

The Performance of the 1990s Canadian Labour Market

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Il y a une tendance générale selon laquelle le marché du travail des années 90 était unique. Ce marché a été caractérisé par des notions telles que: “*downsizing*”, “révolution technologique”, “économie fondée sur le savoir”, “instabilité croissante des emplois” et plusieurs autres. Cet article fournit un survol extensif de la performance du marché du travail durant les années 90 et examine les différences avec celui des années 80. L'article examine ensuite si les faits sont cohérents avec les croyances et les explications populaires. Les sujets au niveau macro sont:

- Est-ce que la nature même du travail a changé drastiquement durant les années 90?
- Est-ce qu'il y a eu un “*ratcheting*” continu du chômage?
- Est-ce que nous avons été témoin d'une augmentation de l'instabilité des emplois ainsi que d'une augmentation du niveau de licenciement?
- Est-ce que le “*downsizing*” a augmenté durant les années 90?
- Pourquoi la croissance du revenu par habitant s'est stabilisée dans les années 90?
- Pour un travailleur avec un certain niveau de capital humain, est-ce qu'il y a eu une détérioration dans les résultats du marché du travail?

Cet article se termine avec une discussion de la performance globale du marché du travail des années 90 en le comparant avec celui des années 80.

There is a general sense that the 1990s labour market was unique. It has been characterized by notions such as “*downsizing*,” “*technological revolution*,” “*the knowledge-based economy*,” “*rising job instability*,” and so on. This paper provides an extensive overview of the performance of the 1990s labour market, and asks just how different it was from the 1980s. It goes on to ask if the facts are consistent with many common beliefs and explanations. Macro-level topics include:

- Has the nature of work changed dramatically in the 1990s?
- Has there been a continued ratcheting up of unemployment?
- Have we witnessed rising job instability and increased levels of layoffs?
- Did company downsizing increase in the 1990s?
- Why did per capita income growth stall in the 1990s?
- For a worker with a given level of human capital, has there been a deterioration in labour market outcomes?

The paper concludes with a discussion of the overall performance of the 1990s labour market as compared to the 1980s.

INTRODUCTION

The economy of the 1990s has been characterized by buzz-words and phrases such as “downsizing,” “high performance workplaces,” “increasing globalization,” “technological revolution,” “the end of work,” and “the knowledge-based economy.” The notion behind most of these phrases is that competitive and technological pressures have radically altered the production processes, hiring, and business strategies of firms in such a way as to affect the labour market in a major and often negative manner. Some of the outcomes seen to be associated with this change include:

- downsizing and job destruction, which stem from the need to reduce costs and the increased use of technology;
- firms seeking productivity growth by changing the way they engage labour and increasing the use of technology (particularly computers);
- a fundamental change in the nature of work, as firms turn to contracting-out and contingent labour in the face of rising competition;
- rising relative demand for the more highly skilled and educated, in the face of the shift to the “knowledge-based” economy;
- rising job instability, as firms manage their workforces in a fundamentally different way; and
- rising earnings inequality, driven by technological change.

However, in addition to change resulting from the impact of technology and competition on labour demand, there are other factors that potentially affected outcomes in the 1990s, including: (i) a weak economic recovery, (ii) supply-side shifts, (iii) changing labour market institutions, and (iv) change in the way firms organize their workforces. Much is unknown regarding the effect

of each of these dimensions during the past decade. This paper will contrast the major labour market events of the 1990s cycle (to date) with those of the 1980s. The first goal is to better understand how the 1990s market deviated from the 1980s. In particular, the focus is on the outcomes listed above. Did these events occur, and did they occur in a way consistent with the notions described? However, there are other major outcomes that defined the 1990s labour market as well, and this review encompasses them. Rather than simply reviewing the major outcomes, the paper asks to what extent the major events are consistent with prevailing notions regarding an enduring change in the nature of work.

WHY WOULD THE 1990S LABOUR MARKET HAVE DEVIATED FROM THE 1980S?

The 1990s labour market has been buffeted by a range of economic forces. First, demand-side shifts associated with trade and technology are thought to have resulted in considerable structural change in the labour market. This is part of the notion of a move to a “knowledge-based economy.” Second, perhaps the single most important factor influencing labour market outcomes in the 1990s has been the weak aggregate demand. Gross domestic product (GDP) grew at an annual average rate of almost 3 percent over the 1980s (1980-89), but at only 1.8 percent over the 1990s to date (1989-98). This weak GDP growth obviously contributed to the weak employment growth, which in turn could affect other outcomes, such as the shift to self-employment and depressed labour market flows.

Third, change in the way in which firms manage their workforces may have affected labour market performance. Betcherman and Lowe (1997) argue that there are six threads that run through employers’ search for a new model of management: global integration, technological change, innovations in work organization, business rationalization, the pursuit of high-performance workplaces, and new forms of labour relations. To date, we know little about

the extent to which most of these phenomena are taking place in Canadian firms, let alone their effect on labour market outcomes.¹

Fourth, the supply-side of the labour market has undergone substantial change. Most notably, the supply of highly educated workers has been rising dramatically, and the number of less educated workers falling. There are two important dimensions of this rapid increase in the educational qualifications of Canadians. The educational attainment of women rose quite significantly relative to men. As well, the educational attainment of experienced workers increased relative to the young. The age (experience) structure of the labour market also changed. On average, workers are much more experienced in the 1990s than during previous decades. The human capital imbedded in Canadian workers rose significantly.

Fifth, the institutional landscape is different in the 1990s. Employment insurance (EI) changes could influence structural unemployment, employment, and the income of low-income Canadians in the 1990s relative to the 1980s.² The major revisions to the social assistance system in many provinces in both the late 1980s (expansion) and the mid-1990s (contraction), and the introduction of the Child Benefit System by the federal government could also affect both incomes and employment among low-income Canadians. It is probably too early to assess the effects of these changes. Minimum wages have changed little since the early 1980s, but the unionization rate has fallen somewhat (Sargent 1999). The institutional framework of the 1990s is not that of the 1980s.

SUMMARY OF 1990S OUTCOMES

A series of complex forces influenced the 1990s labour market. The following is a summary of some of the most significant macro-level outcomes.

- Associated with the weak economic recovery was a lack of employment creation in general,

but in particular, there was little full-time paid job creation in the 1990s, at least until the more rapid growth beginning in 1998.

- There was a substantial shift in the types of jobs created (more self-employment in particular), but it is not clear that this represents an enduring shift in the nature of work and the way in which firms engage labour. Current research is not conclusive on this issue.
- Increased downsizing during the 1990s recovery played a major role in the slow employment growth, but it is not clear that this was driven by increased competition and technology, as it was found mainly in the public and consumer services sectors.
- Contrary to the expectations of many, job stability did not fall in the 1990s, and if anything it increased. This is not necessarily a good news story, however, as it was associated with a weak labour market and depressed hiring and quit rates. Labour mobility and job tenure behaved much as one would expect in a weak labour market.
- The likelihood of experiencing a permanent lay-off did not increase in the 1990s (at least to 1995), but hiring was suppressed. Firms adjusted to slow employment growth by reducing hiring rather than increasing layoffs.
- Participation rates fell, primarily among young students and due in large part to increased school enrolments. In the aggregate, unemployment behaved much the same during the 1990s as 1980s recovery in terms of rate, incidence, and duration. It remained at a high level by historical standards, but there is little evidence of a continued increase in the level during the 1990s.
- The human capital (education and experience) imbedded in the labour force increased dramatically through the 1990s (and 1980s), and while

there was little change in the “relative” labour market outcomes of workers with more or less human capital, there was a marked deterioration (in an “absolute” sense) in unemployment and job-holding for workers with a given level of human capital, particularly among men.

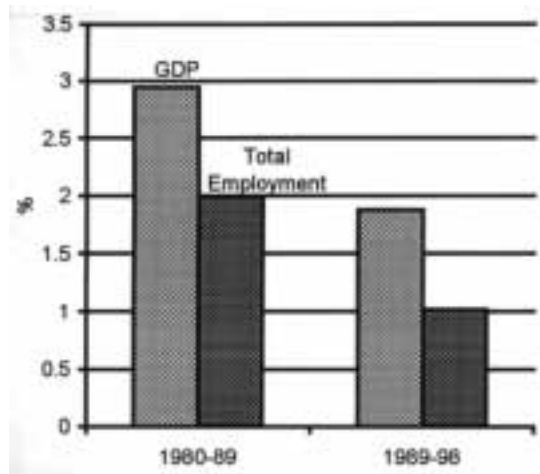
- Although productivity growth increased at the same rate over the 1990s as the 1980s, growth in national income as measured by GDP/capita slowed significantly, and median family earnings fell, if anything. Why the slowdown in income growth with no change in productivity growth? The answer lies in the depressed growth in employment, and the employment-population ratio.

MACRO-LEVEL TRENDS

Employment and Unemployment

Does the Rise in Self-Employment Suggest a Fundamental Shift in the Nature of Work? If seeking a fundamental shift in the nature of work between the 1980s and 1990s, perhaps the most significant macro-level trend was the rise in importance of self-employment, and the weak expansion over the cycle in full-time paid jobs. Total employment growth was very weak during the 1990s relative to the '80s. This occurred in an environment of slow growth in GDP (Figure 1). The traditional gains in full-time paid employment were replaced in the 1990s labour market largely by own-account self-employment (Figure 2). Over the 1990s cycle to date (1989 to 1998),³ full-time paid jobs accounted for only 18 percent of all net job creation in Canada. Over the 1980s cycle, this was 58 percent, and in the United States during the 1990s it was 75 percent (Figures 3 and 4). Self-employment⁴ accounted for about 58 percent of the net change during the 1990s, only 18 percent during the 1980s, and 6 percent in the United States during the 1990s. The strength of self-employment creation varied from year to year, but it remained strong to the end of the period (Figure 2).

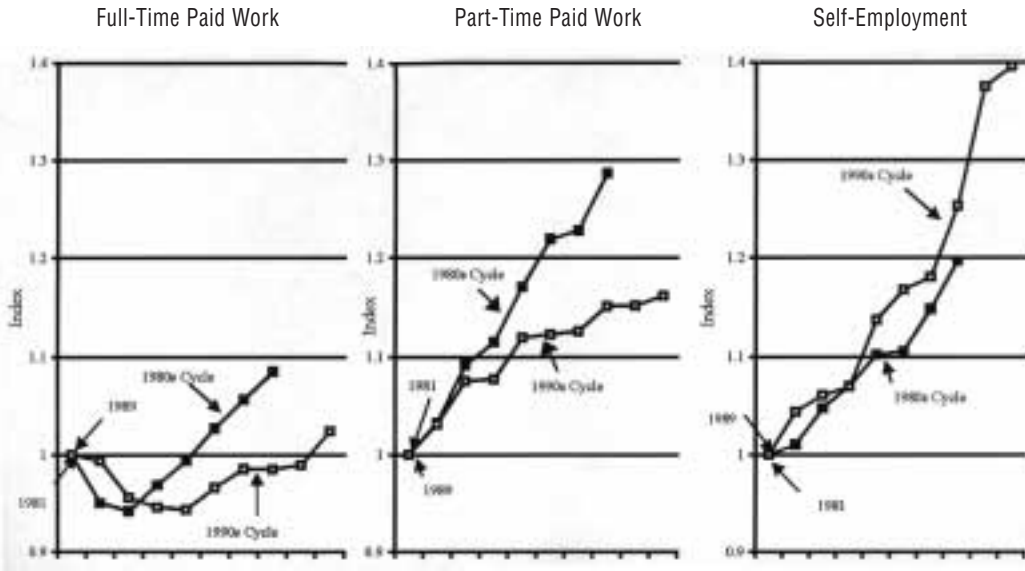
FIGURE 1
Average Annual Growth in GDP and Employment



But is this a fundamental shift in the nature of work in Canada? Is it a manifestation of a fundamental change in the way in which companies engage labour, resulting in increased non-standard or contingent work? It is probably too early to tell. The Organization for Economic Cooperation and Development (OECD) argues that over the long run, the extent to which self-employment growth in Canada outstripped paid employment is highly correlated with labour market slack (the difference between structural and actual unemployment) (OECD 1998). With structural unemployment declining in the 1990s (Sargent 1999), and the aggregate unemployment rate at more or less the same level, labour market slack increased, resulting in more workers turning to self-employment.

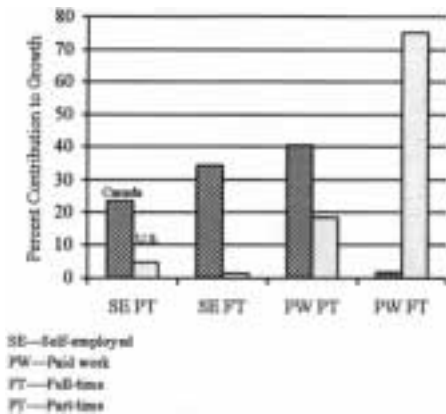
But there are other possibilities. Evidence to date has convincingly suggested that there is little correlation between short-run economic conditions (proxied by either the unemployment rate or full-time paid employment rate) and the tendency to be

FIGURE 2
Index of Employment Growth over the 1980s and 1990s Business Cycles



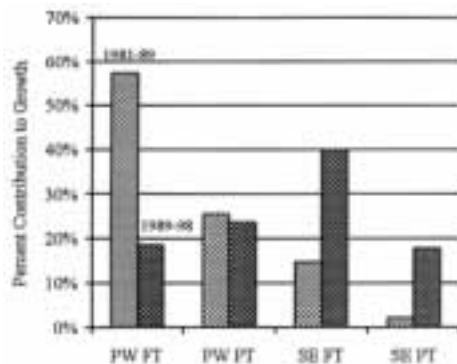
Note: Annual employment growth for each year from 1981-1988 (1980s cycle) and 1989-1998 (1990s cycle) indexed to 1981=1 and 1989=1 respectively.

FIGURE 3
Contribution to Employment Growth, Canada and US, 1989-1998



Note: Using US definition of full-time worker, which is 35 hours or more per week.

FIGURE 4
Contribution to Employment Growth, Canada, 1981-1989 and 1989-98



Note: Using Canadian definition of full-time worker, 30 hours or more per week.

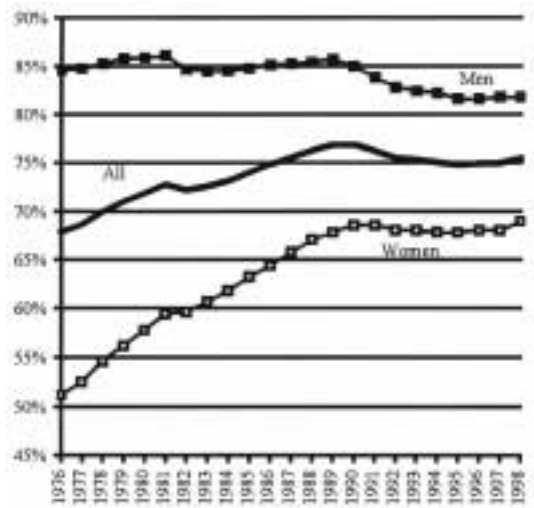
self-employed over the business cycle (Blanchflower and Oswald 1998; Lin, Picot and Yates 1999). Over the cycle, workers in Canada are not increasingly “pushed” into self-employment by deteriorating labour market conditions. However, over a longer period with persistently high unemployment and increasing labour market slack, the “push” hypothesis may be more tenable.

But if this trend represents a fundamental shift in the nature of work, why is it not observed in the US where competitive pressures have presumably been similar? One study concluded that differences in the growth of personal tax rates may be a major reason for the Canada/US difference (Schuetze 1998). Other possible factors not considered in studies to date include differences in the growth of payroll taxes, and the effect of the financing of health care in the United States. There is a very strong incentive for American workers to be in paid jobs, as their medical coverage is financed in this way.

Puzzles remain regarding the reasons for both the rise in self-employment in Canada in the 1990s, and why this was observed in Canada and not the US. Institutional differences between the countries may result in a fundamental shift in the nature of work, which manifests itself in different ways in the two countries. It may also be that the weak economic recovery of the 1990s in Canada drove this phenomenon, and it will reverse itself. Further research is needed.

Labour Force Participation and the Incidence and Duration of Unemployment. The aggregate labour force participation rate has not fully recovered from the decline in the early 1990s, and in the face of poor employment growth, it has remained depressed throughout the decade (Figure 5). Studies have shown that most of this depressed rate is due to declines among young workers and older males. For example, an updated version of Sunter and Bowlby (1998) computes the shortfall in labour force participation during 1998. This shortfall is the difference between the observed values and what one would expect if applying the rates at the last

FIGURE 5
Labour Force Participation Rate



Note: 15-64 year olds.

FIGURE 6
Youth Labour Force Participation

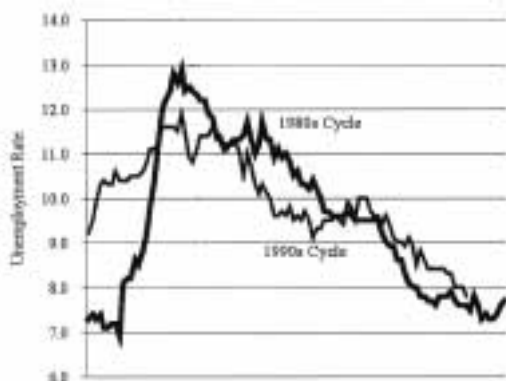


Source: Sunter and Bowlby (1998).

business-cycle peak, 1989. Forty-one percent of the shortfall is among male youth, 30 percent female youth, and 31 percent among males over age 55. Over 70 percent of the aggregate shortfall was among youth, and most of this was due to falling rates among students, and the increased tendency of students to stay in school (Figure 6) (Jennings 1997; Sunter and Bowlby 1998). These participation-rate declines among youth were likely related to deteriorating job opportunities, and the belief that higher levels of education were required to compete in the labour market (this latter point could result in some positive outcomes). While in the aggregate there was little change among prime-aged workers, this masked deterioration among males and improvements among women. Among 25-54 year olds, participation was 36 percent lower in 1998 than one might have expected (based on the patterns of 1989) among men, and 37 percent higher among women.

With somewhat “suppressed” participation, the unemployment rate fell at about the same rate during the 1990s recovery as it did during the 1980s, although it remained high longer during the 1990s

FIGURE 7
Unemployment Rate for the 1980s and 1990s Cycles, Synchronizing Recession Peaks



Note: Monthly unemployment rates from 1980:12 to 1998:12 (1980s cycle) and 1990:11 to 1999:01 (1990s cycle).

FIGURE 8
Incidence and Duration of Unemployment



Note: *Number of persons entering unemployment divided by the labour force.

than 1980s recession (Figure 7). Using a technique outlined by Corak and Heisz (1996) to compute incidence and expected duration of completed spells of unemployment, one observes that duration is marginally higher, and incidence marginally lower in the 1990s (compared to the 1980s); there was not an important change in either component of unemployment (Figure 8).⁵ There is little evidence of a rising level of unemployment in the 1990s cycle compared to the 1980s, although by historical standards, unemployment was high during both of these cycles.

The Decline in Labour Market Outcomes for Workers with a Given Level of Human Capital. Both the 1980s and 1990s witnessed a remarkable supply-side shift in the quality of workers. The human capital embodied in the labour force, both in terms of education and experience, rose. The rapid growth in the educational attainment of workers in particular has been noted by various researchers (e.g., Riddell 1995). The number of degree-holders increased at an annual average rate of 5.4 percent since the mid-1970s (Table 1), while workers with high school or less remained constant. The net result was that the share of the labour force with a university education rose from about 10 percent in 1976 to 18 percent in

TABLE 1
Changes in the Demographic Composition of the Labour Force

	1976-80	Average Annual Growth Rate		
		1981-89	1991-98	1976-98 ¹
(percent growth)				
<i>Men</i>				
Educational Attainment				
High school graduation or less	2.8	-0.6	-2.0	-0.5
Some postsecondary, but less than university	-0.7	4.6	3.0	3.0
University or higher	4.7	4.2	3.9	4.2
Age				
15-24	2.6	-1.7	-1.2	-0.7
25-34	2.9	1.8	-1.3	0.8
35-44	2.8	3.7	2.3	3.0
45-54	0.4	1.1	4.1	2.1
55-64	1.7	0.0	0.2	0.5
<i>Women</i>				
Educational Attainment				
High school graduation or less	5.4	0.7	-2.1	0.5
Some postsecondary, but less than university	2.3	6.2	3.6	4.5
University or higher	9.8	8.2	5.9	7.6
Age				
15-24	3.5	-1.2	-1.1	-0.3
25-34	7.5	4.0	-0.9	2.8
35-44	6.5	6.8	2.6	5.1
45-54	2.7	3.8	5.5	4.2
55-64	4.0	1.4	2.1	2.2
<i>Both</i>				
Educational Attainment				
High school graduation or less	3.8	-0.1	-2.0	-0.1
Some postsecondary, but less than university	0.6	5.4	3.3	3.7
University or higher	6.2	5.7	4.9	5.4
Age				
15-24	3.0	-1.5	-1.2	-0.5
25-34	4.6	2.7	-1.1	1.6
35-44	4.1	4.9	2.4	3.8
45-54	1.2	2.2	4.8	3.0
55-64	2.5	0.5	0.9	1.0

Note: ¹Excludes 1990.

TABLE 2
Labour Force by Educational Attainment

	1976	1981	1989	1990	1998
	<i>(fraction of total)</i>				
<i>Men</i>					
Educational Attainment					
High school graduation or less	0.68	0.68	0.60	0.51	0.41
Some postsecondary, but less than university	0.21	0.19	0.25	0.34	0.41
University or higher	0.11	0.12	0.16	0.15	0.18
Total Men	1.00	1.00	1.00	1.00	1.00
<i>Women</i>					
Educational Attainment					
High school graduation or less	0.67	0.67	0.56	0.50	0.38
Some postsecondary, but less than university	0.25	0.24	0.30	0.37	0.44
University or higher	0.07	0.09	0.14	0.13	0.18
Total Women	1.00	1.00	1.00	1.00	1.00
<i>Both</i>					
Educational Attainment					
High school graduation or less	0.68	0.68	0.58	0.51	0.39
Some postsecondary, but less than university	0.22	0.21	0.27	0.36	0.42
University or higher	0.10	0.11	0.15	0.14	0.18
Total	1.00	1.00	1.00	1.00	1.00

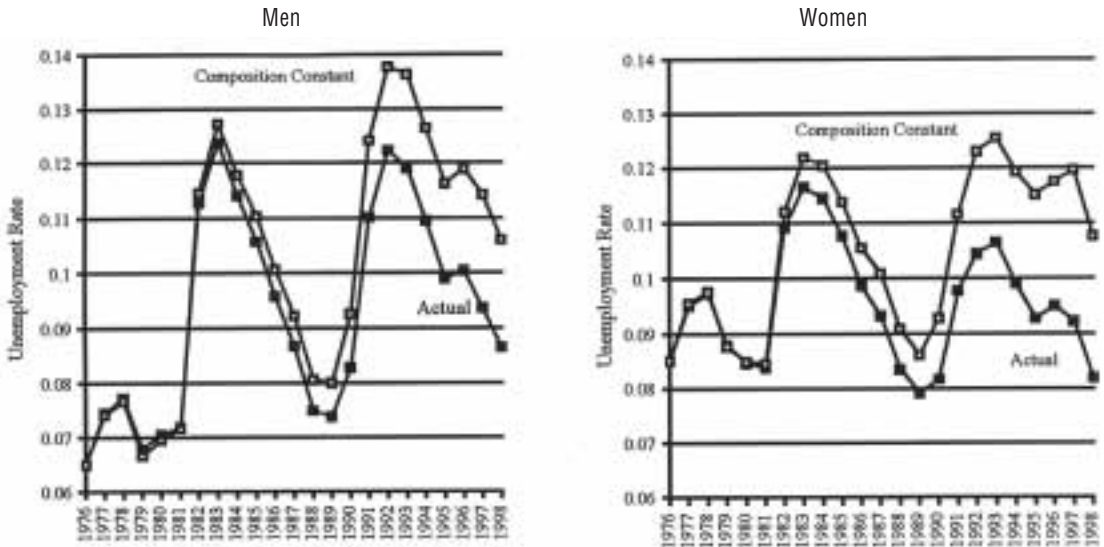
Note: Educational classifications prior to 1989 are not comparable to those post-1989, and hence we include both 1989 and 1990 to provide some idea of the difference.

1998⁶ (Table 2). The experience levels (as proxied by age) of the labour force changed almost as rapidly. The number of mature (45-54) workers rose 4.8 percent per year in the 1990s, while the number of less-experienced workers (under 35) fell at around 1.1 percent per year.

To evaluate labour market performance from a worker's perspective, one would want to know how the market performed for a given level of human capital. Has the unemployment rate increased for

workers with a particular level of experience and education? What about the likelihood of having a job? The aggregate employment and unemployment statistics mask answers to such questions since they do not account for compositional change. Thus, we compute *adjusted* unemployment, paid employment to population, and labour force participation rates that account for the effect of changes in labour force composition.⁷ These adjusted rates reflect the labour market status of workers with a representative level of human capital.

FIGURE 9
Unemployment Rate



Note: 15-64 year olds.

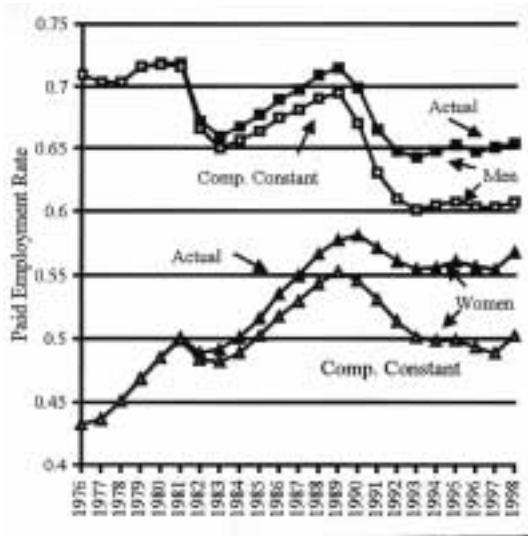
We start with the results for *men*. The performance of the labour market for a male worker with a representative level of human capital deteriorated considerably between the 1980s and 1990s. Between 1988 and 1998 the participation rate was 8 percent lower, unemployment was two percentage points higher, the proportion employed fell by eight percentage points (Figures 9 to 11). In general this deterioration was not unique to any particular group — younger, older, the more or less highly educated. It was observed among all groups. The severity was, if anything, greater among the more experienced, more highly educated males, the very group one would expect to benefit from a labour demand shift that favoured those with greater human capital.

For a female worker with a representative level of human capital (education and experience), labour force participation fell 2.5 points, unemployment

rose 1.6 percentage points, and the paid employment rate fell four percentage points, a substantial decline but smaller than for men. Was this deterioration in labour market outcomes observed across all age/education groups? There was little change in the labour market outcomes presented here for prime-aged, university-educated women. This is consistent with findings from Finnie (1998) on outcomes for university graduates. This is in contrast to men, where declines were significant among the prime-aged and more highly educated. Among women, the very young workers and older workers were most negatively affected.

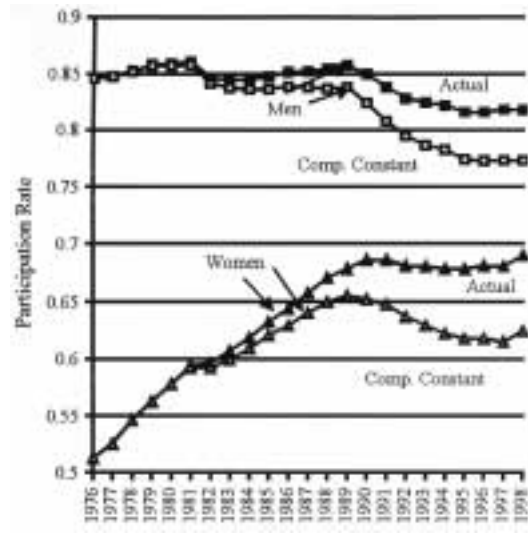
To summarize, while unemployment trends in the 1990s resembled those of the 1980s, a worker with a given level of education and experience saw the unemployment rate rise and likelihood of holding a job decline.

FIGURE 10
Paid Employment to Population Rates



Note: 15-64 year olds.

FIGURE 11
Participation Rate



Note: 15-64 year olds.

Hiring, Labour Turnover and Job Tenure

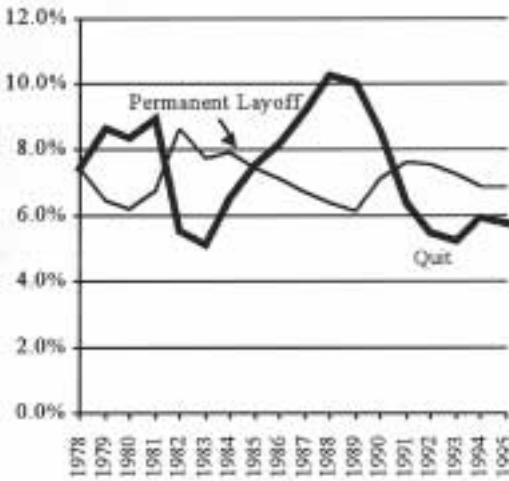
Do Trends in Aggregate Job Stability, Hiring, and Labour Mobility Suggest Fundamental Change in the Nature of Work? The story of the 1990s regarding labour flows appears to be relatively straightforward, at least to the mid-1990s when available data ceases.⁸ Employers reacted to the suppressed paid employment growth by reducing hiring rather than increasing layoffs. Focusing on years with roughly the same elapsed time since the recession ends, 1984-86 and 1994-96, new hires as a proportion of employment were at 20 percent during the mid-1990s, down from 24.4 percent during the mid-1980s (Figure 12). There was little recovery in hiring following the 1990s recession. This lower hiring rate would affect younger workers and new labour force entrants in particular.

Hiring rates were low (relative to the 1980s), but in spite of the concern regarding job loss, the likelihood of being permanently laid off did not increase

FIGURE 12
Hiring and Permanent Separations Rates



FIGURE 13
Permanent Layoff and Quit Rates



during the 1990s cycle, at least to the mid-1990s. This can be seen in the raw data (Figure 13), and holds after controlling for changes in the composition of the workforce (Picot and Lin 1996). In the face of poor job opportunities, quit rates are also lower than in the 1980s. The average quit rate of the 1993-95 period was 5.6 percent, down from 7.4 percent during the 1983-85 period. With lower quit rates, and no substantial rise in permanent layoffs, the likelihood of a worker permanently separating from their firm actually fell in the early 1990s compared to the 1980s (19.3 percent in 1993-95, compared to 22 percent during 1983-85) (Figure 12). Lower hiring and permanent separation rates means that labour mobility fell between the two decades, at least to the middle of the 1990s decade. The rate at which labour was reallocated among firms in response to structural change or inter-firm competition slowed during the 1990s.

Along with lower labour turnover comes increasing job tenure. In spite of the concern regarding job stability, average job tenure⁹ in paid jobs has not

fallen in Canada, and if anything it has increased (Figure 14) (Heisz 1999; Green and Riddell 1996). The expected completed length of a new job rose from an average of 45 months during 1983-86, to 50 months in 1993-96. This is not necessarily a positive sign, as it reflects at least in part the lower quit and hiring rates, which in turn reflect a weak job market. However, it is in contrast to the popular notion that job stability has fallen.

Hence, there has been significant change in labour flows between the 1980s and 1990s. Specifically, the first half of the 1990s saw lower hiring and quit rates, reduced labour mobility, robust aggregate job tenure, and little change in the likelihood of permanent layoff. The change during this period was in the likelihood of getting a job, not in the likelihood of losing it. However, these observations probably do not suggest a structural shift in the way the labour market functions. In light of slow employment growth, these changes are not

FIGURE 14
Average Complete Length of a New Job



particularly surprising, except perhaps for the stability in the permanent layoff rate. Even here, however, it has been shown that in response to changes in employment levels during a recession, firms are much more likely to adjust their hiring rate than the permanent layoff rate, which is the least cyclically sensitive of all labour market flows (Picot, Lin and Pyper 1998).

Job Creation and Destruction

Does the Evidence on Job Destruction and Downsizing Suggest Enduring Change in the Way Firms Manage their Workforces? “Downsizing” reflects the notion that firms restructure their work in such a way as to reduce their workforce and reduce labour costs in order to increase competitiveness. This is not a reduction in employment due to a temporary decrease in product demand. Rather, it is a structural change in the way in which work is conducted, and in what work is conducted, so as to reduce labour requirements. Such action would influence paid employment growth, which was quite weak during the 1990s.

Regular labour force data cannot inform us regarding downsizing since data at the company level are required. Data on job creation and destruction¹⁰ can be generated for the entire economy from the LEAP data set, a longitudinal file of all companies (with employees) in the Canadian economy.¹¹ Between any two years, job creation is the increase in employment observed in companies that are expanding, and job destruction (or loss) the decrease in employment in all companies contracting. The job-loss rate is the total job loss divided by total employment in all firms (expanding and contracting). Net employment change, which is reported by the LFS, is simply the difference between job gain and job loss. The employment growth rate routinely reported is simply the difference between the job creation and destruction rates.

One would expect to see an increase in job destruction in the 1990s relative to the 1980s if downsizing was a significant phenomenon. Such an

increase is observed (Figure 15). Comparing 1984-86 to the 1994-96, two periods that are roughly in the same position in the economic recovery, the job destruction rate is roughly 1.8 percentage points higher in the latter period. The job destruction rate increased in the recession as expected, but did not fall in the recovery of the 1990s as much as expected. A decomposition shows that little of this increase was due to a compositional shift in employment toward industries that have high job destruction rates. Most of the increase was within industries.¹²

One might expect to observe downsizing due to competitive pressures or technological change in much of the commercial economy, perhaps notably the business services/financial sector, where information technologies expanded rapidly, or the manufacturing sector, which is open to foreign competition. In fact, the lion’s share of the increase in job destruction is concentrated in the public services (health, education, and government sectors) and

FIGURE 15
Job Creation and Destruction Rates

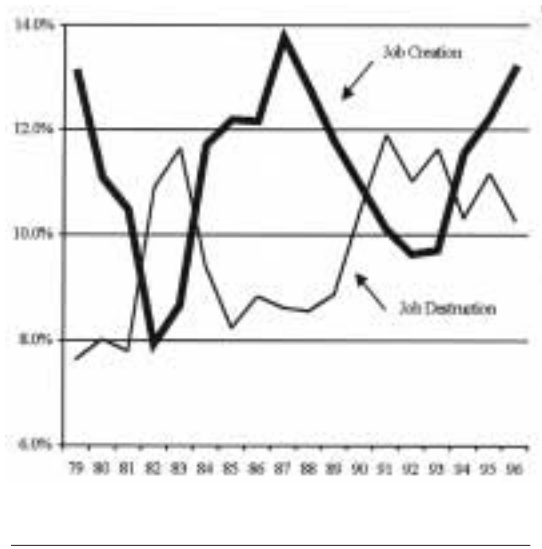


TABLE 3
Change in the Job Destruction Rate by Industry

Industry	Rise in Total Job Destruction Rate Accounted for by each Industry
Primary and construction	-0.01
Manufacturing	0.15
Distributive services	0.18
Business services	0.16
Consumer services	0.67
Public services	0.69
All Industries	1.85 Percentage Points

consumer services industries (Table 3). The public services accounted for nearly 40 percent of the rise in job destruction. Virtually all this was concentrated in the health and government sectors. Consumer services accounted for an almost equal share. In contrast, there was little change in the remainder of the commercial economy. While the general rise in job destruction supports the notion of increased downsizing among commercial firms, its location does not. The majority of the increase in downsizing was observed in the public and consumer services sectors.

Do these data suggest an important change in the way in which firms utilize labour? Did firms downsize at an enhanced level because of increased competition? This may be true for the consumer services sector, but there is little evidence that it holds in the rest of the commercial economy. Overall the increased level of job destruction played a significant role in the slow employment growth of the 1990s, but it was not a widespread phenomenon covering the commercial sector. The downsizing of organizations in the health and government sector does support the notion of a fundamental shift in these sectors at least. Finally, is the increase in job destruction reconcilable with the lack of an increase in layoffs? As noted earlier, firms adjusted by decreasing hiring rather than increasing layoffs in the

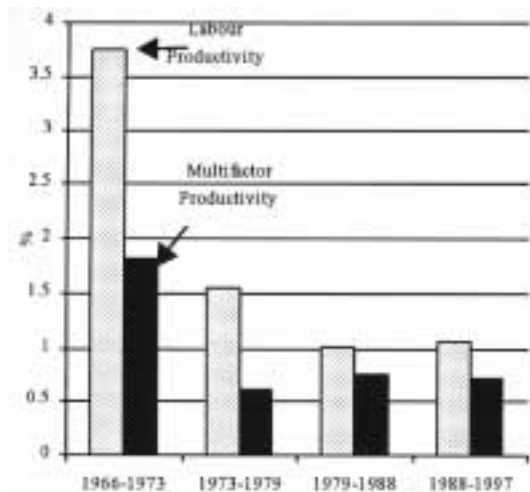
1990s compared to the 1980s. This could hold in downsizing firms as well.

If Productivity Increased at the Same Rate During the 1990s as 1980s, Why the Slowdown in Income?

A comparison of macro-level labour market trends between the decades would not be complete without focusing on productivity and market earnings. Productivity increased at about the same rate during the 1980s and 1990s cycles. A recent release by Statistics Canada suggests that commercial sector productivity growth has been in the same order of magnitude during the 1990s as it was during the 1980s, and in fact has changed little since the dramatic slowdown of the early 1970s (Figure 16). This holds for both labour productivity growth (at an annual average growth of around 1 percent), and multi-factor productivity (around 0.6 percent). More detail can be found in Baldwin and Wells (1999).

However, GDP per capita, an aggregate measure of wealth creation, has slowed in the 1990s, in spite

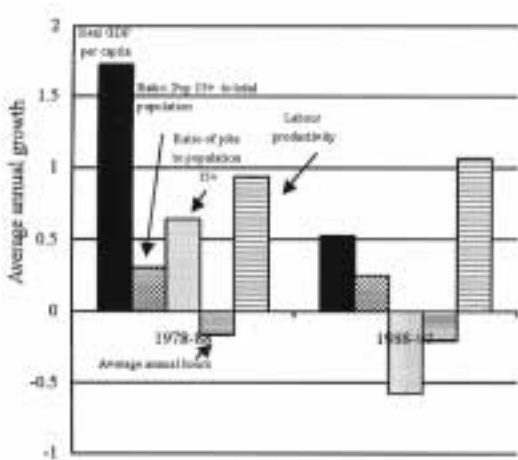
FIGURE 16
Growth in Labour Productivity and Multi-factor Productivity



Source: Statistics Canada.

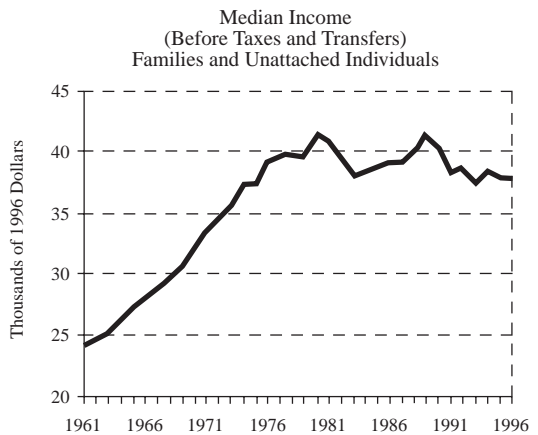
of the stable productivity growth; it grew at an annual average 1.9 percent over the 1981-89 cycles, and 0.7 percent during the 1989-98 cycle. In an accounting sense one can decompose GDP per capita in the following way: $(GDP/pop) = (pop_{15+}/pop) * (emp/pop_{15+}) * (hours/emp) * (GDP/hours)$. In other words, taking the log of both sides of the equation, growth in GDP per capita is the sum of growth in: (i) the share of the population 15+, (ii) the employment-population ratio, (iii) hours worked per employee, and (iv) labour productivity. Hence, even though the growth in labour productivity was similar in the two periods, the growth in the employment-population ratio in particular was depressed in the 1990s compared to the 1980s, resulting in lower growth in GDP/capita. (Figure 17; See Baldwin and Wells 1999 for details). While output per hour worked has changed little, the proportion of the population working has fallen marginally over the cycle (compared with expansion in the 1980s). The result is that the growth in GDP per capita slowed in the 1990s.

FIGURE 17
Reconciliation of Real GDP per Capita to Labour Productivity for the Two Last Business Cycles – Overall Canadian Economy



Source: Baldwin and Wells (1999).

FIGURE 18
Median Family Market Earnings



Slow growth in real GDP per capita is reflected in stagnant family earnings growth. Measures from household data suggest little improvement, and perhaps some deterioration, in family earnings during the 1990s. As a welfare measure, median market earnings at the family level indicate stability throughout the 1980s and perhaps a marginal decline during the 1990s (Figure 18).

SUMMARY OF FINDINGS AND DISCUSSION

While there was a remarkable shift in job creation during the 1990s from full-time paid jobs to own-account self-employment, there is too little available research to assess whether this is an enduring change in the nature of work in Canada. It may be a reaction to the very slack labour market of the 1990s, or it may be driven by a number of “institutional” causes (e.g., personal and payroll taxes) discussed in the paper along with compositional shifts in the labour force. Consistent with very low rates of full-time job creation, participation rates have fallen (among the young in particular). And with the suppressed participation, unemployment fell at about the same

rate during the 1990s recovery as the 1980s. Furthermore, there was little increase in the incidence or duration of unemployment spells. There is little evidence of the “ratcheting up” of unemployment during the 1990s compared to the 1980s cycle that is often referred to in discussions of the 1990s. But by historical standards it remained very high during both periods.

The story regarding labour flows appears to be straightforward. Employers’ response to low employment growth appeared to be more on the hiring than layoff side, as hiring rates were low during the 1990s, but the likelihood of permanent layoff was no higher than during the 1980s. Consistent with poor job opportunities, quit rates were low, which meant that labour mobility actually declined in the 1990s as compared to the 1980s. The reallocation of labour among companies due to structural change or because of inter-firm competition was lower during the 1990s than 1980s recovery. There is little support here for a notion of rapid structural change in which workers are reallocated and displaced at increasing rates. Others have also found little evidence of rising industrial structural change (Gera and Mang 1997; Sargent 1999).

With a lower probability of a worker separating from the firm comes increased average job tenure, in spite of concerns regarding job stability during the 1990s. This is not necessarily a positive outcome, however, as it is driven to a great extent by the weak job market and the lower quit rate.

There is evidence from the job destruction data that company downsizing during the recovery period was greater in the 1990s than the 1980s. This higher level of job destruction played a role in the slow employment growth. However, much of this increased job destruction was located in the public and consumer services sectors. This is not completely consistent with the notion that increased competition (often international) or technological change was driving commercial firms to downsize to a greater extent. One might have expected to see

more evidence of this change across the entire commercial economy.

The latest productivity data from Statistics Canada (as of this writing, Spring 1999) suggests productivity growth in the 1990s was very similar to that seen since the slowdown of the 1970s. One does not see a rapid increase driven by increased use of information technologies or other changes in firms. However, one also does not see a continuous deterioration in productivity growth over the 1980s and 1990s. The growth in income of Canadians as measured by GDP/capita did slow in the 1990s, in large part because of the low growth in the proportion of Canadians working. Median family earnings also showed no improvement in the 1990s.

However, the above macro-level results do not take into account important supply-side shifts, notably the increase in the quality of the Canadian labour force. When focusing on changes in macro-level trends for a representative worker with a fixed level of education and experience, we find substantial deterioration in the labour market of the 1990s. After controlling for education and experience (age), labour force participation falls by five percentage points between the late 1980s and 1990s, unemployment increases two percentage points, and the likelihood of being employed in paid work falls by five percentage points. In an *absolute* sense, the expected labour market outcomes for a worker with a given level of human capital have fallen during the 1990s, particularly among males.

NOTES

This paper represents the views of the authors and does not necessarily reflect the opinions of Statistics Canada. The paper is available on Internet: (www.statcan.ca).

¹The quantitative data to assess such effects on a broad scale simply do not exist, although with the implementation of the Workplace and Employee Survey by Statistics Canada in 1999, it is hoped that this gap will be at least partially filled. Smaller scale surveys (e.g., Betcherman and McMullen 1986) and qualitative studies of the inter-

action of “hard” technologies (capital investment) and “soft” technologies (organizational structures and human resource practices) have been done (e.g., Osberg, Wien and Grude 1995).

²Notably, changes to the EI program could have a significant effect on labour market performance, Sargent (1998) constructed an “EI disincentives index” for Canada, and showed that disincentives to work embodied in the EI system fell through the 1990s, and by 1997 were roughly back to the level observed around the 1971 reform.

³We focus on 1981-89 and 1989-98 in much of this analysis. From an annual perspective, 1981 and 1989 were years of peak labour market performance. Furthermore, when making comparisons between decades, we attempt to focus on years that are comparable. The recessions ended in 1982 and 1992 and we compare years that are equally spread in time from those years. For example, we compare 1998 to 1988.

⁴Self-employment is not measured on a comparable basis in the official statistics of Canada and the United States. In the US, incorporated self-employed are excluded, and in Canada they are included. Here we render the data comparable.

⁵As Sargent (1999) points out, data on uncompleted spells of unemployment from the Labour Force Survey (LFS) show a more substantial increase in unemployment duration between the 1980s and 1990s. The difference is due to underlying methodologies. The approach used here computes expected duration of new spells, and the LFS reports durations of all existing spells. The latter approach oversamples long spells and results in an upward bias in duration. Furthermore, a marginal change in the average length of a new spell can cause a more substantial change in the average duration of the stock of in-progress spells as the stock of unemployed becomes more heavily weighted with workers in the midst of long spells. From 1994 to 1996 the average unemployment spell lasted 4.1 months compared to 4.0 months a decade earlier. Meanwhile, the average length of time workers (sampled at a point in time) have been unemployed rose from 4.9 to 5.7 months. Thus, while the proportion of new unemployment spells that go on to become long spells is not substantially longer in the 1990s, at any point in time the average unemployed worker is more likely to be in the midst of a long spell.

⁶A change in the educational classification in the LFS in 1989 makes comparisons before and after that year difficult. However, estimates of degree-holders past 1989 are biased downwards compared to those prior to 1989.

⁷As an example, let us consider the unemployment rate

The unemployment rate (UR) at time t is equal to the weighted sum of group-specific unemployment rates in that period (UR_t) where the weights equal the share of the labour force accounted for by group i (s_i). Changes in the unemployment rate therefore derive from changes in the composition of the labour force and changes in group-specific unemployment rates. Holding s_{it} constant at $t=1$ levels we can construct an *adjusted* unemployment rate that controls for the change in the human capital composition of the labour force. We define 30 demographic subgroups (i) stratified by age (five groups), educational attainment (three groups), and gender. The change in educational classification in the LFS in 1989 requires that we exercise caution in comparing post-1989 data with earlier years. This should not greatly affect our results, since our analyses make use of rates. The changes in classification will affect the level of, say, unemployment (U) with degrees. But it affects the level of the labour force with degrees in a similar manner. Hence, when calculating the rate (U/LF), the changes will tend to cancel out, leaving the *rate* unaffected, although the levels of both the numerator and denominator will have been affected in likely similar ways. Visual inspection of the time series data suggests that this “cancelling-out” took place, with changes between 1989 and 1990 appearing to stem only from cyclical factors, not changes in the classification system. Nevertheless, we adjusted post-1989 data to test the sensitivity of our results to this assumption. We found that if anything, our results are strengthened by this. In this study we present only *unadjusted* results.

⁸Labour-flow data come from the Longitudinal Worker File (LWF), an administrative data source developed by the Business and Labour Market Analysis Division of Statistics Canada. This file relies on taxation and EI data, and lags the reference period by two years or more. The LWF gives quits, permanent layoffs, temporary layoffs, and other separations at the company level. Hires are derived from the same source at the economy or industry level, and represent replacement and expansionary hiring. These flows measure full- and part-time jobs. See Statistics Canada (1996) for more detail.

⁹Average job tenure is measured following Heisz (1999). This approach measures the average complete length of time a worker just starting a new job can expect to remain with that employer. It measures complete spell lengths and avoids several biases commonly associated with alternate measures of job tenure such as the one regularly reported by the LFS.

¹⁰The concept of job creation and destruction was pioneered by Birch (1987); Leonard (1987); and Davis, Haltiwanger and Schuh (1993) in the United States, and Baldwin, Dunne and Haltiwanger (1994) in Canada.

¹¹LEAP is the Longitudinal Employment Analysis Program, a data set developed and maintained in the Business and Labour Market Analysis Division of Statistics Canada.

¹²Job destruction figures increase job losses from continuing firms that are contracting and firms that die. Likewise, job creation includes gains from births and continuing firms that are growing. In practice, most creation and destruction occurs at continuing firms. Furthermore, cyclical changes are derived almost entirely from growth and destruction at continuing firms, not from firm birth and death.

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