the new schedule of contributions and universal coverage did not begin until January 2, 1972.

The new proposals, particularly those that reduced the qualification periods and made the benefits more attractive, became the centre of heated controversy. One important area of criticism was directed at the alleged potential work disincentive effects of the new program:

> We feel that it (the new Unemployment Insurance Program) is a disincentive, that it will stifle initiative and most important and lasting, it will encourage people to take the attitude: Why should we work, when the government will look after us?
> (Lincoln Alexander, M.P., *Hansard,* April 19, 1971)

The Minister of Labour defended the bill, stating that it was his belief that "the overwhelming majority of Canadians in the work force would prefer a job rather than unemployment insurance or welfare, if they have that choice" (*Hansard,* April 19, 1971).

Another major criticism levelled at the bill was that it was a welfare measure rather than an insurance scheme. One member of parliament called the scheme "simply a further example of the government foisting on the people of this country, socialistic measures which are neither wanted by the vast majority of the people nor needed, nor are they within the financial means of the country" (Gordon Ritchie, M.P., *Hansard,* April 20, 1971).

While the government maintained that an effort had been made to remove all welfare connotations from the bill, there was no denying that the program provided for some income redistribution. In fact, the White Paper on Unemployment Insurance noted that benefits would be paid "more on the basis of need than length of time in the work force" and that the program "in some respects calls upon the good will and responsibility of more fortunate, better-placed Canadians towards those who through lack of education and opportunity are in less secure occupations".

The final charge aimed at the new bill was that the plan was not actuarially sound. An opponent of the Act predicted that the fund would operate at a deficit of approximately one-half billion dollars over its first year. He also called the proposed legislation a program of "vast and devastating consequences for the public purse" (Gordon Ritchie, M.P., *Hansard,* April 20, 1971). It is worth noting that besides the aforementioned provisions for federal contributions under the legislation, the government could lend the program up to $800 million.

Outside the Commons, some newspaper editors and various businessmen's organizations voiced many of these same criticisms. Certain groups, particularly the Canadian Teachers' Federation, opposed the bill on the grounds that their members did not need the coverage and consequently should not have to pay for it.

It was partly to answer these objections that preferential contribution rates had been introduced for the first three years. Those who were not covered in the old plan would only have to pay 40 per cent of the full contribution rates in 1972, 60 per cent in 1973, 80 per cent in 1974 and the full rate thereafter.

The new Act drastically changed the operation of the fund as reflected in the operating statistics. From 1960 to 1967, the average weekly benefit had remained almost constant at $24 per beneficiary (see Chart 5-1). There had

Chart 5-1

Average Weekly UIC Payments Per Person,
Quarterly Averages, 1959-73

(Seasonally adjusted)
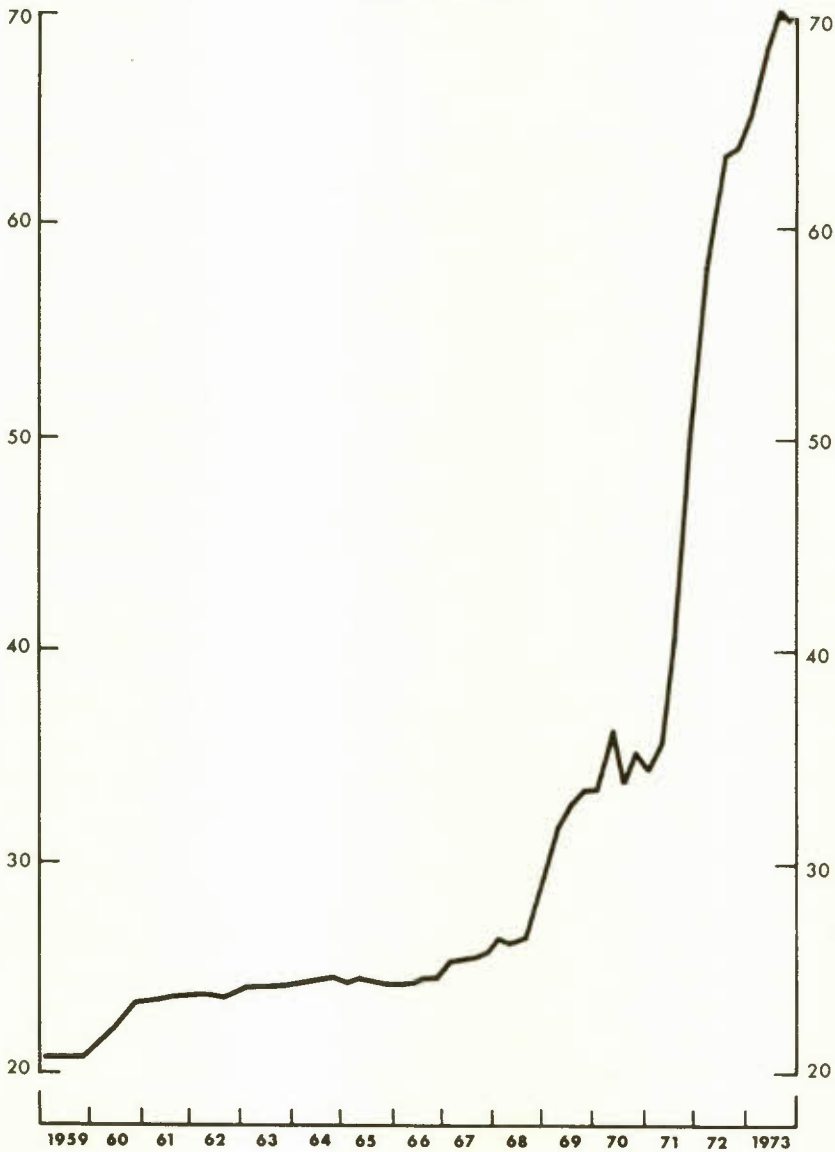
Source: Unemployment Insurance Commission.

been a sharp increase of about $8 during the years 1968 to 1969 as the result of an across-the-board increase in benefits. But the increase during 1971 to 1972 was of far greater magnitude. The average weekly benefit climbed from $36 in second quarter 1971, just before implementation of the new Act, to $61 in second quarter 1972, two quarters after full implementation. This amounted to an increase of almost 70 per cent over one year. The amount of the average weekly benefit continued to rise steeply, increasing over 11 per

Chart 5-2

**The Insured Population,
Quarterly Averages, 1959-73**

(Seasonally adjusted)
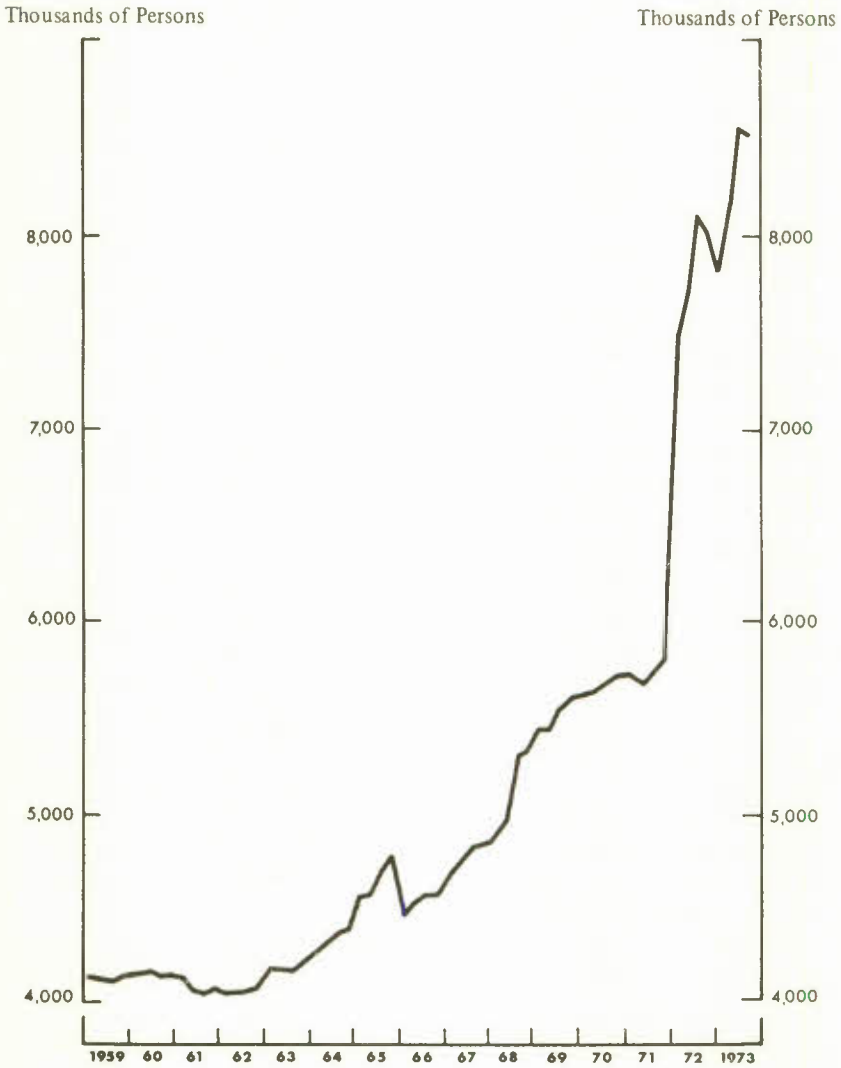
Source: Unemployment Insurance Commission.

cent in 1973. This is because each individual's benefits are tied directly to his or her previous weekly earnings. As average weekly earnings are trending upward, also do average weekly unemployment insurance benefits. In addition, the maximum allowable benefit is indexed according to changes in a quarterly national average of weekly earnings.

The size of the insured population had also been relatively stable before the new Act. In fact, there had been only one significant increase since 1959 (see Chart 5-2). But on January 2, 1972, when the universality provision of the new Act came into effect, 1.8 million additional persons were included in the coverage. In 1973, another million joined so that the total insured population was over 8.5 million by the beginning of 1974.

Because of the sharply higher average benefits referred to earlier and the increase in the number of beneficiaries (24 per cent higher in second quarter 1972 than second quarter 1971), the total benefits paid climbed steeply. Total benefits paid had in fact declined in the early 1960s, as unemployment diminished, but started increasing with higher unemployment (and higher average benefits) later in the decade. With the new Act, total benefits paid out more than doubled from $227 million in second quarter 1971 to $498 million in second quarter 1972. Chart 5-3 clearly shows the pattern of benefits paid, expressed in terms of seasonally adjusted data at annual rates.

The fluctuations which appear in Chart 5-3 during 1972 and 1973 appear to have been caused by the seasonal adjustment process, as the seasonality of total benefits paid has probably been changed by the new Act.

Late in 1972, it became evident that there had been a serious miscalculation of the predicted cost of the plan. During passage of the bill, a UIC official had told a parliamentary committee that "the $800 million represented, as an upper limit on the amount of advances, presumably the worst possible case we could think of in terms of a deficit". When asked whether this meant that the ceiling had been calculated on the basis of a 7 per cent national unemployment, the official replied, "We used 7 per cent and then some. We later calculated a figure that could represent the worst possible case and then we added another $100 million or so for good measure" (*Proceedings of House of Commons Committee on Labour*, Manpower and Immigration, May 19, 1971).

Yet by September 1972, less than a year after full implementation of the new plan, the $800 million was almost exhausted. Since the country was in the midst of a federal election, the cabinet used governor's general warrants to keep the program operating. On October 5, 1972, a warrant of $234 million was issued to the Unemployment Insurance Account. A further warrant of $220 million was issued on December 14.

The government dealt with the unemployment insurance question in early 1973. Some of the regulations governing the program were tightened and there was an increase in the number of investigations of beneficiaries. The other major change was the total removal of the $800 million ceiling. This was accomplished by bill C-124, which was passed on February 7, 1973.

Chart 5-3

Total UIC Benefits Paid, Quarterly Averages, 1959-73

(Seasonally adjusted at annual rates)

Millions of Dollars   Millions of Dollars
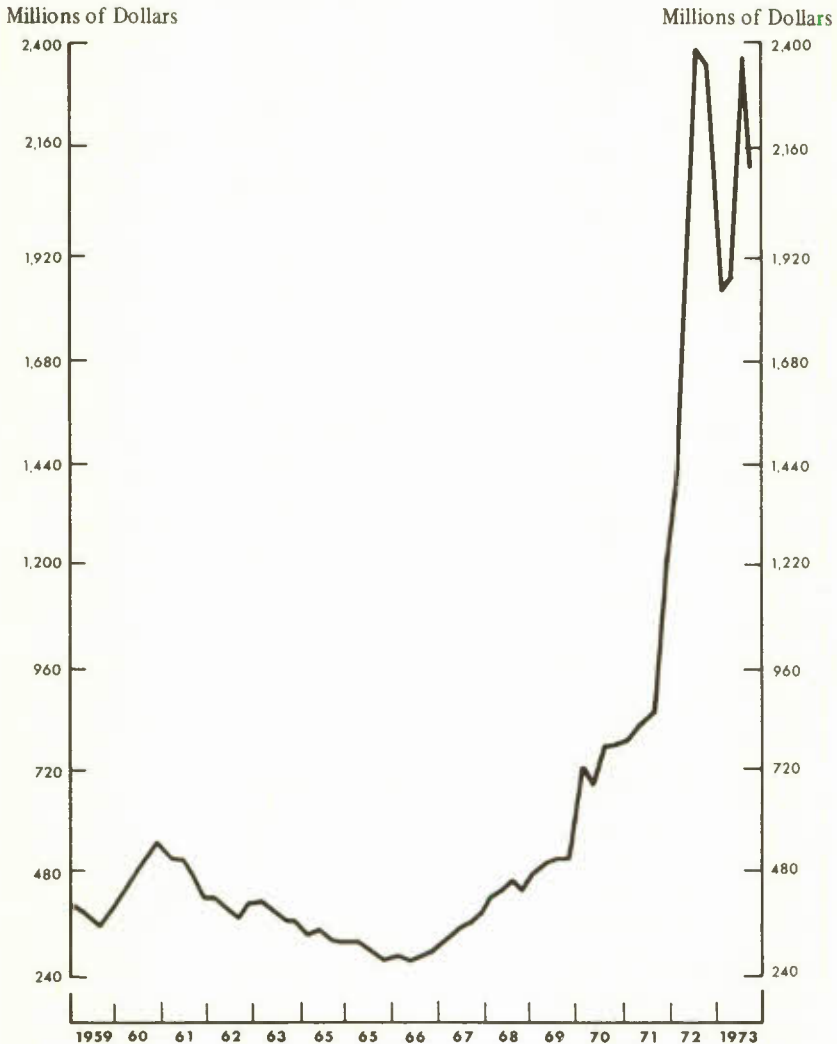
Source: Unemployment Insurance Commission.

Since that time, government loans to the Unemployment Insurance Commission have frequently exceeded the old ceiling. For instance, on March 31, 1974, the total loans outstanding equalled $1.7 billion, almost a billion dollars over the original ceiling. This occurred in spite of the increase of contribution rates from 90¢ per $100 of earnings, to $1.00 on January 1, 1973 and $1.40 on January 1, 1974. One statistic most clearly illustrates the reason for the mounting deficit of the UIC: total benefits paid out by the plan rose from about $500 million in 1969, to just over $2 billion in 1973.

C UIC Beneficiaries and Claimants, 1969-73

Part of the reason for the increase in total benefits paid was an increase in the number of beneficiaries: they rose by 86 per cent from 1969 to 1973. Over the same period, the number of claimants more than doubled.

It is of interest to compare the number of claimants with the number of unemployed as measured by Statistics Canada (see Table 5-1). It can be seen that the average number of claimants in 1973 exceeded the average number of unemployed by over 300,000. In 1969, this difference had been only 28,000. The largest jump occurred between 1971 and 1972; when average unemployment increased by 10,000, the number of claimants increased by about 200,000.

Table 5-1

Unemployment and Number of
Unemployment Insurance Claimants, Canada, 1969-73

	Average Unemployment*	Average Number of UIC Claimants**	Percentage Difference
	(Thousands of persons)		
1969	382	410	7
1970	495	541	9
1971	552	603	9
1972	562	804	43
1973	520	828	59

* Statistics Canada, Labour Force Survey.
** Unemployment Insurance Commission administrative data.

Some of the difference between the number of unemployed and the number of claimants may be explained. Many claims are turned down because they are invalid: the claimant may be working, for example. The number of claimants exceeded the number of benefit recipients in 1973 by 31 per cent. In addition, claimants who seek sickness or maternity benefits would normally be classified as not in the labour force rather than unemployed. If we distinguish actual beneficiaries from the number of claimants and exclude sickness and maternity recipients from the total, the remaining group ("regular beneficiaries") differs only slightly from the Labour Force Survey estimate of the number of unemployed persons, at least on an annual average basis in 1972 and 1973. The differences are shown in Table 5-2. Under the old Act, about 80 per cent of the average number of unemployed were regular beneficiaries; under the new Act, it is about 100 per cent.

Table 5-2

Unemployment and Number of Regular Beneficiaries, Canada, 1969-73

	Average Unemployment*	Average Number of Regular Beneficiaries	Percentage Difference
	(Thousands of persons)		
1969	382	303	−21
1970	495	381	−23
1971	552	430	−22
1972	562	560	0
1973	520	530	2

* Statistics Canada, Labour Force Survey.

Some discrepancies between the number of unemployed and the number of regular beneficiaries under the new Act can be expected. On the one hand, the unemployment figures are derived from a sample survey and are, therefore, subject to sampling error. On the other hand, some persons who may be employed part-time, and counted as employed by Statistics Canada, may at the same time legitimately be receiving benefits from the UIC. There are also differences in timing between the two measures that may be expected to cause them to differ.[1] The timing differences are clearly apparent in a comparison of monthly observations for the two series. These are shown in Table 5-3.

Table 5-3

Unemployment and Number of Regular Beneficiaries, Monthly, 1973

	Average Unemployment*	Average Number of Regular Beneficiaries	Percentage Difference
	(Thousands of persons)		
January	688	691	3
February	655	774	119
March	608	726	118
April	570	695	125
May	493	496	3
June	503	465	−38
July	461	489	28
August	433	367	−66
September	421	410	−11
October	429	353	−76
November	468	430	−38
December	512	461	−51

* Statistics Canada, Labour Force Survey.

1 See also M. Naemark, "Comparing Unemployment Statistics with Data from the Unemployment Insurance Commission", *Canadian Statistical Review,* March 1973.

Data are available on various attributes of UIC claimants. The sex distribution of regular claimants and unemployment shows that, between 1969 and 1973, the ratio of regular claimants to unemployed persons went up for both sexes. That same ratio also increased in all major regions. These data are summarized in Table 5-4.

Table 5-4

Unemployment and Regular UIC Claimants, by Sex and by Region, 1969 and 1973

	Average Unemployment*			Average Number of Regular Beneficiaries		
	1969	1973	Percentage Change	1969	1973	Percentage Change
	(Thousands of persons)			(Thousands of persons)		
Male	288	360	25	275	444	61
Female	94	160	70	135	327	142
Total	382	520	36	410	771	88
Atlantic Provinces	49	66	35	61	118	93
Quebec	158	189	20	133	232	74
Ontario	95	142	49	125	229	83
Prairie Provinces	39	58	48	44	90	105
British Columbia	42	65	55	47	101	115

* Statistics Canada, Labour Force Survey.

APPENDIX TO CHAPTER 5

Table A5-1

Benefit Structure Provided by the Unemployment Insurance Act, 1971

Identification	Eligibility	Duration	Rate	Financing
Phase 1	20 or more employment weeks in past 52 weeks.	Three weeks paid in advance after two weeks waiting period.	2/3 of earnings with maximum of $100 per week.	Employer-employee contributions government pays extra amount required when national unemployment rate exceeds 4 per cent.
Phase 2 8-15 weeks– 8 benefit weeks 16 weeks– 9 benefit weeks 17 weeks–10 benefit weeks 18 weeks–11 benefit weeks 19 weeks–12 benefit weeks (two calendar weeks allowed to draw each benefit week)	8-19 employment weeks in past 52 – available after phase 1 or as an entrance to the system.	8-12 weeks in bi-weekly payments after two weeks waiting period if entering system. Maximum 12 weeks.	Same as phase 1.	Same as phase 1.
Phase 3	National unemployment rate: 0-4 per cent predetermined at time claimant emerges from phase 2. Over 4 up to 5 per cent Over 5 per cent Predetermined after 10th week.	10 weeks 4 weeks 8 weeks Maximum 18 weeks	Same as phase 1 although 75 per cent provided after 10th week with dependants.	Shared by employee and employer up to 4 per cent and full cost borne by government over 4 per cent.

| Phase 4 | Labour force attachment less than 20 weeks
20 weeks
21 to 52 weeks
(One benefit week for each two employment weeks in excess of 20 weeks) available to claimants emerging from phase 3 who have 20 or more employment weeks in past 52 weeks. | 0 weeks
2 weeks
3-16 weeks

Maximum 18 weeks | 66 2/3 per cent of earnings if single 75 per cent of earnings with dependants. | Full cost borne by government. |
| Phase 5 | Regional unemployment rate if regional rate is over 4 per cent and exceeds national rate by:
up to 1 per cent
over 1 up to 2 per cent
over 2 up to 3 per cent
over 3 per cent | 0 weeks
6 weeks
12 weeks
18 weeks
Maximum 18 weeks | Same as phase 4. | Same as phase 4. |

Earnings of 25 per cent of benefit rate allowed in all phases. Maximum entitlement from all phases in phases 2 to 5. No earnings allowed in waiting periods or in Sickness and Maternity. Earnings ignored in phase 1 and Retirement. Maximum benefit is $100 per week in all phases.

Note: Maximum entitlement from all phases is limited to 51 weeks.
Source: Unemployment Insurance Commission.

6 Assessing Labour Market Programs in the Context of a Macro-Econometric Model

A Introduction: The Methodology of Simulation Analysis

An analysis of the macro-economic implications of the various programs implemented by the federal government to deal with labour market problems in the late 1960s and early 1970s is presented in the following chapters of this report. The methodological technique employed to assess these implications was simulation analysis using a macro-econometric model of the Canadian economy. The model used in the analysis was the University of Toronto Quarterly Econometric Forecasting Model.[1]

Simulation analysis is perhaps the closest macro-economics can come to approximating the conditions of a "controlled experiment" as performed in the other social sciences and the physical sciences. Simulation experiments may be designed to yield quantitative estimates of what might have happened if this or that event had occurred. For purposes of this study, the experiments were designed to provide estimates of how the aggregate performance of the Canadian economy might have been altered in 1969 through 1973, had the specific labour market programs adopted by the government been replaced by more traditional fiscal policies for stimulating the economy.

The mechanics of the simulation experiments involved the following steps: first, the macro-econometric model was used to approximate the actual 1969 to 1973 economic experience, i.e., a solution of the model was obtained for this interval. Care was taken to ensure that the solution closely matched the actual performance of the economy over the period. This solution was used as the *control solution* against which the policy simulations were evaluated. Next, the assumptions on which the control solution was based were systematically relaxed to allow the various labour market programs (e.g., the Local Initiatives Program) to be replaced by alternative fiscal policies (e.g., a cut in personal income taxes). The model was then resolved over the same five-year period to produce a series of alternative solutions, or *simulations.*

The solution values for various macro-economic variables such as total employment, gross national product, etc., differed in the simulations from

1 Gregory V. Jump, *The University of Toronto Quarterly Econometric Forecasting Model: A Description of Its Real Sector,* IQASEP Report No. 4, University of Toronto, 1972.

the values obtained in the control solution. The algebraic differences represent estimates of the impacts of the policy substitutions which were assumed to take place in the simulations. For example, one simulation in which the Local Initiatives Program was replaced by a general reduction in personal income taxes produced consistently lower values for total employ- ment than appeared in the control solution. The differences in the employment figures between these solutions are estimates of how many more or fewer jobs would have been created by the tax cut alternative. Since the values in this specific simulation turned out to be lower than those in the control solution, the results indicate that a tax reduction would have generated fewer, rather than more new jobs. The results of this and other simulations are reported in Chapters 7 and 8.

The use of the word "estimates" in referring to the numerical results of the simulation experiments is not to be overlooked. Since it is obviously not possible to conduct controlled experiments in the actual economy, only estimates of the likely effects of various policy experiments can be obtained. As is the case with any estimates, those presented in this study are only as reasonable as the methods used to obtain them. The remainder of this chapter is devoted to an examination of the principal tools of analysis employed in deriving the simulation results of the study. An overview of the University of Toronto Quarterly Econometric Forecasting Model is presented in the next sub-section, along with a discussion of why this particular model was selected for use. In the final sub-section, a closer look is taken at the control solution upon which the simulation experiments are based.

B   The University of Toronto Quarterly Econometric Forecasting Model

The University of Toronto Quarterly Econometric Forecasting Model (henceforth referred to as the QFM) is an intermediate-sized, quarterly econometric model of the Canadian economy. The version used in this study consists of some 35 behavioural and 43 definitional equations determining such economic aggregates as gross national product, total employment and unemployment, the overall unemployment rate, and implicit price indexes for the subcomponents of GNP.[2] The Appendix to Chapter 6 includes a review of the dynamic properties of the QFM.

The QFM was developed at the Institute for Policy Analysis at the University of Toronto through the collaboration of Professors G. V. Jump and J. W. T. Winder. It presents a structural — as opposed to a reduced form — view of the workings of the Canadian economy. Central to the model's structure are equations representing the demands for goods and services by consumers, investors, and governments. These equations operate in the model to determine aggregate output and employment through familiar multiplier-

2   A complete description of the structure of this version of the model is contained in Jump, *op. cit.*

accelerator processes. In this respect, the QFM may be described as a demand-accented, or Keynesian, model of macro-economic behaviour.

Since its inception in late 1970, the QFM has been actively employed in producing periodic short-term forecasts of the Canadian economy.[3] The model has also been used on numerous occasions to analyse the impacts of specific fiscal policy developments.[4] These were important considerations in the selection of the QFM as the macro-econometric model to be used in performing the simulation experiments of this study. In choosing the QFM, we selected a model which has been employed in both forecasting and policy simulation analysis over much of the same interval our simulation experiments would be performed. This meant that many of the potential problems we would encounter had already been solved. The simulations pertaining to unemployment insurance provide a good example of the type of problem avoided by using the QFM as opposed to some other model of the economy.[5]

The 1971 revision in the UIC Act altered the entire nature of the unemployment insurance program in the middle of that year. Several of the experiments we wished to perform centred upon estimating what would have happened in 1971 to 1973 if the old UIC Act had remained in effect over this period. To obtain estimates of these effects, we required a model capable of simulating both the new and the old versions of the UIC Act. This was a requirement that the University of Toronto forecasters had also encountered back in early 1971, when they faced the problem of making a forecast which overlapped the termination of the old UIC Act and the start of the new one. They met this problem by building into the QFM an endogenous unemployment insurance sub-sector capable of dealing with both alternatives.[6] From our point of view, this proved to be a most convenient aid in generating the desired simulation experiments.

An additional factor influencing the selection of the QFM was consideration of possible data limitations. Several of the labour market programs we wished to evaluate were not begun until late in the fourth quarter of 1971. Thus we had available only two full-year observations of the activities of these programs. At the time the simulation experiments were performed, the Annual National Income and Expenditures Accounts data for 1973 had not been published. Simulations with an annual econometric model would

3 For a discussion of one of the earliest forecasts generated with the model, see G. V. Jump, J. A. Sawyer, and J. W. T. Winder, *The Economic Outlook for 1971, Canada,* IQASEP Policy Paper No. 8, University of Toronto, 1970.

4 For examples of two such analyses, see G. V. Jump and T. A. Wilson, "Tax Policy Options for Increasing Employment Without Inflation", *Canadian Tax Journal,* Vol. XX, March-April 1972; and G. V. Jump and T. A. Wilson, "Canadian Fiscal Policy: 1973-74", *Canadian Tax Journal,* Vol. XXII, January-February 1974.

5 These simulations are reported in Chapter 8.

6 The UIC sub-sector of the QFM is described in Jump, *op. cit.,* pp. 43-45. It is worth noting that among the alternative macro-econometric models we had to choose from, neither CANDIDE nor TRACE contain an endogenous unemployment insurance sub-sector. The Bank of Canada model RDX2 does contain one.

have had to end with 1972, leaving only one observation to evaluate the impacts of the LIP, OFY, and on-the-job training programs. This effectively ruled out the use of an annual macro-econometric model.

The QFM provided a logical alternative. Since it is a quarterly rather than an annual model, eight full quarters of data pertaining to activities of these programs could be utilized. Furthermore, the QFM has as its data base the Quarterly National Income and Expenditures Accounts. Preliminary Quarterly National Income and Expenditures data were available for all of 1973 at the time the simulations were to be performed; hence, simulations made with the QFM could run to the end of 1973 and make full use of the observations on program activities.[7]

There was only one aspect of the QFM which was deemed to be unsuitable for the simulation experiments we wished to perform. That model does not contain an endogenous mechanism to determine labour force and labour force participation rates. In simulations aimed at evaluating the impacts of specific labour market programs, the absence of such a mechanism could be a serious deficiency. To correct that omission and thereby improve the quality of the simulation results, we added to the structure of the QFM three equations. The first determines the overall labour force participation rate as a function of demographic and economic variables. The second determines the unemployment rate of adult males as a function of the size of the GNP gap. The third determines the level of the labour force as the product of the labour force participation rate and the source population.

The overall participation rate was introduced as an endogenous variable. No attempt was made to further explain participation by age group or sex in keeping with the macro-economic nature of the basic model. Labour force participation is explained by the GNP gap, the growth in new jobs, the growth in real disposable income, the rate of unemployment of adult males, and by the ratio of immigration to the labour force source population. The equation captures both discouraged and encouraged worker effects as well as the influence of changing income on the decision to participate. For the purposes of estimating this equation, the GNP gap was defined as the difference between potential output and actual output in real terms. Potential output was derived on a trend-through-peaks basis.

As the economy moves through a cyclical expansion, the gap between potential and actual output narrows. Advances in output are based partially on employment gains and partially on productivity improvement. Persons not in the labour force at the outset of such a phase, but who desire to work, would be thereby encouraged to join the labour force and to seek work. On the other hand, when the GNP gap is widening, new jobs would not be

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7 The fact that the QFM is used for forecasting also meant that its data base would be up-to-date with the latest revisions in the National Income and Expenditures Accounts.

created at the same pace and some of those persons who are unemployed would become discouraged about finding work and drop out of the labour force. The equation was designed to account for these influences.

The unemployment rate of adult males, which appears as an explanatory variable for the participation rate, is itself stochastically determined. It is a distributed lag function of the GNP gap. The importance of this variable in determining participation is that it is a better measure of the degree of tightness of the labour market generally than the overall rate of unemployment.

Finally, the level of the labour force is derived by relating the participation rate to the labour force source population. The latter variable was introduced as an additional exogenous variable to the model.

C   The Control Solution

As earlier described, the methodology of simulation analysis involves the comparison of an alternative simulation with a control solution. The same control solution was used in all of the simulation experiments performed in the course of this study. It was generated by solving the QFM over the twenty quarter interval starting with the first quarter of 1969 and ending with the fourth quarter of 1973. Historical values were used for all variables exogenous to the model; i.e., actual historical values were used in the control solution for all variables which are not predicted by the models' equations, but which are used as explanatory factors in these equations.

Because a macro-econometric model is only an approximation to actual economic behaviour, its solutions can never perfectly reproduce actual economic performance, even when the values of all exogenous variables are known. The QFM is no exception. The solution it generated for the 1969 to 1973 historical period did not perfectly match the actual economic events of that period. The discrepancies were not large, but they did exist.

Under normal circumstances, this solution would have been quite acceptable as a control solution base for simulation analysis. It is not essential that the control solution perfectly replicate actual performance. The objective of simulation analysis is to obtain estimates of the impacts of relaxing alternative policy assumptions. Estimates are obtained by subtracting the predicted values for variables in the control solution from the predicted values for the same variables in the simulations. These differences should normally not depend on whether the predicted values in the control solution are equal to actual values. Presumably the same factors which cause the control solution values to deviate from actual values are at work in the simulations.

There is, however, one sense in which the preceding arguments must be qualified. If the model used to perform the simulation analysis is a non-linear model – and all existing macro-econometric models, including the QFM are – then an inability to replicate actual economic performance with the

control solution might introduce discrepancies of second order magnitude into the simulation results. Such discrepancies can arise due to the fact that the dynamic properties of a non-linear model are sensitive to the level of economic activity embodied in the control solution. For example, the simulated impact on, say gross national product, of a $100 million increase in government expenditures will vary in a non-linear model with the level of GNP in the control solution. Normally the variance will be very small in comparison with the size of the overall impact; for example, with predicted equal to actual GNP in the control solution, the increase in government spending might induce an estimated increase in GNP of, say $200 million, while at a slightly lower level of GNP in the control solution, the estimated increase might turn out to be $203 million.

The discrepancies due to non-linearities in the QFM were determined to be of the order of magnitude illustrated in the example through some experimental simulations. They are quite obviously small and probably lie within the limits of error that should usually be attached to estimates derived from simulation experiments. The experiments conducted in this report were, however, unusual in the sense that they involved not only the implementation of one expansionary policy, but also the removal of another; e.g., the simulation referred to earlier in which LIP was replaced by a reduction in personal income taxes. In simulations of this sort, there are two policy changes at work – one deflationary and the other expansionary. The net impact of these changes in certain macro-economic variables such as gross national product might be expected to be small. Any discrepancies, which enter this simulation because the control solution does not coincide with actual economic performance over the simulation period, might be large relative to the total simulated effect. This is a possibility we thought it wise to guard against.

The one way to insure that the sort of discrepancies described above do not enter the simulation experiments is to adjust the control solution so that it closely matches actual historical experience. That is precisely what was done. Additive adjustments were introduced into the behaviour equations of the QFM in such a way as to offset the errors which arose in the first solution of the model over the simulation period. Through this procedure, a control solution of the model was obtained which very closely matched the true experience of the 1969 to 1973 period. Rounding errors prevented a 100 per cent reconciliation, but the remaining differences were extremely small as illustrated in Chart 6-1.

The chart shows predicted values of the unemployment rate from the control solution plotted against actual quarterly values of the unemployment rate, seasonally adjusted. The differences may be observed to be very small. In terms of the per cent deviation from actual values, the unemployment rate appears to be typical of other variables in the control solution.

In ending this discussion, we should point out that the additive adjustments made to the QFM in order to produce the control solution in no way alter the nature of the model equations. The adjustments have the sole effect of reducing to near zero any unwanted discrepancies that might have crept into the simulation results.

Chart 6-1

Unemployment Rate, Seasonally Adjusted,
Model Control Solution, 1969-73
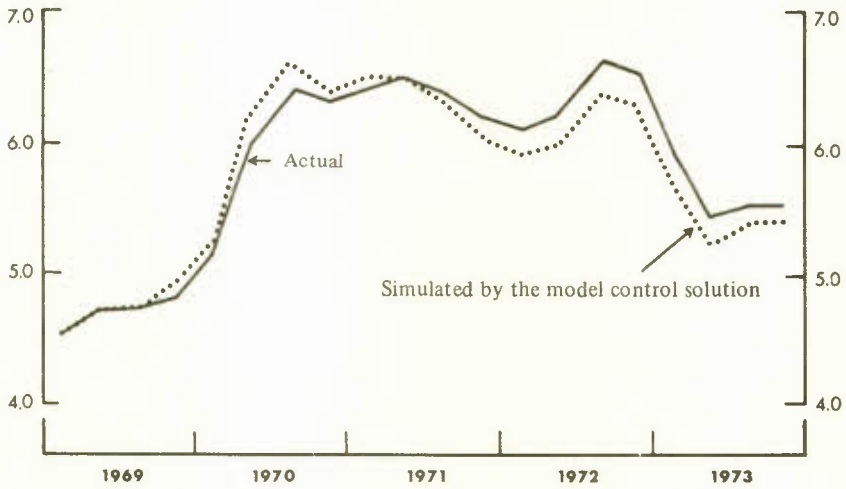
APPENDIX TO CHAPTER 6

Dynamics of the University of Toronto
Quarterly Econometric Forecasting Model

This Appendix contains some tabulations of the dynamic response of the University of Toronto Quarterly Econometric Forecasting Model (QFM) to changes in government fiscal activity.

The simulations reported in Chapters 7 and 8, utilize the QFM to estimate how the substitution of alternative uses of public funds might have affected the performance of the Canadian economy over the early part of this decade. The results of those simulations may be more readily understood if the reader has some notion of the dynamics of the econometric model which generated them.

Table A6-1 presents dynamic multipliers for selected variables from the QFM over the period 1969, first quarter, through 1972, fourth quarter. Three separate experiments were performed in order to generate the multipliers. In the first, nominal government expenditures were increased by $500 million above historical values over 1969, first quarter, through 1972, fourth quarter, in order to determine the multiplier impacts of such expenditures on nominal and real GNP and real consumer expenditures. In the second experiment, taxable government transfer payments to persons were increased by $500 million over this same interval. In the final experiment, personal income taxes were reduced by $500 million. The range of experiments was chosen to correspond with the nature of the simulations reported in the main body of the text.

Table A6-2 reports the impacts of the three alternative policy experiments on the GNP price index, total employment, and the unemployment rate. Because these variables are not measured in dollar values, it does not make sense to report the results of the experiments in terms of multipliers as was done in Table A6-1. Instead, the figures in Table A6-2 report the percentage impacts of the various policies on the variables in question.

Appendix Table A6-1

Dynamic Multipliers

(All values expressed as ratios)

	Value in Quarter*							Value in Year**			
	q=1	q=2	q=3	q=4	q=8	q=12	q=16	y=1	y=2	y=3	y=4
A $500 million nominal increase in government non-wage expenditures											
Nominal GNP	0.83	1.14	1.36	1.52	1.95	2.03	1.79	1.21	1.80	2.03	1.90
Real GNP	0.70	0.95	1.12	1.22	1.32	1.13	0.71	1.00	1.31	1.22	0.88
Real Consumer Expenditures	0.14	0.22	0.30	0.37	0.55	0.56	0.33	0.26	0.49	0.57	0.44
A $500 million increase in (taxable) government transfer payment to persons											
Nominal GNP	0.32	0.55	0.75	0.92	1.40	1.56	1.53	0.63	1.24	1.52	1.57
Real GNP	0.24	0.41	0.54	0.65	0.92	0.97	0.87	0.46	0.84	0.97	0.93
Real Consumer Expenditures	0.36	0.57	0.73	0.86	1.17	1.22	1.12	0.63	1.08	1.22	1.19
A $500 million decrease in personal income taxes											
Nominal GNP	0.43	0.72	0.99	1.22	1.90	2.15	2.12	0.84	1.68	2.09	2.15
Real GNP	0.32	0.54	0.72	0.87	1.25	1.34	1.20	0.61	1.13	1.32	1.27
Real Consumer Expenditures	0.48	0.75	0.97	1.15	1.59	1.69	1.55	0.83	1.45	1.67	1.63

*   Shock applied beginning in quarter q=1 and sustained through quarter q=16.
** Average value of multiplier during each of the four years over which the shock was applied.

Appendix Table A6-2

Dynamics of Price and Employment Response

	Value in Quarter*							Value in Year**			
	q=1	q=2	q=3	q=4	q=8	q=12	q=16	y=1	y=2	y=3	y=4
A $500 million nominal increase in government non-wage expenditures											
Price Index for GNP (percentage impact)	-0.02*	-0.03	-0.02	-0.01	0.14	0.30	0.40	-0.02	0.08	0.25	0.36
Total Employment (percentage impact)	0.11*	0.22	0.33	0.43	0.60	0.57	0.42	0.27	0.57	0.60	0.48
Unemployment Rate (arithmetic impact)	-0.06*	-0.13	-0.20	-0.26	-0.36	-0.34	-0.26	-0.16	-0.34	-0.36	-0.29
A $500 million increase in (taxable) government transfer payments to persons											
Price Index for GNP (percentage impact)	0.02	0.03	0.04	0.06	0.13	0.16	0.18	0.04	0.10	0.15	0.17
Total Employment (percentage impact)	0.04	0.09	0.15	0.21	0.38	0.44	0.41	0.12	0.33	0.43	0.43
Unemployment Rate (arithmetic impact)	-0.02	-0.05	-0.09	-0.13	-0.23	-0.27	-0.25	-0.07	-0.20	-0.26	-0.26
A $500 million decrease in personal income taxes											
Price Index for GNP (percentage impact)	0.02	0.04	0.05	0.08	0.17	0.22	0.25	0.05	0.14	0.20	0.23
Total Employment (percentage impact)	0.05	0.12	0.19	0.27	0.51	0.60	0.57	0.16	0.44	0.59	0.59
Unemployment Rate (arithmetic impact)	-0.03	-0.07	-0.12	-0.17	-0.31	-0.36	-0.34	-0.10	-0.26	-0.35	-0.36

* Shock applied beginning in quarter q=1 and sustained through quarter q=16.

** Average value of multiplier during each of the four years over which the shock was applied.

Interpretation: In the first quarter of its application, a $500 million increase in government non-wage expenditures decreased the GNP price index by 0.02 per cent, increased employment by 0.11 per cent and lowered the unemployment rate by 0.06 percentage point.

7 Simulation Results: Direct Employment Creation and Manpower Training

A Introduction

Presented in this chapter are the results of simulation experiments pertaining to the Local Initiatives, Opportunities for Youth, and Manpower Training Programs. The simulations were designed to yield estimates of the net macro-economic impact of expenditures made on each of these programs in comparison with alternative uses of the funds spent in financing them. Two alternative uses of these funds are considered. One set of simulations provides estimates of how the performance of the Canadian economy might have been altered over the 1969-73 period if, instead of undertaking these specific programs, the Government of Canada had used the funds necessary to finance them for the purchase of additional goods and services from the private sector of the economy. A second set of simulations provides estimates of how the economic performance might have been affected if the government had not initiated the programs but had, instead, reduced personal income taxes.

Within the context of these two alternatives, the various programs are considered individually rather than collectively. For example, one simulation depicts how the economy might have fared had the $378 million spent on the Local Initiatives Program in 1971 through 1973 been used to expand government purchases of goods and services as an alternative. A second simulation shows that might have occurred if a $378 million general cut in personal income taxes had been undertaken instead of LIP. Similar and separate simulations appear for each of the remaining programs.

Through their design, the simulation experiments present comparisons of the impacts on aggregate output, labour market variables, and price indexes of the various programs with the more traditional tools of fiscal policy — expenditure and tax changes. This is an appropriate way of evaluating the macro-economic effects of the programs. As was pointed out in Chapters 2 and 3, both the Local Initiatives and the Opportunities for Youth Programs were at least partially motivated by a desire on the part of the federal government to deal with the rising unemployment rates of the early 1970s. The traditional tools of fiscal policy might have been utilized instead and it is

logical to ask whether government expenditures increases or personal income tax cuts would have been more or less effective methods for dealing with the problem. The simulation experiments involving LIP and OFY partially answer this question by providing estimates of the comparative labour market impacts of the policy alternatives.

What the simulations show is how much different the unemployment rate might have been in 1971 to 1973 if personal income tax cuts or expenditures increases had replaced LIP and OFY. This is a useful piece of information for helping to assess what would have been the most effective policies for dealing with the rise in unemployment during that period. Hopefully it will also be useful information in shaping future fiscal decisions, but it is to be emphasized that the relative merits of alternative policies *vis-à-vis* their labour market effects is only one dimension of the problem of choosing the most appropriate course of fiscal action.

The more general question of whether LIP and OFY were the best policies to have adopted is a question for which the simulation results cannot provide the full answer. The simulations deal only with macro-economic effects and do not provide information concerning all of the social costs and benefits associated with the various alternatives. Policy decisions should be based on a complete cost-benefit analysis of the alternatives. The best policy is that which yields the largest social benefits for a given cost.

Certainly programs like LIP and OFY yield some benefits beyond their labour market impact. These are derived from the social services provided by the activities of such programs. Government expenditures and personal tax changes also generate social benefits in excess of their macro-economic effects. The crux is that the simulation results presented here do not tell the complete story regarding all these benefits. They provide only part of the information necessary to fully evaluate the merits of LIP and OFY versus the traditional fiscal methods as appropriate policy choices.

The simulations involving Manpower Training Programs present a slightly different perspective for comparison of the policy alternatives. Unlike LIP and OFY, the manpower programs were not motivated principally to deal with short-run problems of rising unemployment. They were, instead, aimed at preventing the emergence of longer-term, or secular, unemployment which many fear might arise due to a mis-match between the skill levels of the labour force and the skill requirements of employers.

In any economy, no matter how advanced, there will always be some demand for unskilled labour. One alternative to the use of manpower programs for treating secular unemployment problems is the application of traditional fiscal policy. If applied in sufficient doses, government expenditures increases and personal tax cuts can provide enough stimulus to aggregate demand to absorb unskilled workers into the ranks of the employed. Of course, this may be a costly policy: if the mis-match between labour skills and employment requirements is sufficiently great (and this is something

about which little solid evidence exists) considerable distortions and shortages could emerge in the economy. The manpower simulations reported here present a picture of how the economy might have been affected in the 1969-73 period if traditional fiscal policy measures had been adopted to fight unemployment instead of manpower training programs.

The simulations required that specific assumptions be made regarding the extent to which labour skills and job requirements were tending to imbalance during the simulation interval. The results turned out to be extremely sensitive to the nature of these assumptions, and two alternative scenarios are presented in the case of the Canada Manpower Training Program. In the first scenario, it is assumed that there would not have been a mis-match between skill levels and requirements even in the absence of a Canada Manpower Training Program. This is an extreme assumption, but one which establishes an effective lower bound to the impacts of that program. In the second scenario, it is assumed both that there was some mis-matching of skills and that the CMTP was an effective means of eliminating this imbalance. Further details regarding the assumptions are presented in section D along with the simulation results.

The number of simulation experiments reported below is ten – two each for the OFY, LIP, and Canada Manpower On-the-Job Training Programs and four for the CMTP. Since each simulation was performed over the twenty quarter internal spanning 1969 Q1 through 1973 Q4, the volume of output generated was substantial. In order to reduce it to manageable proportions, and at the same time to make the findings more easily interpreted, the simulation results have been annualized by averaging the quarterly results for each calendar year. These annualized figures are reported in the tables below for only a limited number of the macro-economic variables for which results were obtained. The variables of greatest interest in the simulations are those pertaining to the labour market, and results for aggregate labour force, employment, and the unemployment rate we highlighted in the tables. In addition, the tables show the results of the various simulation experiments for real gross national product and the overall rate of price inflation, as measured by year-to-year percentage changes in the implicit price index for total GNP.

B   Simulation Results: Local Initiatives Program

Since the mechanics involved in performing all of the simulation experiments were similar, they need be described in full detail only once. The simulation in which LIP is assumed to have been replaced by an increase in government purchases of goods and services may be used to illustrate the procedure.

The reader is reminded that the control solution described in Chapter 6 was used as the basis of evaluation in all of the simulation experiments. This solution closely matched the actual performance of the Canadian economy

over the 1969-73 period. The LIP versus government expenditures simulation
was generated by altering assumptions of the control solution to correspond
with a set of circumstances which coincided with the specified objective.
Specifically, the following changes were made:

(i)   Government purchases of goods and services, from the private sector of
       the economy, were raised by a total of $378 million over the interval
       1971 Q4 through 1973 Q4. This corresponds with the period in which
       the LIP program was in operation during the time interval under
       investigation. The $378 million represents the amount spent on LIP
       over this period, and this total was distributed among the nine
       quarters involved in a manner which matched actual LIP disbursements
       on a seasonally adjusted basis.

(ii)   Transfer payments to persons were reduced over this same 1971 Q4 to
       1973 Q4 interval by a matching amount; i.e., by $378 million. This
       change had the effect of removing from the control solution's
       assumptions all payments made by LIP, which are recorded in the
       National Income and Expenditures Accounts as federal government
       transfer payments.

(iii) The labour force status of LIP employees was altered to conform with
       the status these persons had before entering LIP jobs. Some LIP
       employees were not in the labour force prior to their LIP involvement.
       It was assumed that had LIP not occurred, these people would have
       remained out of the labour force. Other persons were unemployed
       before joining a LIP project. It was assumed that these persons would
       have continued to be unemployed if LIP had not been initiated. The
       remaining LIP employees were made up of persons who left other
       jobs to join LIP projects. It is likely that the jobs formerly held by
       these people were filled by others when they quit. In the simulations,
       it was assumed that if LIP had not occurred, those LIP employees who
       had held previous jobs would not have quit. This implied, in turn, that
       the workers who replaced them would have been unemployed in the
       absence of LIP.

The changes described under (iii) represent the direct labour market impacts
of LIP. They say, in effect, that if LIP had not occurred, both labour
force and employment would have been lower and unemployment higher
than was actually the case in 1971 to 1973. This ignores, however, the
offsetting effects which the increase in government expenditures would have
had on the labour market. Certainly the increased government expenditures
which are assumed to have replaced the Local Initiatives Program in the
simulation exercise under discussion would have stimulated some offsetting
employment increases in other economic activities. The extent of these
offsets were left to be determined by the internal workings of the Quarterly

Forecasting Model in the simulation exercise. That is, the changes to assumptions were asymmetrical with respect to the labour market effects of replacing LIP with increased government expenditures. The direct effects of removing LIP were introduced by changing the assumptions which underlie the simulation; the offsetting effects of increasing government expenditures were estimated internally via the simulation.[1]

With the changes in assumptions described above, the Quarterly Forecasting Model was simulated over the 1969 to 1973 interval and a new solution obtained. This new solution differed from the control solution only by virtue of the changes in assumptions. Since the changes pertain only to the nine quarter sub-interval at the end of the simulation period during which LIP was active, the new simulation was, of course, identical to the control solution for all quarters prior to 1971 Q4. The differences in solutions which did occur in 1971 Q4 through 1973 Q4 constitute estimates of how the replacement of LIP with increased government expenditures might have affected macro-economic activity during this period. These differences are summarized as the simulation results appearing in Table 7-1.

Table 7-1

Simulation Impact Results,
Local Initiatives Program, Expenditure Offset

(Differences from control solution)

	1969	1970	1971	1972	1973
Labour force (thousands of persons)	–	–	–1	–21	–25
Employment (thousands of persons)	–	–	–1	–26	–27
Unemployment rate (percentage points)	–	–	–	0.1	–
Real output, GNE (per cent)	–	–	–	0.2	0.2
Inflation rate (percentage points)	–	–	–	–	0.1

The first row of Table 7-1 shows the net effect on the Canadian labour force of replacing LIP with government expenditure. The figure for 1971 is quite small in comparison with those for later years, and this is explained by the fact that the Local Initiatives Program did not begin until December of that year. In 1972, the labour force figure is negative 21,000 persons. This is to be interpreted as meaning that diverting LIP expenditures to increased government purchases of goods and services would have resulted in an

1 Things were done this way because detailed data pertaining to the prior labour force status of LIP employees were available. The direct labour market effects of a hypothetical offsetting increase in government spending cannot, of course, exist. Hence it was necessary to estimate the latter, and the simplest way to do this was to allow the model to do the task in the course of generating the simulation results.

estimated 21,000 fewer persons in the work force on average during 1972. Or, turned the other way around, the Local Initiatives Program attracted into the labour force a net addition of 21,000 persons who would not have been there had the more traditional fiscal policy of increased spending been initiated instead. In 1973, an even greater number of persons – some 25,000 – were brought in as net additions to the labour force by LIP.

In comparison with a total labour force of about 9 million persons, these are not large numbers, but it is reasonable to ask why the results occur. Part of the answer is that the special nature of LIP projects attracted some numbers of persons past retirement age to return to the labour force for the duration of specific projects. In large part these persons left the labour market again once their individual projects lapsed, but while active, they did increase the average size of the work force. These were persons who would not likely have sought work if LIP had not been initiated; hence they show up as part of the (negative) difference between the labour force values in the simulation versus the control solution. In addition to retired persons, the community-involvement aspects of many LIP projects proved attractive to other people not in the labour force; e.g., students, young persons living at home but neither working or seeking work, and housewives. These are also persons who would probably have not otherwise entered the work force, and they account for most of the remainder of the difference in the labour force values between the two simulations.[2]

The second row of Table 7-1 contains the simulated employment effects. Again the figure for 1971 is of trivial magnitude because of the late start LIP had in that year. For 1972 and 1973, the employment figures are negative and approximately the same size. They imply that had LIP been replaced by higher government spending, aggregate employment would have been lower by an estimated average of 26,000 persons in both of those years. This finding is explainable by the fact that LIP was a direct employment creation program. A substantial fraction of each dollar spent under LIP represented wages paid to a LIP employee (only projects in which labour costs exceeded 85 per cent of total costs were considered by LIP). In comparison, a smaller fraction of each dollar spent by the government for purchases of goods and services from the private sector would end up as wages and salaries. The remaining fraction would be absorbed by indirect taxes, profits, rents,

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2 All of this is not to suggest that increased government purchases of goods and services do not also generate additions to the labour force. They do, but the mechanism involved is more subtle. By adding to increased overall economic activity, higher government spending acts to make jobs data more available and more remunerative. This will attract new labour force entrants through what might be described as "normal" economic incentives. Such incentives have been allowed for in the simulation through the inclusion in the Quarterly Forecasting Model of a behavioural equation determining the labour force participation rate. That equation was mentioned in Chapter 6 and is described in more detail in the Appendix to Chapter 6.

imported materials, etc. Thus, it is understandable that the direct employment creation of a LIP dollar is somewhat higher than that of a dollar spent on alternative uses.[3]

It is interesting to observe, however, that the employment differences are of roughly the same magnitude as the labour force differences. The Local Initiatives Program did create net new jobs, but only about the same number as the net increase in labour force which it induced. As a consequence, the results show that LIP had virtually no impact on reducing unemployment below the levels which might have been achieved through increased government expenditures.

The third row of the table shows that there was virtually no difference in the overall unemployment rate between the simulation and the control solution.

The final two rows of Table 7-1 provide estimates of the differential impacts of LIP *vis-à-vis* higher government spending on aggregate economic performance. Row four presents the effects on real gross national product valued in constant 1961 dollars. The results are expressed here in terms of the per cent difference between the simulation and the control solution. Thus the figure for 1972 means that real gross national product was 0.2 per cent higher in the simulation than it was in the control solution. This is not a large difference in an absolute sense, but it is sizable in view of the rather small effects revealed by the comparisons for labour market variables.

Taken together with the 26,000 person reduction in employment, the 1972 real gross national product figure would seem to imply that a significant increase in labour's productivity would have occurred if increased government spending had replaced LIP. This is not a valid implication and certainly not one which should be left with the reader. The real gross national product figures (and hence the productivity implications) contain some distortions because of the accounting convention adopted by the National Income and Expenditures Accounts with regard to LIP expenditure. Within the National Income and Expenditure Accounts, LIP expenditures are counted as federal government transfer payments and do not appear as part of gross national product. Government purchases of goods and services do, of course, get included as part of GNP. Thus, in the simulation, when government purchases of $378 million are substituted for LIP expenditures of the same amount,

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3 It should not be overlooked that the discussion here is in reference only to the direct employment creation of alternative forms of spending. A dollar spent on LIP may create more jobs than a dollar spent on, say, purchases of defense materials, but the difference is due entirely to first round, or direct, effects. Each dollar spent also has induced, or indirect, employment effects as the recipients of the government's dollars increase their spending in turn. Presumably, both the recipient of the $1 LIP expenditure and the collective recipients of the $1 defense expenditure will increase their own consumption spending. These second round expenditures will induce further employment increases and further spending increases in the familiar "multiplier" process.

there is a direct increase in nominal GNP of $378 million which shows up in the results over the 1971-73 period.

The National Income and Expenditure Accounts treatment of LIP could certainly be argued. LIP projects do produce services, and a strong case could be made for valuing these at cost and including them in gross national product as part of output originating in the domestic economy – in the same manner that wages and salaries paid to government employees are currently considered to be part of gross national product. If that accounting convention had been adopted, the simulation results would have been unaffected except for the real gross national product figures appearing in row four of Table 7-1. These would have been lowered by a factor of roughly one-fifth, reflecting the fact that substitution of government spending for LIP largely represents the substitution of one form of gross production for another.

The authors of this report believe the accounting convention outlined in the preceding paragraph to have been more appropriate than that actually adopted. However, this is more a conceptual issue than a real one. Having voiced our difference of opinion, the meaning of our findings should be clear. The essential message of the results is that LIP does not appear to have had macro-economic effects substantially different from what might have been achieved had government spending increases been used as a substitute. The simulated impacts are small for both labour force and employment. For the overall unemployment rate and the rate of inflation in the implicit price index for GNP (row five, Table 7-1) the differences are negligible. Regardless of the accounting convention adopted for GNP, the second order magnitude of the impacts on these other variables remains.

Table 7-2

Simulation Impact Results,
Local Initiatives Program, Personal Tax Offset

(Differences from control solution)

	1969	1970	1971	1972	1973
Labour force (thousands of persons)	–	–	−1	−26	−25
Employment (thousands of persons)	–	–	−1	−31	−34
Unemployment rate (percentage points)	–	–	–	0.1	0.1
Real output, GNE (per cent)	–	–	–	0.1	0.2
Inflation rate (percentage points)	–	–	–	–	−0.1

Table 7-2 presents the results of the simulation experiment in which the Local Initiatives Program is replaced by an across-the-board cut in personal income taxes of the same magnitude. By and large the results are quite similar to those of the preceding experiment. This is not unexpected, for a tax reduction differs from an expenditures increase only in its first round economic impact. A personal income tax cut acts to increase personal

disposable incomes and provides economic stimulation by inducing an increase in personal consumption expenditure. Consumer spending is not increased dollar for dollar with the amount of the tax reduction, however, because some part of the resulting increase in personal disposable income will be used to augment savings. Only that fraction of the tax reduction that is used for additional consumption spending enters the expenditures income flow. Since this is less than 100 per cent, the stimulative effects of a tax cut are less than those of a government spending increase of the same amount.[4]

The results for employment in row two of Table 7-2 confirm the *a priori* expectation that a tax cut would be a slightly less expansionary substitute for LIP than an increase in government expenditure. These figures show that replacement of LIP by personal income tax reductions would have resulted in 31,000 to 34,000 fewer jobs on average in 1972 and 1973 (the analogous figure from Table 7-1 was 26,000). The remaining variables are similarly close to their earlier simulation experiment counterparts.

Why is real GNP higher with a tax cut rather than LIP? The answer is that LIP expenditures are recorded as transfer payments to persons in the National Income and Expenditures Accounts. The incomes received by LIP participants were fully taxable under the Income Tax Act. Hence a $1 expenditure on LIP would have increased aggregate personal disposable income by $1, less the increased tax liability accruing to the recipient. A $1 personal tax cut, on the other hand, would increase aggregate personal disposable income by exactly $1. The greater income increase associated with the tax cut would have meant that the induced effects on consumer spending,[5] and hence on real GNP, would have been greater for that alternative.

Why are the employment effects greater with LIP than with a tax cut? The answer to this question is that the recipients of LIP expenditures were regarded as employed with respect to their labour force status. Hence LIP expenditures had direct employment-creating effects as earlier described. Tax cuts, however, have no direct employment effects.

While the results presented in Tables 7-1 and 7-2 are only estimates, they do suggest a tentative conclusion. From the strict point of view of stabilization policy, the results imply that the Local Initiatives Program was neither significantly more nor significantly less effective in combating high unemployment than the more traditional policies of expenditures increases or tax cuts would have been. The findings stress more than ever the importance that should be attached to evaluating the other kinds of social benefits associated with LIP and similar programs. It would appear to be these other benefits which hold the balance for determining whether such programs will be economically justifiable in the future.

4 This is the basis for the so-called "balanced budget" multiplier taught in introductory economics courses.

5 The marginal propensity to consume is assumed in the simulations to be the same for all forms of real personal disposable income.

C   Simulation Results: Opportunities for Youth Program

The changes made to assumptions underlying the control solution for purposes of performing the OFY simulations were similar to those described above for the LIP simulations. One difference which did arise involved making an explicit assumption of what would have been the labour force status of OFY participants had that program not been initiated. Participants in the Opportunities for Youth Program were almost exclusively students. This, together with the fact that OFY projects ran from June through August in 1971 through 1973, meant that virtually all of the persons involved were not in the labour force prior to their OFY involvement. Consequently, data pertaining to the pre-enrolment labour force status of OFY participants were not very helpful in trying to determine what fraction of these persons would have remained in the labour market had OFY not been undertaken. It was assumed arbitrarily that 50 per cent of the students involved would have sought employment under those circumstances, and the simulation experiments reported below are based on that assumption.[6]

The simulation results for replacing OFY with an equivalent increase in government expenditure are shown in Table 7-3. The results for substituting a personal income tax reduction for OFY are shown in Table 7-4. The two sets of results are quite similar, again supporting the *a priori* expectation that the government spending alternative is slightly more expansionary than the tax cut alternative. Because of this similarity, only Table 7-3 is discussed in detail.

Table 7-3

Simulation Impact Results,
Opportunities for Youth Program, Expenditure Offset

(Differences from control solution)

	1969	1970	1971	1972	1973
Labour force (thousands of persons)	–	–	−4	−2	−4
Employment (thousands of persons)	–	–	−4	−3	−4
Unemployment rate (percentage points)	–	–	–	–	–
Real output, GNE (per cent)	–	–	–	–	–
Inflation rate (percentage points)	–	–	–	–	–

In terms of dollar outlays, the OFY Program was only about one-fifth as large as LIP. This much smaller scale is reflected in the simulation results.

6 About the only evidence which exists to support this assumption is the summer labour force participation rate for students aged fourteen and older. That participation rate has been in the neighbourhood of 28 per cent in recent years. Because OFY projects are likely to attract a larger proportion of older students, the 0.28 value is probably too low. A value of 0.50 was arbitrarily chosen. This may be too high, and if so, will lead the simulations to over-estimate the net reduction in the unemployment rate attributable to the OFY program.

The labour force and employment differences shown in Table 7-3 are in the neighbourhood of one-sixth the size of their counterparts in that other direct employment-creating program. Within this table, the labour force effects are approximately equal in magnitude and sign to the employment effects for all three years of OFY's operation. What this means is that OFY attracted into the summer labour force some students who would not have sought work had OFY funds been used to augment government purchases of goods and services from the private sector. OFY also served to create more jobs than the government spending alternative would have created, as evidenced by the negative signs in the employment results in the second row of the table. But the net increase in jobs created by OFY almost exactly matched the net increase in labour force it produced. Hence the net impact on unemployment was negligible and the unemployment rate, as shown in the third row, was no different than it would have been under the increased government spending alternative.[7]

Table 7-4

Simulation Impact Results,
Opportunities for Youth Program, Personal Tax Offset

(Differences from control solution)

	1969	1970	1971	1972	1973
Labour force (thousands of persons)	–	–	−5	−3	−3
Employment (thousands of persons)	–	–	−5	−4	−5
Unemployment rate (percentage points)	–	–	–	–	–
Real output, GNE (per cent)	–	–	–	–	–
Inflation rate (percentage points)	–	–	–	–	–

The real gross national product differences shown in the fourth row of Tables 7-3 and 7-4 are based on the same controversial accounting convention discussed in the previous sub-section. Like LIP payments, OFY expenditures are regarded as transfer payments and not counted as part of gross national product. In the authors' opinion, the figures in row four of the tables overstate the effects on productive activity of replacing OFY with alternative fiscal policies, and if "corrected" would not be significantly different from zero for any of the years. But again it is not fruitful to argue about accounting procedures. The essence of the OFY results is that the overall unemployment effects of this program are not substantially different than

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7 The seasonal nature of OFY is hidden by the annual tabulation of the simulation results. The 3,000 to 4,000 person differences shown for labour force and employment in Tables 7-3 and 7-4 would be concentrated in June through July of the affected years. For example, if the 1972 pattern of OFY spending had been replaced by a similar pattern of increased government expenditures, employment would have been lower by an average of 12,000 persons in the summer three months of that year. Employment would have been identical in the other months of the year, making the annual average difference in employment equal to the 3,000 figure shown in the table.

what might have been achieved had the funds utilized there been redirected to other fiscal means.

D   Simulation Results: Canada Manpower Training Program

As was mentioned in the introduction to this chapter, two sets of simulation results were performed for the Canada Manpower Training Program. The first of these, referred to as Case A, were generated under the extreme assumption that manpower training does not significantly alter the skills of most trainees. The second set, referred to as Case B, were performed under the assumption that a substantial proportion of trainees gain increased job skills through CMTP.

Case A assumptions give credence to critics of manpower training, who have argued that, since most persons who enter training are unemployed, they do so merely to collect training allowances. The key assumption made here is that trainee graduates of CMTP are indistinguishable from other members of the labour force both before and after training. It was assumed that trainee graduates who do find jobs merely take positions that would otherwise have been filled by other members of the labour force. The 12 per cent or so of trainees who enter CMTP without having been in the labour force were assumed to remain in the work force after training with skills no different than the general population.

The labour market impacts of CMTP under these extreme assumptions would be quite limited. CMTP would have no direct effect on employment levels, but would act to reduce measured levels of unemployment. The unemployment impact would derive solely from the fact that the labour force status of persons who are unemployed immediately prior to entering training is changed once they begin training. Trainees are considered to be not in the labour force. Hence every unemployed person that enters CMTP causes the measured level of data unemployment and labour force to drop by one. This drop is not permanent, however; it lasts only as long as the individual remains in training. As soon as he finishes and returns to work, he is reclassified as being in the labour force. Under Case A assumptions, one person finishing training also contributes one person to the measured level of the unemployed. This happens because it has been assumed that, even if that person gains employment at the completion of training, he does so at the expense of someone else who will be unemployed.

The average number of persons in CMTP, once our 1969 to 1973 simulation period, was in the neighbourhood of 45,000 persons. Under Case A assumptions this implies that the number of unemployed was lower by an average of 45,000 than it would have been had CMTP been terminated at the end of 1968. In terms of the measured unemployment rate, this number of unemployed persons represented about 0.5 percentage point at the average level of the labour force over the period.

These figures do not tell the whole story implied by the extreme assumptions of Case A. In particular, there is the matter of persons not in the labour force prior to training to be considered. It has been assumed that these people gain enough from training to enter the work force afterwards. They will contribute to cumulative upward growth in both labour force and unemployment over time. This effect is perhaps best explained through illustration.

Let us assume that 100 persons enter training on January 1 of the same year. Using figures that approximately reflect actual experience, suppose that 90 of these persons were employed or unemployed prior to January 1 and the other 10 were not in the labour force. The impact of this on measured labour force statistics for January is to reduce both the labour force and the number of unemployed by 90 persons. Upon the completion of training on March 1, the 100 trainees go into the labour market to seek employment.[8] The measured labour force increases by 100 in March and, under Case A assumptions, so does the measured number of unemployed. From December to March, both the size of the labour force and the number of unemployed have registered a net increase of 10 persons – equal to the number of persons not in the labour force prior to entering training. If another 100 persons with identical labour force characteristics start training on March 1, the effect will be repeated.

A training program which continues indefinitely at this level with a new session every calendar quarter will have diminishing effects on measured labour force and unemployment over time. In the second calendar quarter of its operation, it will reduce measured labour force by 80 persons, in the third quarter by 70 persons, and so on. The labour force reduction diminishes by the 10 not-in-the-labour-force trainees brought through the program in every session. Eventually (after the tenth quarter of operation in the example at hand) the program will contribute to a higher rather than lower labour force. Under the Case A assumption that trainee graduates add to unemployment by competing for jobs with untrained workers, the effects on unemployment of the training program in the example are identical with the labour force effects. That is, the program will eventually (after 10 quarters) contribute to higher rather than lower unemployment rates.

Note that there is a constant number, 90, of persons who are removed from the ranks of employed and unemployed at any point in time by the training sessions. This number is offset by the swelling ranks of previously not-in-the-labour-force graduates which cumulate at the rate of 10 per quarter. It is still true that abolishing the manpower training program at time t would cause the contemporaneously measured levels of labour force and unemployment to increase by 90 persons, but the impact at time $t + j$ will

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8 Follow-up surveys show that three months after the completion of training, a small portion of graduates has dropped out of the labour force.

be less than 90 persons. Moreover if $j > 10$ quarters, the effect would be to reduce labour force and unemployment.

The Case A simulation experiments reported below are similar in concept to discontinuing this hypothetical training program. Of course the CMTP operates on a much larger scale than the program in the example and the proportion of trainees entering from not-in-the-labour-force is variable over time, but in other respects the simulation experiments parallel those of the example. The results of Case A experiments, in which the CMTP was assumed to be discontinued at the end of 1968, are presented in Tables 7-5 and 7-6. Table 7-5 shows the alternative of replacing CMTP outlays over the 1969 to 1973 interval with increases in government purchases of goods and services. Table 7-6 contains the results for replacing CMTP outlays with personal income tax reductions.

Referring to the first of these tables, the variables of greatest interest are those pertaining to the labour market. The first row of Table 7-5 shows the simulated labour force results. Discontinuation of CMTP at the end of 1968 would have resulted in labour force higher in 1969 by 39,000 persons. This is approximately the average number of persons who had previous labour force experience and were enrolled in Canada Manpower Training Programs in 1969. It may be observed that the labour force figures in Table 7-5 diminish year by year. By 1973, there is virtually no difference in the values between the government spending simulation and the control solution. This pattern reflects the cumulative impacts of the not-in-the-labour-force trainees. If, as is assumed in the simulation, CMTP had been discontinued, those persons brought into the labour force by the training programs would have remained out of the labour force. The number of such persons cumulates over time as in the example described above. By 1973, the number of these persons is sufficient to almost completely offset the average number of people in training.

Table 7-5

Simulation Impact Results,
Canada Manpower Training Program, Expenditure Offset,
Low Employment Effects Assumption

(Differences from control solution)

	1969	1970	1971	1972	1973
Labour force (thousands of persons)	39	37	22	8	–
Employment (thousands of persons)	7	28	40	31	10
Unemployment rate (percentage points)	0.4	0.1	−0.2	−0.3	−0.1
Real output, GNE (per cent)	0.2	0.4	0.3	0.1	–
Inflation rate (percentage points)	–	−0.3	–	0.1	0.2

The second row of Table 7-5 shows the simulated effects on employment. The positive signs on these figures reflect the fact that government purchases

of goods and services are a more effective means of generating increased demand for labour than are CMTP expenditures under extreme Case A assumptions.[9] In 1969, the employment effects (measured here in thousands of persons employed) are small, as much of the increased production stimulated by the higher government spending is achieved by an upward adjustment in average hours worked. The number of employees required to produce additional output adjusts in the Quarterly Forecasting Model with a lag. The largest employment differences occur after the first year of the start of the simulation. Employment gains from substituting increased government spending for CMTP outlays reach a maximum of 40,000 jobs in 1971. The effects show a peculiar dip in the final simulation year, 1973. This decline to a 10,000 net gain in employment results from the cyclical characteristics of the model used to perform the simulation.

In response to a sustained shock, the Quarterly Forecasting Model generates a cyclical response of increased and decreased economic activity. The 1973 figures appear to coincide with a trough in this endogenously produced business cycle. Had the simulation experiments been extended beyond 1973 with comparable expenditure figures, the employment effects would probably stabilize in the range of 25,000 to 30,000 net new jobs. It is dangerous to speculate on matters like this. We attempt to do so only to convey the point that it would not be appropriate to extrapolate longer-term implications from the cyclical dip which occurs in the simulation results for 1973.

Row three of Table 7-5 combines the labour force and employment results in the form of simulated differences between the unemployment rates in two simulations. Had CMTP been discontinued, the unemployment rate would have been an estimated 0.4 percentage point higher in 1969 than it actually was. This increase would have been short-lived however. The difference is shown to drop to 0.1 percentage point in 1970 and the sign is reversed in later years. This pattern largely reflects the phenomenon that was described as operating on the labour force values. Discontinuation of Canada Manpower Training Programs would initially add to the number of unemployed as the labour force status of trainees is altered and they are counted as part of measured unemployed. Over time this effect would be reversed for reasons discussed in the example described earlier.

The simulated results for real gross national product show the net expansionary effects on aggregate demand of replacing CMTP with increased government spending under Case A assumptions. The endogenous cyclical variations described above are quite evident in these numbers in the fourth row of the table. By and large, the time profile of the real gross national product differences mirrors that of employment, although employment tends

9 Under Case A assumptions, CMTP outlays have essentially the same employment generating effects as transfer payments to persons. Since transfers are both taxable as income and subject to a personal savings drain, the employment multiplier applicable to them is smaller than the comparable multiplier for government expenditures.

to lag behind by about one year. This lag-lead pattern results from the mechanism by which the number of persons employed responds with lags to output changes in the structure of the Quarterly Forecasting Model.

The price inflation effects are interesting. The results shown in the last row of Table 7-5 suggest that replacing CMTP outlays with increased government purchases would have lowered the overall rate of price inflation by small amounts in the early part of the simulation period. The source of this result lies with the labour market effects of the simulation experiment. By increasing the pool of unemployed workers in the early part of the period, the policy substitution would have lead to downward pressure being exerted on wage settlements in 1969 and 1970. Lower wage rates mean lower labour costs to producers, and this in turn puts downward pressure on price levels — which explains why inflation rates are lower in the first two years. By 1971, however, the replacement of CMTP by higher spending has reduced rather than expanded the pool of unemployed. At this point in time there is upward pressure on both wages and prices. Consequently, inflation rates begin to rise above their control solution values.

The results for the tax cut alternative as shown in Table 7-6 do not differ substantially from those just described. The net expansionary impetus provided by reducing taxes is, as expected, slightly less. The cyclical downturn in employment and real gross national product is also less pronounced in this experiment than it was the previous one. In other respects the tax cut alternative is sufficiently similar to the government spending simulation that it need not be discussed in detail. It is presented largely as additional evidence in support of the tentative conclusion that tax cuts and expenditures increases appear to be more effective methods of stimulating increases in employment than CMTP under Case A assumptions.

Table 7-6

Simulation Impact Results,
Canada Manpower Training Program, Personal Tax Offset,
Low Employment Effects Assumption

(Differences from control solution)

	1969	1970	1971	1972	1973
Labour force (thousands of persons)	33	33	26	15	4
Employment (thousands of persons)	1	15	36	40	26
Unemployment rate (percentage points)	0.4	0.2	−0.1	−0.3	−0.2
Real output, GNE (per cent)	−	0.3	0.4	0.2	0.1
Inflation rate (percentage points)	−	−0.2	−0.1	−	0.1

It should be noted that Case A simulations present the Canada Manpower Training Program under the least favourable set of assumptions regarding its effectiveness of improving the skill levels of the work force. Considering this, the rather poor simulation results for CMTP in comparison with the fiscal

policy alternatives are not surprising. The effectiveness of CMTP is a matter of some debate. Proponents of the program argue that outlays for manpower training are dollars well spent, and that training programs upgrade the skill levels of many persons who would otherwise be unemployable. Critics counter that such outlays are wasted and do not make them provide satisfactory compensation to the unemployed.

One of the objectives of the present study is to consider how much difference it makes to the aggregate economic performance to consider these alternative viewpoints. It is for this reason that two alternative sets of simulation experiments were performed. Case A simulations belong to the critics of CMTP and probably represent a lower bound to the effectiveness of the program. Case B simulations discussed below present the proponents' point of view.

Case B simulations begin with the assumption that the Canadian economy demands a skilled labour force. It was further assumed that manpower training programs are an effective means of upgrading the skill levels of trainees. To be more specific, it was assumed that one-half of the net jobs acquired by trainee graduates were net additions to employment. These one-half were viewed as jobs that could not have been filled from the pool of unemployed labour which was assumed to lack the necessary skills. An illustration will serve to make clearer the true nature of this assumption.

Suppose that at the start of time period t 100 new trainees enter the manpower program. On the basis of average actual data pertaining to new trainees, some 35 per cent of these would have been employed immediately prior to entering training; hence 35 jobs are left vacant.[10] Suppose also that at time t 100 old trainees are graduating. From manpower data, 75 per cent of new graduates found employment during the 1969-73 period. Using this figure, and deducting the number of jobs vacated by new trainees from the number of jobs acquired by the graduate, yields a net total of 40 jobs. The Case B assumption is that one-half of this net total, or 20 jobs in the example at hand, represents the creation of brand new high-skill-requirement jobs which would not have been filled in the absence of the training program. The other one-half are assumed to be unskilled jobs which would have been taken by the unemployed if new graduates had not acquired them.

The scale effect of this assumption when applied to actual CMTP figures is of substantial magnitude. The number of jobs assumed to have been "created" by CMTP operations from 1969 to 1973 cumulates to over 200,000 by the end of the period. That is, if one-half of actual CMTP net jobs (as defined in the illustration) are assumed to have been newly created as a consequence of the 1969 to 1973 training program, then the total number of such jobs reaches in excess of 200,000 by the end of 1973.

10 In Case A simulations, it was implicitly assumed that vacated jobs are filled from the remaining pool of unemployed workers. This means that every employed worker who entered training acts to reduce total unemployment by one person, total leaving the level of total employment unchanged.

It is clear that this is a rather powerful assumption (though it is not the most powerful one that could be made). What it means in terms of the simulation experiments is that discontinuation of a Case B Canada Manpower Training Program would have lead to substantial losses of both output and employment over the 1969-73 period. This is illustrated by the simulation results for both the increased government spending and tax cut alternatives, which are reported in Tables 7-7 and 7-8, respectively.

Looking first at the employment figures in Table 7-7, the cumulative losses due to halting CMTP are quite evident. The values are small (in absolute value) in the early years but cumulate rapidly. The cessation of CMTP at the end of 1968 has the effect in this simulation of greatly reducing the supply of skilled labour, while at the same time increasing the supply of unskilled labour. The use of CMTP funds to expand government purchases of goods and services only marginally increases the demand for unskilled labour. A marked excess demand for skilled labour is created. The result is that bottlenecks in production arise and both employment and output drop sharply. The cumulative marked decline in real gross national product shown in row four of Table 7-7 provides striking evidence of just how steep the drop in output might have been had the simulated replacement of CMTP by higher government spending actually taken place.

Table 7-7

Simulation Impact Results,
Canada Manpower Training Program, Expenditure Offset,
High Employment Effects Assumption

(Differences from control solution)

	1969	1970	1971	1972	1973
Labour force (thousands of persons)	36	25	5	−20	−45
Employment (thousands of persons)	−3	−9	−32	−99	−219
Unemployment rate (percentage points)	0.4	0.4	0.4	0.9	1.9
Real output, GNE (per cent)	0.2	0.1	−0.4	−1.4	−2.6
Inflation rate (percentage points)	0.0	0.4	1.0	2.0	3.0

The unemployment rate in the simulation is shown to be substantially higher than its control solution values, especially in the later years. It may seem paradoxical that this higher unemployment rate is accompanied in the simulation by a dramatically increased rate of price inflation, but there is a logical explanation. The greater number of unemployed in the simulation *vis-à-vis* the control solution represent unskilled workers. By assumption, the simulation portrays a situation in which there is a mis-marketing of labour skills. The unemployed are without jobs not because of lack of aggregate demand, but because they do not possess the necessary skills required for available jobs. Employers, for their part, have an excess demand for skilled

labour; so that in spite of the high unemployment rate among unskilled workers, the labour market for skilled labour is very tight.[11]

Prices rise in these circumstances for two reasons; first, because the wages of skilled labour are tied up, and secondly, because producers are forced to use price hikes in order to ration their limited supplies of output among demanders. This explains the price *level* in the simulation being higher than it is in the control solution. The reason that the rate of price *inflation* is greater is that the supply constraints described above are worsening over the simulation period. The number of skilled workers lost by discontinuation of CMTP is cumulative from 1969 and so are the inflationary pressures.

As was true in all of the preceding experiments, the simulation involving the tax reduction alternative produces similar results in this case. Those results appear in Table 7-8 and will not be discussed at length. They definitely support the conclusion that if Case B assumptions are appropriate, the Canada Manpower Training Program is an essential policy for maintaining high levels of economic performance. In view of the simulation results, it would be difficult to argue that any measure of economic performance would have been improved by the substitution of government expenditure increases or personal tax cuts for outlays made on CMTP.

Table 7-8

Simulation Impact Results,
Canada Manpower Training Program, Personal Tax Offset,
High Employment Effects Assumption

(Differences from control solution)

	1969	1970	1971	1972	1973
Labour force (thousands of persons)	29	22	9	−13	−41
Employment (thousands of persons)	−8	−22	−36	−87	−199
Unemployment rate (percentage points)	0.4	0.5	0.5	0.8	1.7
Real output, GNE (per cent)	−	−	−0.4	−1.2	−2.5
Inflation rate (percentage points)	−	0.4	0.8	2.0	31

The extreme divergence of Case B results from the earlier results for Case A raises again the question of which set of underlying assumptions is more appropriate. That is not a question which the simulation experiments can answer. What the experiments do show is that the answer to this question is extremely important as regards not only the labour market but also economic

11 In the model simulations for Case B, workers were divided into two skill categories. "Unskilled workers" were regarded as unemployable and always included as part of overall unemployment. "Skilled workers" were regarded as employable and were either employed or unemployed depending upon aggregate demand conditions.

performance in general. The central message conveyed is that effort spent in trying to assess either the demand for skilled labour or the function of manpower training programs in meeting these demands would be an effort well spent.

E   Simulation Results: Canada Manpower On-the-Job Training Program

The Canada Manpower On-the-Job Training Program began in late 1971. This scale of operations is perhaps one-quarter the size of CMTP. From a macro-economic point of view, one of the major differences between the on-the-job training and other forms of manpower training is that trainees in the former are included in the measured labour statistics as employed. Discontinuation of this program would not, therefore, have the same contemporaneous impacts on measured labour force and on unemployment as was described earlier for CMTP.

This is not to say that labour market implications of on-the-job training are simple to assess. There is as much scope to experiment with alternative sets of assumptions concerning the extent to which on-the-job training programs improve the skill levels of workers as exists for CMTP. No experimentation was done in this case, however, because the program has simply not been in existence long enough to make that a worthwhile exercise. The results of the preceding simulation experiments may be used to illustrate the diverging results that may be expected to arise between extreme sets of assumptions for virtually all manpower programs.

The simulation experiments which were conducted for on-the-job training are based on the assumption that one-half of the jobs filled by trainees are newly created, permanent jobs that would not otherwise have existed. The other one-half are assumed to be jobs which employers would have filled even in the absence of a training program by drawing from the pool of unemployed. The one-half figure was arbitrarily chosen, since little evidence exists to suggest a more appropriate value. In comparison with the alternative CMTP assumptions, this choice is closest to the Case B alternative.

Under this assumption, had on-the-job training not been initiated in late 1971, the level of employment would have been lower at any time in 1972 and 1973 by one-half the cumulative total of persons engaged in the training program, up to that time. Considering the short life of the program, this would not have been a large number even by the end of 1973.

The simulation results for replacing on-the-job training with higher government spending are reported in Table 7-9. Those for replacement with a reduction in personal income taxes are shown in Table 7-10. The results show that neither an expenditures increase nor a tax decrease of amounts equal to program outlays would generate sufficient stimulus to offset the loss of employment associated with removal of the program. The employment differences reported in both tables imply lower employment in the simulation relative to the control solution.

Table 7-9

**Simulation Impact Results,
Canada Manpower On-the-Job Training Program, Expenditure Offset**

(Differences from control solution)

	1969	1970	1971	1972	1973
Labour force (thousands of persons)	–	–	–	−7	−5
Employment (thousands of persons)	–	–	–	−14	−16
Unemployment rate (percentage points)	–	–	–	0.1	0.1
Real output, GNE (per cent)	–	–	–	0.1	–
Inflation rate (percentage points)	–	–	–	–	0.1

The real gross national product figures are positive in both tables – a result which seemingly implies that replacing on-the-job training with traditional forms of fiscal stimulus would add to total production rather than subtract from it. This effect is actually only a transitory one, and would be sharply reversed in later periods if it had been possible to extend the simulations over a longer interval. It should be noted that the same phenomenon appeared for the first two years of Case B CMTP simulations, and for the same reasons.

The gross national product effects arise from a combination of factors. The wage earnings of on-the-job trainees are subject to income taxation. If the program were stopped and personal income taxes reduced, there would be a net increase in aggregate after-tax personal disposable incomes. This increase would be supplemented by the unemployment insurance benefits which some of the unemployed former trainees would be eligible to receive. Higher total incomes would stimulate a net increase in the aggregate demand for consumer goods and services. This increased demand could be met for a short period of time (even though there would be fewer skilled employees available) through an expansion of hours worked per week by remaining employees. But the expansion of hours could not continue indefinitely. Labour market pressures would eventually have to arise and put upward pressure on prices. When this happens, both the aggregate demand and supply of goods and services would decline below the levels attained in the control solution. Judging from Case B CMTP results, the decline in total production would not show up on a full-year basis until the third year following the substitution of tax cuts for training programs. The government spending alternative would show roughly the same time pattern.

The lags described here also apply to price responses. The bottom rows of Tables 7-9 and 7-10 show no effect on the rate of inflation in the implicit price index for gross national product until 1973. In that year, price levels are shown to be marginally higher in the simulation *vis-à-vis* the control solution. This is only the tip of the iceberg of accelerated inflation which would likely have appeared had it been possible to extend the simulations over a longer time period.

Table 7-10

Simulation Impact Results,
Canada Manpower On-the-Job Training Program, Personal Tax Offset

(Differences from control solution)

	1969	1970	1971	1972	1973
Labour force (thousands of persons)	—	—	—	−8	−5
Employment (thousands of persons)	—	—	—	−15	−17
Unemployment rate (percentage points)	—	—	—	0.1	0.1
Real output, GNE (per cent)	—	—	—	0.1	—
Inflation rate (percentage points)	—	—	—	—	0.1

With some speculation as to the probable effects of an extended simulation, the results for CMJTP seem to comply with the findings to Case B CMTP simulation experiments. If, as has been assumed in the simulations, on-the-job training is an effective means of upgrading the skills of the Canadian labour force, then the effects of discontinuing that program could have potentially large impacts over the longer run. In the short run, the impacts on measured unemployment, output, and price inflation would be small, but it is improper to infer from this that the program is ineffective. The effects of manpower training, as we have seen, tend to cumulate markedly over time.

8 Simulation Results: Unemployment Insurance

A Introduction

The simulation analysis of the unemployment insurance program warrants a separate chapter because it was carried out in a different manner than that reported in Chapter 7. In terms of its economic impact, the change in the unemployment insurance program is of a different kind than changes in direct employment-creation programs.

Two major types of effects can be distinguished from the change in the UIC program. On the one hand, there are likely to be some ramifications of a change in the amount of money flowing through the contributions benefit payments system together with the impact of an altered government deficit position. The new Act greatly increased the benefit rate while reducing the qualification period and lengthening the period of time over which benefits could be paid. Coverage was also extended to all employed persons except the self-employed with the intention that the new scheme would be self-supporting under certain economic conditions. When the unemployment rate exceeds 4 per cent in Canada, the federal government assumes responsibility for all additional benefits which are paid. The deficit between contributions and payments must be financed through federal tax revenues or through borrowing. In the two and a half years after the introduction of the Act, the cumulative deficit was approximately $2.6 billion.

On the other hand, one could distinguish a change in the labour market behaviour of persons as a direct consequence of the changes introduced in the new Act itself. For example, persons may attach themselves to the labour force, when they otherwise would not have done so, in order to establish a basis for collecting benefit payments. Additionally, persons who are unemployed and receiving unemployment insurance may not actively seek re-employment as a consequence of the increased benefits of the new program.

In the simulations performed for this study, the focus was on the macro-economic implications of the changed magnitude of money flows attributable to the new UIC program. The extent to which the Act served as an incentive to those not in the work force to seek employment and as a disincentive to those receiving benefits to accept re-employment are being

examined by other researchers participating in the Economic Council's Labour Market Study.

B   Results

We set out to measure the economic effects caused by increased cash-flow from contributions and benefits and the changed deficit position of the government resulting from the introduction of the new Act. To do this we chose to restore the conditions of the old Act, and to simulate the likely course of the economy assuming a UIC program continuing as it was in mid-1971. Specifically, the following alterations were made to the model to accomplish this:

(i) The employer and employee contribution rate was reset to 1.4 per cent of gross income, with contributions by the employer equaling those of the employee. With the new Act, the average contribution rate was lower than 1.4 per cent, with the employer rate greater than that for the employee.

(ii) The wage at which contributions to the fund reach a maximum was set at its old Act value of $5,200 throughout the simulation period. This implies a maximum contribution of $72.80 by any individual employee or employer per year. Under the new Act, the maximum contribution had risen to $116.30 by 1973 (1.4 per cent of $8,307).

(iii) The exemption of persons earning in excess of $7,800 annual salary from participating in the unemployment insurance program was restored in the model. Under the new Act, almost all employed persons are required to contribute to the fund; consequently, almost all unemployed persons are eligible for benefits. Under the old Act, only about 80 per cent of unemployed persons were eligible for benefit payments.

(iv) The maximum weekly benefit was set to $53 per week, its value as of mid-1971. By 1973, under the new Act, the maximum weekly benefit had been increased to $107 per week.

Before any simulations could be carried out, it was necessary to derive an estimate of the change in the deficit position of the UIC program due to the new Act. Using the above-described changes to restore the conditions under the old Act, the model was solved for the 1971-73 period so that it provided figures on what total benefit payments and UIC contributions would have been in the absence of the new legislation. Next, this estimated deficit for the old program was subtracted from the deficit that was actually realized under the new program control solution in order to derive a measure of the incremental deficit accruing to the government that was paid out as a consequence of the new Act. The difference between what the deficit was

and what it would have been in 1971 was about $1,000 million in 1972 and about $880 million in 1973. These figures compare to control solution deficits in the UIC fund of $260 million in 1971, $1.2 billion in 1972, and slightly over $1 billion in 1973.

With a measure of the difference in the net cash-flow under the old and new Acts available, simulation experiments could be performed. The first simulation was based on the assumption that the government had intended to introduce the degree of economic stimulus that the new Act actually provided but chose another way of putting it into the system. We chose to do this through a reduction of personal income taxes. Tax revenue was reduced by the estimated extra transfer cost actually paid out by the government. Alternatively, we could assume that the extent of the stimulus was not intended by the government. In the simulation, to account for this circumstance we assume no offsetting tax cut: the government's overall financial requirement would be reduced. The results of these two simulations are reported below.

The results of the simulation which assumed a tax cut as a policy alternative are displayed in Table 8-1. Since the changes did not occur until mid-1971, the simulation before that time was exactly the same as the control solution. It is immediately evident that had this tax cut policy been adopted instead of the changes in the Unemployment Insurance Act, the economy would have appeared much the same as it actually did. The impact on the labour force is almost non-existent; the labour force would have been lower by 1,000 persons in 1974 but would have been unchanged prior to that. On the demand side of the labour market, employment would have been less by 2,000 persons in 1972 and 8,000 in 1973. The unemployment rate would have been marginally higher in 1973. The results on the labour market can largely be interpreted to mean that traditional fiscal measures would have had much the same effect in stimulating growth of jobs as did the additional transfer spending by the government under the new Act.

Table 8-1

Simulation Impact Results,
Unemployment Insurance, Personal Tax Offset

(Differences from control solution)

	1969	1970	1971	1972	1973
Labour force (thousands of persons)	—	—	—	—	−1
Employment (thousands of persons)	—	—	—	−2	−8
Unemployment rate (percentage points)	—	—	—	—	0.1
Real output, GNE (per cent)	—	—	—	—	−0.2
Inflation rate (percentage points)	—	—	—	0.1	−0.1

The other results of this simulation reported in lines 4 and 5 of Table 8-1 show that two other economic indicators, the real output and the inflation

rate, reflect the trends evident in the labour market. Constant dollar gross national product would have been slightly lower by 1973 with the impact on the rate of inflation showing up as anticipated.

Instead of choosing a cut in taxes as the appropriate policy alternative for the simulation, one could have assumed that the government could have spent this money directly as transfer payments to persons under various existing programs. Indeed, there are some observers who argue that had the new Act not been introduced, then a substantial increase in transfer spending would have been necessary in any case. However, unemployment insurance benefits are one form of transfer payment. If a simulation had been designed to replace unemployment insurance increases by increases in other forms of transfer payments, the net impacts would have been nil. The model does not distinguish between different forms of transfer income.

The second simulation assumes a decrease in government deficit; that is, the old Act is maintained and taxes remain what they were but no new stimulus is applied to the system. The results are shown in Table 8-2. Adverse effects on the labour market would have been large and cumulative. The labour force would have been lower by 3,000 persons in 1972 and lower by a further 33,000 in 1973 as discouragement and disincentive effects set in. The reduced cash flow would have acted quickly on labour demand and employment would have been lower by 30,000 persons and 112,000 in 1972 and 1973, respectively. The net effect on the average annual unemployment rate would have been to increase it by almost a full percentage point by 1973.

Table 8-2

Simulation Impact Results,
Unemployment Insurance, No Offset

(Differences from control solution)

	1969	1970	1971	1972	1973
Labour force (thousands of persons)	–	–	−1	−3	−33
Employment (thousands of persons)	–	–	−1	−30	−112
Unemployment rate (percentage points)	–	–	–	0.3	0.9
Real output, GNE (per cent)	–	–	–	−0.8	−1.2
Inflation rate (percentage points)	–	–	–	−0.1	−0.3

Real gross national product would have been considerably lower than it was in both 1972 and 1973. The simulation results were that constant dollar GNE was 0.8 per cent lower than its control level in 1972, and 1.2 per cent lower in 1973. These represent a reduction in the rate of real growth by 0.7 percentage point for 1972 and by 0.5 percentage point for 1973. The resulting slackness in the economy would have lowered the rate of inflation for both years as is shown in the last row of the table.

C Conclusions

It is clear from the last simulation that in the absence of any counteracting policy changes the reform introduced by the new UIC Act was clearly expansionary. The increased cash-flow through the economic system stimulated income, consumption, and investment which, in turn, influenced the market for labour and the price mechanism.

The same degree of economic expansion, however, would have also resulted from more traditional application of fiscal measures. In our simulation, we chose to reduce personal income taxes and allow the concomitant increase in personal disposable income to stimulate the economy. In doing so, we found that the profiles of employment and unemployment of consumer demand and investment spending and of prices would have been changed very little from those that were actually realized.

These simulations did not assess the influence of the Act itself on the decisions of persons to participate or amend their labour force behaviour. If, indeed, there are important incentive and disincentive effects to be found, then these may be added to the findings reported in this chapter. In fact, the integration of both sets of findings is essential in order to present a total picture of the economic impact of the changes in UIC legislation.

9 Summary and Conclusions

A Summary

The period 1969-73 was a time of significant change for the Canadian labour
market. Over an interval in which the economy experienced a complete
business cycle, there were major changes in the structure of federal policies
directed towards the labour market.

A well-known indicator of the cyclical movement of the economy is the
seasonally adjusted unemployment rate. In early 1969, it hovered around the
4.5 per cent level; by 1972, it had climbed to almost 7.0 per cent but fell to
about 5.5 per cent by the end of 1973. Inflation was also of continuing
concern throughout the period, although it was often overshadowed by high
unemployment.

In Chapter 2, important features of the Canadian economy during the
1969-73 period were reviewed. These included the broad indicators of
output, productivity and employment as well as performance measures
bearing directly on the labour market. The structure of employment change
was described with specific mention of the relative decline in the importance
of the service sector in 1972 and 1973 and the continuation of the exodus of
self-employed farmers from the agricultural sector over the entire period
under review. It was noted that major changes occurred in the historic
relationship between job vacancies and unemployment; between the rate of
labour force participation and the rate of unemployment; and between the
rate of inflation and the rate of unemployment.

The second part of Chapter 2 contains a fairly detailed record of fiscal
policy changes over the 1969-73 period with special attention directed
towards those measures introduced to deal with unemployment. Public
spending increased substantially between 1969 and 1973. In part, that growth
was attributable to the federal government's reaction to high unemployment.
At the beginning of the period, the government acted to restrain the growth
of demand in the economy in order to dampen inflationary pressures. In
1970, the impetus was shifted to expansionary policies. Included in these
fiscal measures were programs aimed directly at the labour market such as
Local Initiatives, Opportunities for Youth and the Canada Manpower
On-the-Job Training Programs. There were also revisions in the scale and

direction of the Canada Manpower Training Program and a massive overhaul of unemployment insurance.

LIP, introduced in 1971, was undertaken to provide jobs on projects of community betterment for persons who would otherwise be out of work. It involved expenditures of some $380 million from 1971 to 1973 and provided over 750,000 man-months of employment. The purpose of the OFY Program was to reduce the rate of student unemployment by encouraging activities which would be both satisfying and socially useful. The program involved some $90 million in grants for over 9,500 projects involving 95,000 summer jobs from 1971 to 1973.

The Canada Manpower Training Program was originally designed to improve income distribution and the rate of economic growth, and to provide a greater degree of economic stability. This was to be accomplished by upgrading the efficiency of labour markets, increasing employability by improving work skills and providing additional stimulus in times of high seasonal or cyclical unemployment. Government expenditures and allowances under this program more than doubled during the period. A major change was the introduction of the Canada Manpower On-the-Job Training Program.

The Unemployment Insurance Act of 1971 constituted another major change in federal labour policy. Chapter 5 describes in some detail the changes made. In summary, the size of benefits was increased, the eligibility requirements were reduced, the period over which benefits could be received was lengthened, and coverage was increased by including all employees in the plan. The federal government also assumed responsibility for all benefits due to a national unemployment rate of over 4 per cent. From 1971 to 1973, the government contributed over $2.5 billion to the operation of the program. A major reason for this has been an increase in the annual rate of total benefits paid from $500 million in 1969 to over $2 billion four years later.

The University of Toronto Quarterly Econometric Forecasting Model was used to assess these programs in a macro-economic context. Simulation analyses were carried out to determine what would have happened in the event that these programs were replaced by other types of fiscal action. Two alternative policy approaches were used in the simulation experiments concerning the employment-creation and manpower programs. One approach was to increase government expenditures on goods and services in lieu of financing the programs. The second was to reduce personal income taxes by the same amount.

The policy experiments present comparisons between the simulation results and a control solution of the impacts on macro-economic variables only but do not provide information concerning social costs or benefits. The variables of particular interest were those pertaining to the labour market—labour force, employment, and unemployment rate, as well as real gross national product and the overall rate of price inflation.

The simulation results are sensitive to specific assumptions made about each program. One set of assumptions was made for each of LIP, OFY, and On-the-Job Training. Two sets of assumptions were made for CMTP.

The two policy alternatives to LIP lead to very similar results. The conclusion is that LIP was a direct employment-creation program having little net effect on the unemployment rate because of offsetting labour supply and demand effects. Similarly, the substitution of a general government spending increase or tax reduction for OFY indicates that the overall unemployment, production, and price effects of OFY are not substantially different from those which could otherwise have been achieved.

The analysis of Canada Manpower Training Program was carried out using two extreme sets of assumptions. The first assumption was that manpower training did very little to improve the skills of trainees and in reality only served to reduce unemployment. This low employment effect assumption did not give particularly different results for the two alternative policy offsets. Discontinuation of CMTP at the end of 1968 would have resulted initially in a significantly increased labour force, but the effect would gradually diminish in subsequent years. The employment effects showed that increased government expenditures or a tax cut were more effective methods of generating employment and decreasing unemployment than CMTP expenditures. Real output would have been slightly higher over the period.

The second set of CMTP simulations work under the assumption that manpower training is an effective means of upgrading skill levels and thus net additions to employment. The withdrawal of CMTP in the simulations in conjunction with this high employment effects assumption yields results of high losses in both output and employment. These are explained by the reduction in the supply of skilled labour caused by the absence of CMTP and the concomitant increase in unskilled labour. The cumulative effects indicate a marked decline in employment and output and a substantial increase in the unemployment rate. This was accompanied by a dramatic increase in inflation. The large divergence between the two sets of results shows their sensitivity to the assumptions made.

The simulation results for the substitution of Canada Manpower On-the-Job Training with a general government expenditure increase or tax reduction show that neither policy option would generate sufficient stimulus to offset the loss of employment associated with removal of the program. This removal would mean a decrease in the participation rate and an increase in the unemployment rate.

In the simulation experiments, the net expansionary impetus provided by reducing taxes tends to be slightly less than that provided by increasing government expenditures on goods and services as a consequence of the savings "leakage".

The simulation analysis of the unemployment insurance program was carried out in a different manner from that of the other programs. The

conditions of the old Act were restored and the model was then solved to yield estimates of what benefits and contributions would have been over the 1971-73 period. The extra federal expenditure on unemployment insurance caused by the new Act could then be calculated.

Using this information, two simulation experiments were performed. While the provisions of the old Act were maintained for both experiments, the first replaced the additional federal UIC expenditures with an equal reduction in personal income tax. The second experiment was conducted assuming no offsetting stimulus.

The simulations account only for the macro-economic effects of the increased stimulus due to the new Act. They do not measure any incentive or disincentive effects that the Act may have had on the decision of individuals to participate in the labour force or to seek re-employment. The conclusion of the experiments was that neglecting any direct effects on labour force behaviour, the implementation of the new Act increased employment, participation rates and real output. However, a traditional fiscal measure such as a tax cut would have had an expansionary effect of approximately equal magnitude.

In Chapters 7 and 8, the effects of various programs were considered on a program-by-program basis. What can be said about the combined effect of all the programs, or versions of all the programs during the period 1969-73? Since the properties of the model do not allow the summation of the individual results to assess such a total effect (see Chapter 6), a final "global" simulation was conducted.

B Global Simulation

In our global simulation, the purpose is to evaluate the macro-economic impact of five programs collectively in comparison with an alternative economic policy. The fundamental question of the exercise is whether traditional fiscal means, in particular, a reduction in personal income taxes, would have been more or less effective in dealing with the economic problems faced by the government than the program changes that were actually instituted. Some of the assumptions made in setting up the individual program simulations were amended for the purposes of the global simulation. These revisions are reported in the following. In terms of alternative spending, we assumed that the realized fiscal stimulus of these programs had been intended. Thus net federal expenditure removed by our changes was replaced by an offsetting reduction in personal income taxes.

The assumptions made about the direct labour market impact of LIP as discussed in Chapter 7, section B, were retained. Expenditures by the government in the form of LIP grants were deducted from transfer payments to persons in accordance with National Income Accounting convention. These grants amounted to $378 million between 1971 and 1973. To compensate for our removal of LIP, personal income

taxes were reduced by that amount. The assumptions about the labour force status of OFY participants were similar to those reported in Chapter 7, section C. Government expenditures on OFY were netted out of transfer payments to persons and a tax cut was effected by lowering personal taxes by the full amount of OFY spending.

In Chapter 7, section D, two sets of assumptions about the direct employment effects of CMTP (referred to as the low employment effects assumption and the high employment effects assumption) were discussed. For the global simulation, a third set of assumptions was utilized. This third case was postulated assuming that a moderate proportion of CMTP trainees gained increased job skills through the program.[1] In effect, this assumption is the middle ground between the two extreme cases.

The simulations reported in Chapter 7, section D, assumed the *complete* removal of CMTP and re-introduced the stimulus in a different manner, either through government spending or a tax cut. For this simulation, we did not discontinue CMTP; rather, the level of activity under the program was held constant at its 1969 level. That is to say, in the years 1970 to 1973 it was assumed that CMTP accepted the same number of trainees as had been accepted in 1969. Training costs and trainees' allowances were indexed for price increases over the years 1970 to 1973 from their base in 1969 in order to approximate as closely as possible what costs and allowances would have been under this new set of circumstances. Training costs were indexed to the overall price deflator while allowance costs were escalated by the consumer spending deflator. This was done in the spirit of recent federal legislation which ties selected transfer programs, such as old age pensions, to the cost of living. In the resulting simulation experiment, then, changes in the scale of the program which occurred after 1969 have been deleted. The additional training costs arising from such scale changes were deducted from current government spending on goods and services and the additional trainees' allowances were removed from transfers to persons. The total of these extra amounts was removed from personal income taxes.

The assumption that 50 per cent of the jobs filled by trainees under CMJTP were newly created jobs was used again in the global simulation. Costs of the plan are deducted from government subsidies and the money is introduced into the system by subtracting it from personal taxes.

In Chapter 8 simulation of unemployment insurance, the conditions of the old Act were maintained over the period 1971-73. For the global simulation, it seemed appropriate to retain the old Act but to allow the parameters to increase by the rate of inflation, again in the spirit of recent developments in fiscal policy. Accordingly, the weekly benefit payments, the wage at which

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1 Specifically, it was assumed that one-quarter of the net jobs acquired by the trainee graduates were not additions to employment. These one-quarter were viewed as jobs which could not have been filled from the pool of unemployed labour which was assumed to lack the necessary skills.

contributions reach their maximum, and the wage at which persons may exempt themselves from the program were all indexed to price changes since mid-1971. For example, the weekly benefit was allowed to rise from $53 per week in 1971 to $60 per week by the fourth quarter of 1974, about a 13 per cent increase. The resulting change in the deficit position due to the new Act was deducted from personal taxes.

Summary results of the global simulation are shown in Table 9-1. They indicate that the five programs under study together had a substantial effect on the labour market.

Table 9-1

Global Simulation Impact Results,
All Programs, Personal Tax Offset

(Differences from control solution)

	1969	1970	1971	1972	1973
Labour force (thousands of persons)	–	5	2	–17	–7
Employment (thousands of persons)	–	–1	–9	–58	–70
Unemployment rate (percentage points)	–	0.1	0.1	0.5	0.7
Real output, GNE (per cent)	–	–	–	0.1	0.1
Inflation rate (percentage points)	–	–	–	0.1	–

The first row of Table 9-1 shows the net effect on the Canadian labour force. The figure for 1970 shows a small increase in labour force participation caused entirely by CMTP. After 1970, the other programs begin to influence the participation rate. By 1972, 17,000 more persons would have been out of the labour force. In 1973, this drops down to 5,000 fewer people. In terms of the total labour force, these figures are quite small. It must be recalled that all five programs are interacting and to some degree offsetting each other to yield these results. The second row of Table 9-1 contains the simulated employment effects. From 1971 to 1973, the programs appear to have been much more effective in creating employment relative to a personal income tax reduction. The employment figure takes a particularly large jump in 1972 with all five programs in full operation. However, these results must be interpreted carefully.

Chart 9-1 illustrates the trajectory of employment over the five-year period. It presents a comparison between the percentage differences from the 1963-73 trend of the actual and simulated employment figures. The two profiles are different. However, under our tax cut assumption, with the expenditure programs either dismantled or checked in terms of growth, employment still rebounds very considerably. The difference between the two profiles appears largely to be one of timing – and this is why the annual average employment figures for 1972 and 1973 look as they do in Table 9-1.

The policy option chosen still serves to contribute to a rebound of economic activity in 1972 and 1973. However, it does not do so as quickly as other means, such as direct employment-creation programs. But this then becomes a matter of the timing of the initiative. With foresight, one could accomplish, on the tax side, much of what is accomplished by changing expenditures.

Chart 9-1

Total Employment, Canada

(Percentage differences from 1963-73 trend)

Global Simulation
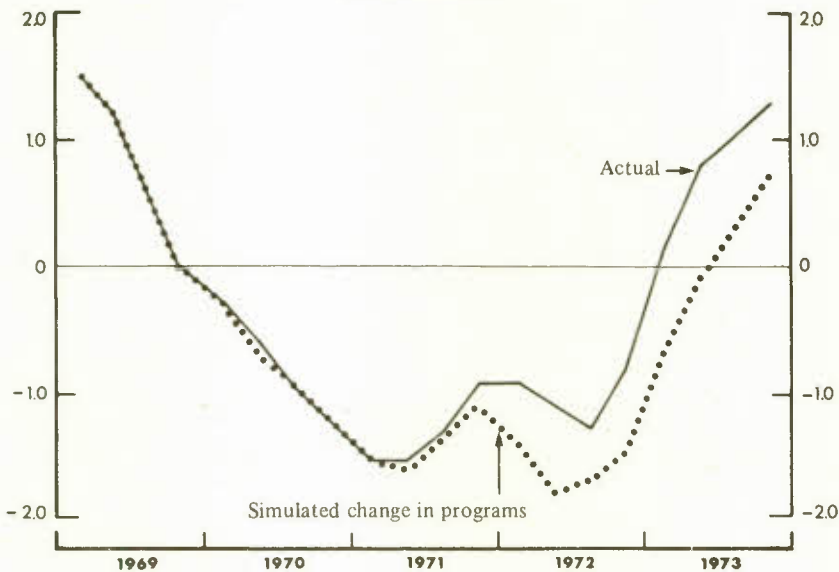
The unemployment results of the global simulation are presented both in Table 9-1 and in Chart 9-2. The third row of Table 9-1 illustrates the average annual impact on the unemployment rate. During the first year, the unemployment rate shows no divergence from the control solution levels. In 1970 and 1971 it rises by 0.1 per cent. In 1972 and 1973, the unemployment rate rises to over one-half of a percentage point higher than that of the control solution. Chart 9-2 compares the path of the unemployment rate of the global simulation to that of the actual unemployment rate. There is very little difference between the two paths until late 1970 when the global unemployment rate takes a swing upward. In late 1971, the divergence between the two becomes even more marked. For the rest of the period, the actual unemployment rate is one-half of a percentage point or more below that predicted by the global simulation. But once again, the impact appears mainly to be on the timing of the outcome and not necessarily on the outcome itself.

Our results are influenced, of course, by the assumptions we have made about each program and the way all the programs are removed. The assumption made for CMTP especially affects the entire labour force sector of the model (as shown in Chapter 7).

Chart 9-2

Unemployment Rate, Canada

(Seasonally adjusted, quarterly, 1969-73)

Global Simulation
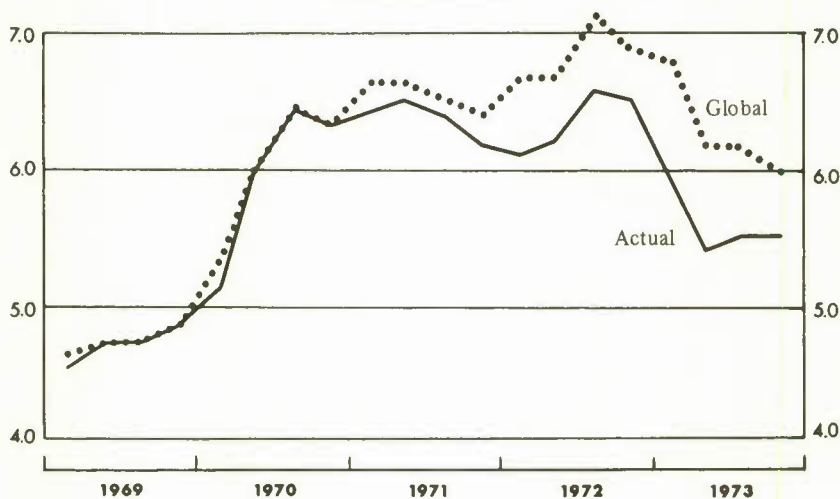
We selected a mid-point between the two earlier extreme assumptions about the value of this program. It must be emphasized, however, that the entire program was not removed for the global simulation. The large effects shown in Chapter 7 are reduced by a large extent in the global simulation. We cannot overemphasize the effect of CMTP. In our view, the program does contribute to improving the skills of the labour force. It is this program, in particular, which is accounting for a significant part of the difference between actual and simulated results.

C Conclusions

The purpose of this study was to examine the macro-economic implications of certain federal labour policies. These policies have certain stabilization objectives; the question is how well they fulfil these objectives.

It is important to remember that we did *not* attempt to measure the success or failure of the policies with regard to social or economic goals other than stabilization. For example, some of the programs will likely have had an effect on unemployment rates in certain regions or among certain groups.

Another example is the effect that some will have had on the redistribution of income.

Were the policies, when considered as a group, any more effective as a stabilization tool than reducing taxes? The simulation results seem to indicate that they were but only to the extent that they were relatively faster acting than the tax cut offset examined. One must further qualify the results by saying that if any of the programs had an impact on work incentives, as many have argued, these effects would have to be added to those described here. Other studies for the Economic Council of Canada have considered these alternative effects.

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