

# Symposium on Labour Force Participation in Canada in the 1990s: An Introduction and Overview

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A major development in the Canadian labour market in the 1990s has been the decline in labour force participation. This issue of *Canadian Business Economics* consists of a symposium of articles that explore this issue. The idea for this symposium came out of a December 1997 workshop on labour force participation organized by the Canadian Employment Research Forum. The Centre for the Study of Living Standards and Human Resources Development Canada then organized two sessions on labour force participation at the annual meeting of the Canadian Economics Association in May 1998 where these papers were first presented. The papers were then refereed and revised for publication. This introduction sets the context for the symposium that follow by presenting basic data on labour force participation rate trends and summarizing and synthesizing the key findings of the five articles.

## Trends in Labour Force Participation in Canada in the 1990s

### Trends by age-sex groups

After peaking at 67.5 per cent in 1989, the aggregate participation rate of the population 15 and over fell continually during the first six years of the 1990s to a trough of 64.8 per cent in 1997, before recovering slightly to 65.1 per cent in 1998. As the articles in this symposium attempt to explain the decline in labour force participation in the 1990s, it is the 2.7 percentage point decline in the aggregate participation rate between the 1989 peak and the 1997 trough that will be the focus of attention.

The aggregate participation rate is of course determined by trends in participation rates for various age-sex groups. Table 1 presents data on trends in labour force participation for the three major age groups: youth (15-24 age group), prime aged persons (25-54 years), and older persons (55 and over) for both sexes and males and females.

Of the three age groups, it was youth who experienced by far the largest decline in labour force participation, with a 9.4 percentage point decline in their rate from 70.6 per cent in 1989 to 61.2 per cent in 1997. Older workers experienced the second largest fall, 2.6 percentage points from 26.8 per cent to 24.2 per cent. Prime-age persons saw the smallest decline, only 0.4 percentage points from 84.2 per cent to 83.8 per cent. The contribution of the three age-groups to the overall fall reflects both their absolute decline in participation and their relative importance in the working age population (in 1989, the 15-24 age group represented 19 per cent of the working age population, the 25-54 group 56 per cent, and the 55 and over age group 25 per cent). Not surprisingly, it was youth that made the largest contribution to the decline in the aggregate participation rate in the 1990s: 67 per cent, followed by older age group (24 per cent), and prime-aged group (8 per cent).

In terms of more detailed age groups (see Table A1 in the appendix), it was teenagers aged 15-19 who experienced the largest absolute fall in their participation rate between 1989 and 1997 (11.9 points), followed by young adults aged 20-24 (5.7 points), the 60-64 age group (2.2 points), the 55-59 age group (1.9 points), the 25-29 age group (1.5 points), the 70 and over age group (0.6 points), the 35-44 age group (0.3 points), and finally the 25-29 age group (0.1 points). The participation rate for the 65-69 age group and the 45-54

**Table 1 Participation Rates in Canada for Major Age-Sex Groups, 1989 and 1997**

	BOTH SEXES				MALES				FEMALES			
	1989 %	1997 %	1989-97 change, % points	Age group contribution to total PR change, %	1989 %	1997 %	1989-97 change, % points	Age group contribution to total PR change, %	1989 %	1997 %	1989-97 change, % points	Age group contribution to total PR change, %
15 +	67.5	64.8	-2.7	100.0	77.1	72.5	-4.6	84.4	58.3	57.4	-0.8	15.6
15 - 24	70.6	61.2	-9.4	67.6	73.4	63.4	-10.1	36.5	67.8	59.0	-8.8	31.1
25 - 54	84.2	83.8	-0.4	8.5	93.8	91.1	-2.7	28.2	74.7	76.6	1.9	-20.0
55 +	26.8	24.2	-2.6	24.0	38.2	33.1	-5.1	21.3	17.2	16.6	-0.6	3.2

Source: Labour Force Survey, Statistics Canada

Note: contribution calculation based on 1989 working age population shares

**Table 2 Participation Rates by Province, 1989 and 1997**

	Participation Rate, %		Change in % point 1989-97	Provincial contribution, %
	1989	1997		
Canada	67.5	64.8	-2.7	100.0
Atlantic Prov.	59.8	58.8	-1.1	3.6
Newfoundland	56.0	52.5	-3.5	2.7
PEI	64.9	66.3	1.4	-0.2
Nova Scotia	61.5	60.2	-1.3	1.6
New Brunswick	59.9	60.1	0.2	-0.2
Quebec	64.4	62.1	-2.3	21.9
Ontario	70.3	65.9	-4.5	62.5
Prairies	70.0	69.6	-0.4	2.4
Manitoba	67.3	67.0	-0.3	0.5
Saskatchewan	66.4	66.4	-0.1	0.1
Alberta	72.6	71.8	-0.8	2.7
British Columbia	67.4	64.9	-2.5	11.2

Source: Labour Force Survey, Statistics Canada

Note: Contribution calculation based on 1989 working age population shares.

age group both increased (0.5 and 0.9 points respectively).

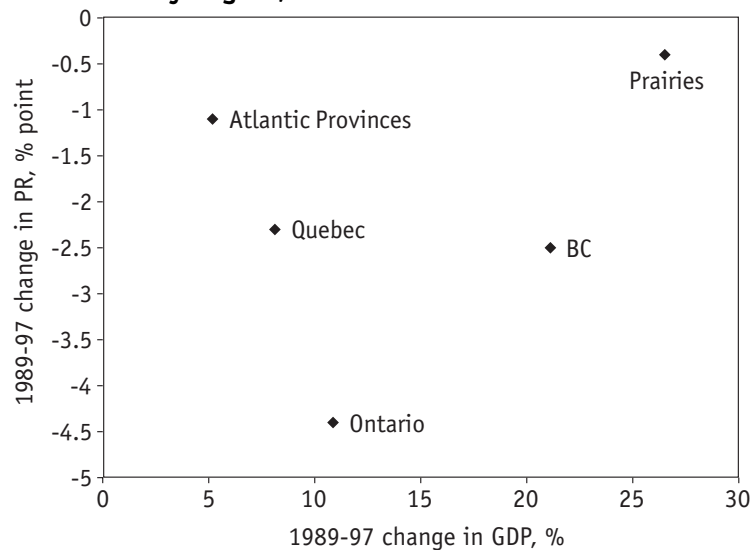
As age-specific participation rates can vary by sex, it is useful to examine trends in age-sex specific rates (Table 1). For all three age groups taken together, the fall in the male participation rate was five times that of the female rate (4.6 percentage points versus 0.9 points), meaning that declining male participation accounted for 83 per cent of the overall fall in labour force participation.

For youth the declines in male and female participation rates were relatively similar (10.0 and 8.8 percentage points respectively). In contrast, for the other two age groups, trends by sex differed markedly. For the prime-age group the female rate actually rose 1.9 points in the 1990s, while the male rate fell 2.7 points. For the 55 and over group, both rates fell, but the decline in the male rate was eight times greater than that experienced by the female rate (5.1 points versus 0.6 points).

In terms of contribution by age-sex groups to the overall decline in the aggregate labour force participation rate in the 1990s, male youth make the largest contribution at 37 per cent, followed by female youth (31 per cent), prime aged males (28 per cent), older males (21 per cent), and older females (3 per cent). As the participation rate of prime-aged women increased in the 1990s, this group made a significant negative contribution to the decline in the participation rate (20 per cent).

Table A1 in the appendix provides data on trends in labour force participation in the 1990s for nine five-year or ten-year age groups for both men and women (as well as data for five aggregated age groups). For the nine male age groups all but one (65-69 age group) experienced falls in the participation rate between 1989 and 1997, with teenagers experiencing the largest decline (13.0 points), followed by the 55-59 age group (6.0 points), the 60-64 age group (5.8 points), and young adults (5.7 points). For the nine female age groups, only two experienced declining participation in the 1990s: teenagers (10.8 points) and young adults (5.8 points). The participation rate of women aged 45-54 increased by a strong 4.8 points. These data illustrate the pervasiveness of the phenomenon of declining labour force participation among men and the limited extent of the phenomenon among women, confined to the under 25 age group.

**Chart 1 Economic Growth and Participation Rates by Region, 1989-97**



### participation rates by province

Participation rate trends by province varied greatly in the 1990s, from a 4.4 points decline in Ontario between 1989 and 1997 to a 1.4 point increase in Prince Edward Island (Table 2). Indeed, only two provinces (Ontario and Newfoundland) experienced falls greater than the national decline in labour force participation (2.7 points). Given Ontario's large decline and large share of Canada's population, this one province accounted for 62 per cent of the overall decline.

Both Ontario and Newfoundland experienced below-average economic growth in the 1990s, with real GDP falling 1.7 per cent in Newfoundland and rising 10.9 per cent in Ontario between 1989 and 1997, compared to the national increase of 14.9 per cent (Chart 1). The Prairies, the region with the smallest decline in labour force participation in the 1990s (0.4 points) had by far the most robust economic growth (26.5 per cent).

### Canada-U.S. participation rate comparison

In contrast to the 2.7 percentage point decline in the Canadian participation rate between 1989 and 1997, the U.S. participation rate rose 0.6 points (Table 3). The Canadian participation rate experienced a greater declines (or smaller increases) in the 1990s for all six major age-sex groups. This suggests that economy-wide rather

**Table 3 Participation Rates in the United States, 1989 and 1997**

	United States			Canada
	1989 %	1997 %	1989-97 % point change	1989-97 % point change
Both				
16+	66.4	67.1	0.6	-2.7
16-24	68.6	65.4	-3.1	-9.4
25-54	83.4	84.1	0.7	-0.4
55+	30.3	30.9	0.6	-2.6
Males				
16+	76.4	75.0	-1.4	-4.6
16-24	72.9	68.2	-4.7	-10.0
25-54	93.7	91.8	-1.8	-2.7
55+	39.6	38.9	-0.7	-5.1
Females				
16+	57.4	59.8	2.4	-0.8
16-24	64.4	62.6	-1.8	-8.8
25-54	73.6	76.7	3.0	1.9
55+	23.0	24.6	1.6	-0.6

Sources: Bureau of Labour Statistics, 1999; Statistics Canada, Labour Force Historical Review, 1998

Note: Canadian data are for the 15+ and 15-24 age groups.

**Table 4 Determinants of GDP Per Capita Growth**

					Average annual rates of change		% point change between 81-89 and 89-97
	1981	1989	1997	1998	1981-89	1989-97	
GDP per capita (1992\$)	22,248	25,840	27,141	27,701	1.89	0.62	-1.27
Output per worker (1992\$)	48,369	53,765	58,321	58,513	1.33	1.02	-0.31
Employment/ Total Pop, %	46.0	48.1	46.5	47.3	0.55	-0.41	-0.96
WAP/ Total Population, %	76.2	77.0	79.1	79.3	0.14	0.33	0.19
Employment/ WAP, %	60.4	62.4	58.9	59.7	0.42	-0.73	-1.15
Participation Rate, %	65.3	67.5	64.8	65.1	0.41	-0.50	-0.92
Unemployment Rate, %	7.6	7.5	9.2	8.3			
Empl/LF or (100-UR), %	92.4	92.5	90.8	91.7	0.01	-0.23	-0.23

Sources: National Accounts and Labour Force Survey, Statistics Canada

than age-sex specific forces were affecting labour force participation.

In terms of major age groups, youth were the only one to experience a decline in the United States (3.1 points), with the participation rate of prime-age and older groups rising (0.7 and 0.6 points respectively). But when the prime-age and older age groups are broken down by sex, one finds that the participation rate for males decreased for both age groups, in contrast to rising female rates.

The largest participation rate trend divergences between Canada and the United States in the 1990s were for youth (a 9.4 points decline in Canada versus 3.1 points in the United States) and older males (5.1 versus 0.7 points). In terms of levels, Canada's participation rate in 1997 was 2.3 points below the U.S. rate (64.8 per cent versus 67.1 per cent), with almost all the gap accounted for by lower participation rates for youth (4 percentage points) and older workers (7 points). These differences apply to both male and female participation rates.

## **Implications of the Decline in Labour Force Participation**

### **contribution of falling participation to the decline in living standards**

The rate of advance of Canadian living standards, as represented by trends in GDP per capita, plummeted in the 1990s, dropping from an average annual rate of increase of 1.9 per cent over the cyclically neutral peak-to-peak 1981-89 period to 0.6 per cent from the 1989 peak to 1997.

GDP per capita can be decomposed into two basic components: GDP per person employed and the employment/population ratio, in turn determined by the employment/working age population ratio (also known as the employment rate) and the ratio of the working age population to the total population. The employment rate in turn is determined by the unemployment rate and the participation rate.

The most important factor behind the drop in the growth in living standards in the 1990s was the collapse of the employment rate, not the dete-

rioration of productivity growth (Table 4). Of the 1.3 percentage point fall in the rate of increase in GDP per capita, 1.0 points was due to a fall in the rate of increase in the employment/total population ratio and 0.3 points to slower productivity growth. The ratio of the working age population to the total population increased at a faster rate in the 1990s than the 1980s, reflecting faster growth in the working age population relative to the under 15 population. This development contributed 0.2 points per year more to GDP per capita growth in the 1990s than in the 1980s. Consequently, the deterioration of the employment/working age population ratio (-1.2 points) was greater than that of the employment/total population ratio (-1.0 points).

The most important factor behind the 1.2 point decline in the rate of increase in the employment/working age population in the 1990s was the fall in labour force participation, with the rate of growth 0.9 points lower in the 1990s than the 1980s (-0.5 per cent versus 0.4 per cent per year). The fall in labour force participation in the 1990s thus accounted for about two thirds of the overall decline in GDP per capita growth relative to the 1980s. The rise in the unemployment rate between 1989 and 1997 also contributed 0.2 points to the fall in the rate of growth of the employment/working age population ratio.

To gauge the impact of this decline in labour force participation on the economic well-being of Canadians (as opposed to GDP per capita), it is essential to know whether this development was voluntary or involuntary. As leisure contributes to economic well-being, if Canadians consciously choose to participate less in the labour force in order to enjoy more leisure time (e.g. early retirement), then, even with lower incomes, one could not conclude we were worse off. On the other hand, if the decline in participation was not by choice, then the resulting decline in incomes does represent a decline in economic well-being. Equally, if the fall in participation reflects a decision to invest in human capital and to foregone income now for higher income later, it is unclear whether from a life cycle perspective Canadians are worse off.

## **potential growth, the output gap and the conduct of macroeconomic policy**

The causes of the decline in labour force participation have important implications for the measurement of potential output and the output gap, and the conduct of macroeconomic policy. If the decline in labour force participation in the 1990s has been a structural non-reversible phenomenon, then the potential growth rate of the Canadian economy has fallen, with the implication that the actual level of output may be close to the potential level, with little or no room for stimulative macroeconomic policy to increase output.

On the other hand, if the decline in labour force participation has been a cyclical development due to the weak labour market and can be reversed with strong demand growth, then the rate of potential output growth may not have fallen and the level of actual output may be well under the economy's level of potential output. The implication of such a situation would be that there is room for macroeconomic policy to increase output without inflation.

## **Summaries of Articles**

This section of the introduction summarizes the five articles in the symposium. The first article by Pierre Fortin of the Université du Québec à Montréal and Mario Fortin of Université de Sherbrooke examines the trends and determinants of the participation rate for six demographic groups, three age groups (15-24, 25-54, and 55 and over) for both men and women. The second article by Irene Ip and Sheryl King of the Bank of Canada and Geneviève Verdier of the University of British Columbia provides a Canada-U.S. comparison of structural influences on labour force participation. The third article by Bob Dugan of WEFA Inc. and Benoit Robidoux of Finance Canada examines the impact of demographic shifts on labour force participation. The final two articles look at participation rate trends for particular groups. The fourth article by Paul Beaudry of the University of British Columbia, CIRANO, and CIAR and Thomas Lemieux of the Université de Montréal and CIRANO examines the labour force participation of women aged 25 to 64. The fifth and final article by Richard Archambault and Louis

Grignon of Human Resources Development Canada looks at the factors behind the decline in youth labour force participation

## **Fortin and Fortin: participation rate equations for six demographic groups**

Cyclical, policy changes, and structural factors have been put forward to explain the decline in labour force participation in Canada in the 1990s. In the first article in the symposium, Pierre Fortin and Mario Fortin attempt to determine the relative importance of these three types of factors by estimating a participation rate equation where the independent variables are an index of job availability (the Help-Wanted Index), the real wage, the real minimum wage, an index of unemployment insurance generosity, real social assistance benefits, and a time trend to capture other structural influences. The equation is estimated for six demographic groups (men and women 15-24, 25-54 and 55 and over) over the 1969-96 period. They find that the drop in the aggregate participation rate in the 1990s was equally due to the three factors: poor macroeconomic conditions, policy changes in unemployment insurance and the minimum wage, and structural transformations.

The explanatory power of the equations is found to be good for the younger and middle-age groups, but poor for the older groups. The equations show no significant shift over the 1990-96 sub-period, implying that the decline in the participation rate in the 1990s should not be attributed to a new structural relationship. In terms of the variables, the authors find that young people, and to a less extent, middle-aged persons, respond positively to cyclical variations in job opportunities, but older persons do not; minimum wages affect negatively the labour force participation of the younger age groups and middle-aged women; UI generosity affects positively only youth participation; and social assistance affects negatively the participation of middle-aged women.

The authors use their equations to simulate the impact of changes in cyclical, policy, and structural variables on labour force participation of the six groups in the 1990-97 period. The model can account for 2.6 percentage points of the total 2.7 per centage point decline in the aggregate participation rate between 1989 and 1997. Reduced job availability was responsible for 37 per cent of the

decline, increases in the real minimum wage 15 per cent, decreased UI generosity 19 per cent, falls in social assistance benefits made a 4 per cent negative contribution to the decline in participation, and structural factors accounting for the remaining 30 per cent of the decline. These structural factors included rising school attendance, the changing roles of men and women in society, the changing demand and supply of skills, the expansion of public pension plans, and the rising average age of the 55 and over group.

The simulations explained quite well the evolution of labour force participation for all groups except older males. Perhaps surprisingly, none of the large decline in participation of this group was found to be due to reduced job availability.

The finding that only about 40 per cent of the decline in labour force participation in the 1990s is cyclical has important implication for the path of potential output. The authors find that whatever the value of the non-accelerating inflation rate of unemployment (nairu), in a non-inflationary cyclical recovery, the participation rate is unlikely to rise more than 0.8 percentage points from the 1997 level of 64.8 per cent.

### **Ip, King and Verdier: structural influences on participation in Canada and the United States**

As noted earlier, in contrast to the decline in labour force participation in Canada in the 1990s, the aggregate participation rate in the United States actually rose slightly (up 0.5 percentage points between 1989 and 1997). This US experience provides a useful benchmark for the analysis of the Canadian developments. In the second article of the symposium, Irene Ip, Sheryl King and Geneviève Verdier, while recognizing that cyclical influences have contributed significantly to the decline in labour force participation in the 1990s in Canada relative to the United States, focus on supply-side factors at play in the behaviour of the participation rate in the two countries.

A key structural variable influencing youth labour force participation is enrolment rates. As the participation rate of students is below that of non-students, increased enrolment tends to reduce aggregate participation. Enrolment rates for teenagers increased 7 percentage points in Canada between 1989 and 1997, and 5 points in the United States; rates for youth adults increased 11

points in Canada and 7 points in the United States. As the U.S. economy enjoyed low unemployment in both 1989 and 1997, the rise in enrolment rates was related to structural factors, such as the growing recognition of the importance of education for success on the job market. Structural factors were undoubtedly at play in Canada. However, the authors suggest that the increase in enrolment rates beyond that experienced in the United States (29 per cent of the increase in enrolment rates for teens and 36 per cent for young adults) may be interpreted as a cyclical response to weak employment opportunities in Canada.

The authors find composition changes in the age structure of the population account for about one percentage point of the decline in the aggregate participation rate in Canada between 1989 and 1997, as the relative importance of low-participation rate groups has increased.

Based on an analysis of the factors affecting labour force participation of the major age-sex groups, the authors forecast a rise in the aggregate participation rate in Canada from 65.1 per cent in 1998 to 66.6 per cent in 2006. For the United States, the Bureau of Labor Statistics is forecasting a smaller increase, but from a higher level, to 67.6 per cent in 2006 from 67.1 per cent in 1998.

The authors expect increases in labour force participation for all age-sex groups in Canada. Between 1998 and 2006, the participation rate is forecast to rise 4.6 percentage points for older men (55 and over), 3.8 points for older women, 3.7 points for prime age women, 8.9 points for teenagers, 3.5 points for young adults, and even 1.0 points for prime-aged men. The 1.5 point increase in the aggregate participation rate is much smaller than almost all the increases in the age-sex group specific rates because of the changing age structure, in particular the increasing proportion of the population in older age groups.

### **Dugan and Robidoux: demographic shifts and labour force participation**

Labour force participation vary greatly by age, with persons 55 and over having much lower participation rates than younger persons. Consequently, changes in the demographic composition of the population can exert a long-run effect on aggregate participation rates. In the third article of the symposium, Bob Dugan and Benoit Robidoux

examine the impact of demographic shifts on labour force participation in Canada. They use an accounting framework and plausible trend participation rates for 16 demographic groups with source population estimates to estimate an aggregate structural participation rate for Canada.

They find that the ageing of the population has already started to exert a downward pressure of the aggregate participation rate in Canada due to longer life expectancy and the resulting growing proportion of the population in the low-participation rate 65 and over age group. The movement of the baby boom generation into the 65 and over group in coming years will intensify this trend. Between 1989 and 1997 they find that the demographic composition effect reduced the aggregate participation rate by almost 1 percentage point, and that from now to 2030 it will reduce the participation rate by an additional 8.5 points. Of course, greater than expected trend increases in labour force participation rates by older age groups could offset some of this composition effect.

The authors point out that changes in demographic composition had virtually no effect on the participation rate in the 1990s in the United States as the share of the population 65 and over was stable. This situation reflects the fact the United States became an "older" society earlier than Canada due to an earlier and smaller baby boom and a higher average age for immigrants.

Dugan and Robidoux calculate a trend participation rate of 66.2 in 1997, 1.4 percentage points above the actual rate of 64.8 per cent. Based on this rate they conclude that about one half of the 2.7 point decline in the participation rate in the 1990s was structural and one half cyclical.

### **Beaudry and Lemieux: cohort effects and female participation**

The participation rate of women aged 25-64 rose greatly in the 1970s and 1980s, but has stagnated in the 1990s. In principle, this development could reflect either the poor growth performance of the economy this decade or the completion of the integration of women into the labour force. In the fourth article of this symposium, Paul Beaudry and Thomas Lemieux use a cohort analysis to shed light on the explanation of this stagnation in female labour force participation.

Using data from the Survey of Consumer Finances for the 1976-94 period, the authors track the participation rates over time of representative groups of women who entered the labour force at different points in time. They decompose a cohort's participation rate into three effects: a macroeconomic effect common across cohorts linked to factors such as recessions and employment insurance generosity; an age or life-cycle effect; and a cohort-specific effect which shows the differences between cohorts for a given age and macroeconomic effect.

The authors find that the cohort effects are likely the dominant factor in explaining the recent stagnation of female participation, just as it explained the large increases in the 1970s and 1980s. The recession of the early 1990s, which according to the authors reduced the female participation 1 percentage point, merely amplified the stagnation phenomenon. As the cohort effects stabilize with the narrowing of the gap between male and female participation rates, the stagnation would have occurred, albeit later in the 1990s, even if more favourable macroeconomic conditions had prevailed.

The authors conclude that there is still room for a 2-3 percentage point increase in the participation rate of women 25-64, but the magnitude of the increases of the 1970s and 1980s is not possible as the cohort effects that prevailed then no longer exist.

The authors stress that their results are dependent on the amount of flexibility used to capture the cohort effect so that the age profile and its slope can trace both the rise and the flattening of the participation rate by age. They point out that over time participation behaviour of women 25-64 is converging toward that of men, namely, high and flat participation profiles to at least age 55. They also note that the much smaller increase in the female participation rate in the United States in the 1990s relative to the 1970s and 1980s despite the robust U.S. labour market supports their findings as the cohort effects were also levelling out south of the border.

### **Archambault and Grignon: factors behind the decline in youth participation**

Of the three major age groups, youth (aged 15-24) experienced the largest fall in labour force par-



ticipation and accounted for the lion's share of the aggregate decline. Consequently, an understanding of the factors behind this development is essential to an overall understanding of the fall in labour force participation in the 1990s in Canada.

In the fifth and final article in the symposium, Richard Archambault and Louis Grignon examine the causes of this large fall in youth labour force participation in Canada in the 1990s. They disaggregate the youth participation rate into three components: the student participation rate, the non-student participation rate, and the school enrolment rate. The aggregate youth rate is the sum of the student and non-student rates weighted by their respective shares of the population (the enrolment rate for students). Such an approach makes it possible to take account of behavioural differences between students and non-students and to treat the enrolment rate as a phenomenon to be explained rather than a determinant of the participation rate.

All three variables are modelled as a function of a cyclical variable and a number of structural variables- the real wage, the relative minimum wage, employment insurance, social assistance, and a time trend. The results show the importance of economic conditions and the modest effect of public policy programs on the decision to participate in the labour market and go to school.

Based on the estimated equations estimated for the 1976-96 period, a dynamic simulation was conducted over the 1990-96 period to account for the impact of the variables on the student and non-student participation rates and enrolment rate. According to the equations estimated for the 15-24 age group, the cyclical variable accounts for about one half of the decline in the youth participation rate between 1990 and 1996, two thirds of the decline in the student participation rate, and about one third of the fall in both the non-student participation rate and rise in the enrolment rate. The remaining decline in the two participation rates and rise in the enrolment rate are not to any significant degree explained by the four structural variables, but rather are either captured by the time trend or not explained at all. Given these results, the authors conclude that we have a poor understanding of the non-cyclical forces that account for up to one half of the decline in youth labour force participation in the 1990s.

## Synthesis of Symposium Research Findings

The aggregate participation rate in Canada fell 2.7 points between 1989 and 1997, in contrast to a 2.2 point rise between 1981 and 1989. For a number of structural reasons, the pace of participation rate increase in the 1970s and 1980s was unsustainable in the 1990s. The key structural factors at play in the 1990s that lowered trend participation rate growth are highlighted below.

- The leveling off of cohorts effects, reflecting the narrowing of the gap between male and female participation rates, has meant that the large increases in female participation experienced in the 1970s and 1980s were no longer possible;
- The rising school enrolment rate, reflecting the increased recognition of education for labour market success, acted to reduced the youth participation rate as the participation rates for students is well below that of non-students.
- The changing demographic composition of the population, and in particular the growth in the share of the population 65 and over, reduced the aggregate participation rate by nearly 1 percentage point in the 1990s as older age groups have much lower participation rates than the 25-54 age group.

The first two of these factors were also at play in the United States, reducing the rate of increase in the trend participation rate in that country despite that country's tighter labour market. Indeed, the rise in the U.S. enrolment rate can serve as a benchmark for the rise in the structural component of the enrolment rate in Canada. On the other hand, changes in the demographic composition of the population appear to have had no effect on the trend participation rate in the 1990s in the United States.

Structural factors can account for the deceleration of participation rate growth in the 1990s relative to the 1980s in Canada (as also happened in the United States from a 2.6 point increase in the 1980s to 0.5 points in the 1990s). They may even account for a moderate decline in the Canadian participation rate given the existence in this country of a negative demographic composition effect not present in the United States. However, it is un-

likely that these structural factors can account for the complete 2.7 point fall.

The weak cyclical conditions in Canada also played an important role in reducing labour force participation, particularly among youth, but also among older male workers. It is no accident that the years with the largest falls in output and employment, namely 1990, 1991, and 1992, were those with the largest declines in the participation rate. The stronger U.S. economy in turns explains why the participation rate did not follow the same path south of the border.

While one can with reasonable certainty conclude that the failure of the participate to rise in Canada in the 1990s reflects the influence of the three structural factors noted above, the apportioning of the actual 2.7 point decline in the participation rate between structural and cyclical factors is more difficult. The only paper that attempts to address this issue for the decline in the aggregate participation rate is that by Fortin and Fortin and they tentatively conclude that only 40 per cent of the decline was cyclical.

The recent improvement in economic conditions has produced a significant rebound in the participation rate in 1998 and in 1999. Indeed, in the first five months of 1999 the seasonally-adjusted participation rate has averaged 65.8 per cent, recovering 1.0 point or 37 per cent of the 2.7 point decline between 1989 and 1997. The youth

participation rate has recovered 30 per cent, the participation of persons 55 and over has recovered about a quarter and the participation rate of prime-aged individuals has more than recovered the ground lost over the 1989-97 period. The participation rate for prime-aged women in particular was 1.3 percentage points higher than in 1989 as both cyclical and structural factors (remaining cohort effects) pushed up participation for this group.

The pick-up in the participation rate that has already taken place since 1997 and the likelihood that the expansion will continue through 1999 and beyond suggest that the scope for a rebound in participation could be somewhat greater than suggested in some of the articles in this symposium. This is a welcome prospect for the Canadian labour market since a rise in participation rate increases potential output, reduces the risk of increased inflation and contributes to higher standards of living.

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# Appendix

**Table A1 Participation Rates by Detailed Age-Sex Groups, 1989 and 1997**

	BOTH SEXES			MALES			FEMALES		
	1989, %	1997, %	1989-97 change, % points	1989, %	1997, %	1989-97 change, % points	1989, %	1997, %	1989-97 change, % points
25 +	66.7	65.5	-1.2	78.0	74.4	-3.6	56.1	57.1	1.1
45 +	45.2	46.4	1.2	58.0	56.2	-1.8	33.7	37.5	3.8
65 +	7.0	6.4	-0.7	11.0	10.2	-0.8	4.1	3.5	-0.6
70 +	4.2	3.6	-0.7	7.1	6.2	-1.0	2.2	1.7	-0.5
25 - 44	85.6	85.1	-0.5	94.4	92.0	-2.4	76.8	78.2	1.4
15 - 19	58.7	46.8	-11.9	60.6	47.6	-13.0	56.7	45.9	-10.8
20 - 24	81.3	75.6	-5.7	84.9	79.2	-5.7	77.6	71.8	-5.8
25 - 29	85.7	84.2	-1.5	93.5	90.5	-3.0	77.8	77.9	0.1
30 - 34	85.0	84.9	-0.1	94.8	92.2	-2.6	75.2	77.5	2.3
35 - 44	86.0	85.7	-0.3	94.7	92.6	-2.1	77.2	78.8	1.6
45 - 54	79.7	80.6	0.9	91.7	88.8	-3.0	67.6	72.4	4.8
55 - 59	61.9	60.0	-1.9	78.5	72.5	-6.0	45.5	47.6	2.1
60 - 64	37.2	35.1	-2.2	52.6	46.8	-5.8	23.1	23.8	0.7
65 - 69	11.9	12.4	0.5	17.0	17.5	0.5	7.6	7.7	0.1

Source: Statistics Canada, Labour Force Historical Review, 1998