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**A Comparison of Canadian and U.S.
Labour Market Performance,
1989-2000**

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A Comparison of Canadian and U.S. Labour Market Performance, 1989-2000¹

The gap between Canadian and U.S. living standards widened considerably in the 1990s. Americans, on average, were 16 per cent better off in terms of real personal income per capita in 2000 than in 1989, while Canadians experienced a 5 percent increase in real incomes. The thesis of this paper is that this divergence to a large degree, particularly in the first half of the 1990s, has its roots in part in the different labour market and productivity performance of the two economies and that Canada's inferior income performance reflected cyclical factors associated with poor macroeconomic policy management rather than structural factors.

The paper is divided into three main parts. The first section examines general economic and labour market developments in Canada and the United States in the 1989-2000 period, looking at trends in real income, population, labour force, employment, unemployment, output and productivity. The second section looks at the common trends in the two labour markets, including the concentration of employment growth in services and in managerial and professional occupations; growing wage inequality; and the downward trend in the non-accelerating inflation rate of unemployment. The third section examines divergent trends in the two labour markets, including the widening of the unemployment rate gap; the emergence of a participation rate gap; and greater self-employment and part-time employment growth in Canada.

Economic and Labour Market Developments in Canada and the United States, 1989-2000

Real Income Trends

The most relevant measure of income trends is personal income per capita measured in real terms (excluding inflation). In 2000, per capita personal income in Canada, expressed in 1992 Canadian dollars, was \$23,584, up 4.6 per cent from the level of \$22,557 in 1989 and 7.6 per cent higher than the \$21,915 in 1996.² During the second half of the 1990s, Canadians enjoyed a 1.9 percent average annual increase in living standards. In the United States, per capita personal income, expressed in 1992 U.S. dollars, was \$24,494 in 2000, up from \$21,042 in 1989 and \$22,055 in 1996. Americans on average enjoyed a 16.4 per cent total increase or 1.39 per cent average annual increase in living standards for the 1989-00 period and an average annual increase of 2.7 per cent during the second half of the 1990s.

¹ This paper is an updated and revised version of "A Comparison of Canadian and U.S. Labour Market Performance in the 1990s" in *Vanishing Borders: Canada Among Nations, 2000* edited by Maureen Molet and Fen Hampson (Toronto: Oxford University Press, 2000).

² Supporting Tables for the data presented in the paper are posted on the CSLS website under reports (www.csls.ca)

Table 1

Trends in Real Per Capita Income, 1989-2000
(average annual rate of change in real per capita terms)

	Real GDP Per Capita	Personal Income	Disposable Personal Income
1989-2000			
Canada	1.35	0.41	-0.02
U.S.	2.20	1.39	1.08
Canada-U.S.	-0.85	-0.98	-1.10
1989-1996			
Canada	0.28	-0.41	-0.84
U.S.	1.43	0.67	0.58
Canada-U.S.	-1.15	-1.08	-1.42
1996-2000			
Canada	3.26	1.85	1.43
U.S.	3.56	2.66	1.96
Canada-U.S.	-0.30	-0.81	-0.53

Source: Statistics Canada, Bureau of Economic Analysis, and Bureau of Labor Statistics.
Data for U.S. for 2000 are obtained from the BEA, (<http://www.bea.doc.gov/bea/dn/dpga.txt>).
Personal income and personal disposable income values are deflated using the CPI.

International comparisons of real income or living standards levels are more difficult than comparisons of growth rates (which use domestic or own-country currencies) because they require the use of purchasing power parity exchange rates, which are subject to a margin of error. According to Statistics Canada, the bilateral Canada-U.S. purchasing power parity in 1992, the base year, was 1.23 Canadian dollars per U.S. dollar (\$0.813 U.S. per Canadian dollar). This means that per capita personal income in Canada in 1989 was 87.2 per cent of the U.S. level, but by 2000 it had fallen to 78.3 per cent (Chart 1).

A second definition of living standards is per capita personal disposable income, or income after taxes. According to this definition, Canada's relative standard of living fell even more in the 1990s, as real per capita disposable personal income declined at a 0.02 per cent average annual rate between 1989 and 2000, compared to a 1.08 per cent average annual increase in the United States. The decline in personal disposable income in Canada was concentrated in the first half of the 1990s, falling at a rate of 0.84 per cent per year. The gap between growth in personal income and personal disposable income is explained by the rising proportion of personal income going to taxes in the 1990s (Chart 2).

In absolute terms, personal disposable incomes in Canada fell from 79.3 per cent of the U.S. level in 1989 to 71.2 per cent in 1996 and then to 70.3 per cent in 2000. One limitation of this definition of living standards is that it only captures the private consumption possibilities, as it excludes the provision of public services such as health and education that are financed with tax revenues. Individuals are not necessarily worse

off when tax increases lower disposable income but result in a greater supply of public services.

A third definition of living standards is real GDP per capita. According to this measure, living standards in Canada advanced by 1.35 per cent per year in the 1990s, compared to 2.20 per cent in the United States. Real per capita GDP growth in Canada was thus considerably faster than personal income growth. This discrepancy is largely explained by the greater increase in the Consumer Price Index (CPI), which is used to deflate personal income, than in the GDP deflator, which is used to deflate GDP. The CPI grew at a 0.52 per cent faster pace than the GDP deflator (2.24 per cent versus 1.72 per cent) between 1989 and 2000 because of the fall in the price of investment goods, driven by very large price declines in computers. Slightly more rapid nominal GDP growth than personal income growth also accounted for some of the discrepancy between real GDP per capita and real personal income per capita.

The rate of increase in per capita real GDP is determined by the rate of change in the number of workers in relation to the total population, and the amount of output each worker produces or worker productivity. This former term can in turn be decomposed into the ratio of the working age population to the total population, and the employment rate, that is the ratio of employment to the working age population. The employment rate is a function of the labour force participation rate and the unemployment rate.

Table 2

Sources of GDP Per Capita Growth in Canada and the United States, 1989-2000
(average annual rate of change)

	Canada	United States	Canada-U.S.
1989-2000			
GDP per capita	1.35	2.20	-0.84
Output per Worker	1.20	1.88	-0.67
Employment/Total Population	0.15	0.31	-0.16
Working Age Population/Total Population	0.16	0.10	0.06
Employment/WAP	-0.11	0.22	-0.33
1989-1996			
GDP per capita	0.30	1.43	-1.13
Output per Worker	1.00	1.34	-0.34
Employment/Total Population	-0.69	0.09	-0.78
Working Age Population/Total Population	0.18	0.04	0.14
Employment/WAP	-0.87	0.05	-0.92
1996-2000			
GDP per capita	3.22	3.56	-0.33
Output per Worker	1.56	2.83	-1.27
Employment/Total Population	1.64	0.71	0.93
Working Age Population/Total Population	0.12	0.19	-0.07
Employment/WAP	1.23	0.51	0.72

In Canada, the 1.32 per cent average annual increase in real GDP per capita in the 1989-00 period can be decomposed into a 1.16 per cent rise in output per worker and a slight increase of 0.16 per cent in the share of employment in the total population. The stability of this latter variable reflects two offsetting trends, the increasing share of the population of working age (0.27 per cent) and the decreasing employment-population ratio (-0.11 per cent) arising from the falling labour force participation rate (-0.18 per cent).

In the United States, the 2.20 per cent average annual rate of increase in real GDP per capita over the 1989-00 period can be decomposed into a 1.88 per cent increase in output per worker and a 0.31 per cent increase in the proportion of the total population at work. This latter term in turn reflects a 0.10 per cent increase in the relative importance of the working age population and a 0.22 increase in the employment rate or employment/working age population ratio. The decline in the unemployment rate and the rising labour force participation each contributed equally to the growth of the employment rate.

Canada experienced 0.88 percentage points slower real GDP per capita growth in the 1990s relative to the United States (2.20 per cent versus 1.32 per cent per year). The difference was greater in the first half of the decade with Canada experiencing a 1.13 percentage point slower real GDP per capita growth than the United States. During the 1996-00 period however, this differential fell to 0.43 percentage points. About one third of the 1989-00 real GDP per capita differential was due to the relative worsening of labour market conditions in Canada (-0.33 points) and three fourths was due to slower productivity growth (-0.72 points). More favourable trends in demographic structures in Canada offset somewhat (0.17 points) these negative developments for trends in relative living standards.

Table 3

Labour Market Developments in Canada and the United States, 1989-2000
(average annual rates of change unless otherwise indicated)

	Canada	U.S.	Canada	U.S.	Canada	U.S.
	1989-2000		1989-1996			
Working Age Population	1.37	1.08	1.40	1.05	1.33	1.12
Participation Rate	-0.18	0.10	-0.54	0.07	0.46	0.14
Labour Force	1.19	1.18	0.85	1.13	1.80	1.27
Employment	1.26	1.30	0.52	1.11	2.59	1.64
Unemployment Rate (total percentage point change)	-0.73	-1.26	2.09	0.13	-2.82	-1.39
Employment-Pop Ratio	-0.11	0.22	-0.87	0.05	1.23	0.51
Real Output	2.48	3.20	1.52	2.46	4.18	4.51
Output Per Worker	1.20	1.88	1.00	1.34	1.56	2.83

In the 1989-1996 period, almost all of Canada's decline (0.9 of 1.1 points) in GDP per capita growth relative to the United States can be accounted for by the relative fall in the employment-population ratio. Only 0.3 points of the relative decline in this measure of living standards are explained by lagging productivity growth.

The situation was completely reversed in the 1996-2000 period. While Canada's per capita real GDP growth continued to lag that of the United States (0.4 points), the employment-population ratio advanced at 0.7 points faster rate in Canada, making up the shortfall explained in the first half of the decade. On the other hand, Canada's productivity growth rate trailed that of the United States by 1.4 points per year because of the strong acceleration of the productivity growth south of the border.

Working Age Population³

The working age or source population is defined as the population 15 years old and over in Canada and 16 years old and over in the United States. In Canada in the 1989-2000 period, the source population advanced at a 1.4 per cent average annual rate, compared to 1.1 per cent in the United States (Chart 4). Our higher population rate growth reflected the greater relative importance of immigration in Canada than in the United States (average annual gross immigration represented 0.8 per cent of the total population over the 1990-98 period in Canada compared to 0.4 per cent in the United States).

Annual variation in source population growth in Canada was also largely due to variation in immigration levels, with population growth peaking at 1.5 per cent in 1990-92 period when immigration levels averaged 250,000 per year. With the decline in immigration levels after the early years of the decade, source population growth fell off to 1.3 per cent by 2000.

Participation Rates

The participation rate is defined as the proportion of the working age population who are in the labour force, that is either employed or unemployed and looking for work. The participation rate in Canada fell significantly in Canada in the 1990s. From a peak of 67.2 per cent at the 1989 cyclical peak, it hit a trough of 64.7 per cent in 1996 before rebounding somewhat to 65.9 per cent in 2000. The average annual rate of decline over the 1989-00 period was 0.2 per cent.

In contrast, the participation rate in the United States rose over the decade. While it initially declined from 66.5 per cent in 1989 to 66.2 in 1991, it then advanced slowly, reaching 67.2 in 2000 for an average annual growth rate of 0.1 per cent.

³ The data sources of all data used in this paper, unless otherwise specified, are the Labour Force Survey for Canada and the Current Population Survey for the United States.

Labour Force

Labour force growth is determined by the growth of the working age population and participation rate. Labour force growth in Canada (Chart 5) averaged 1.2 per cent per year in the 1990s (1.4 per cent source population growth and -0.2 per cent participation rate growth). It was much weaker in the first half of the decade when the participation rate experienced large declines. Labour force growth picked up after 1996 when the participation rate leveled out and began to regain lost ground, averaging a strong 1.8 per cent per year.

Labour force growth in the United States was nearly identical to that in Canada in the 1990s at 1.2 per cent per year, but the sources of the growth were somewhat different, with working age population contributing 1.1 per cent and participation growth 0.1 per cent.

Employment

Employment growth averaged 1.3 per cent per year in Canada in the 1990s (Chart 6), with great variation within the decade following the business cycle. In the early years of the decade (1991 and 1992), employment fell in absolute terms because of the recession. In the 1993-96 period it showed modest annual gains in the 0.8 to 2.0 per cent range. It has only been since 1996 that employment growth has been consistently strong, averaging 2.6 per cent per year.

In the United States, employment growth over the decade at 1.3 per cent per year was nearly identical to that of Canada, but the pattern of growth differed from that experienced in Canada. The decline in employment was smaller in the United States in the early 1990s reflecting the less severe nature of the recession. Equally, the pace of employment growth during the recovery and expansion of the 1993-97 period was stronger, again reflecting the more robust economic growth. Only from 1998 to 2000 has the United States been outperformed on the employment front, with the rate of increase at 1.4 per cent per year, over one percentage point slower than in Canada (2.7 per cent per year). The dwindling of the supply of unemployed workers may in part account for this deceleration of U.S. employment growth from the 1.9 per cent pace of the 1994-97 period.

Unemployment Rate

The unemployment rate in Canada in the 1990s averaged 10.0 per cent, the highest decade average since the 1930s, but there has been much cyclical variation within the decade (Chart 7). The rate rose from a low of 7.6 per cent at the peak of the last business cycle in 1989 to a high of 11.4 in 1993. It declined in 1994 and 1995 as the recovery progressed. But this downward trend stopped in 1996 when the unemployment rate actually rose, reflecting the slowdown in the pace of economic growth that year. Since then the unemployment rate has continued its downward track as the economic expansion has picked up, reaching 6.8 per cent in 2000, below the pre-recession rate of 7.6 per cent in 1989.

Changes in the unemployment rate reflect the relative rates of growth of the labour force and employment, with the rate rising when the former exceeds the latter and vice versa. The slight decline of the unemployment rate over the 1989-00 period in Canada (but not within the period) reflects the slightly faster employment and labour force growth (1.2 and 1.3 per cent per year respectively).

The unemployment rate in the United States in the 1989-00 period averaged 6.1 per cent, below that experienced in the 1980s and 1970s, but above that of the 1950s and 1960s. The U.S. rate rose from a cyclical low of 5.3 per cent in 1989 to peak at 7.5 per cent in 1992 because of the recession of the early 1990s. With strong economic growth it then started a steady and continuous decline, reaching 4.0 per cent in 2000, the lowest rate since 1969. The 1.3 percentage point decline in the unemployment rate between 1989 and 2000 was due to the slightly faster pace of employment growth over the period (1.3 versus 1.2 per cent)

Employment/Population Ratio

The employment/working age population ratio or employment rate is the proportion of the working age population that is employed. This ratio plummeted in Canada in the early 1990s, falling from 62.1 per cent in 1989 to 58.0 per cent in 1993, because of the falling labour force participation and the rising unemployment. By 2000, it had rebounded to 61.4 per cent due to the return of the unemployment rate to the pre-recession level and the rising participation rate. But it was still slightly below the 1989 level since the participation rate was still this amount below the pre-recession level.

In the United States, the employment rate fell in the early 1990s from 63.0 per cent in 1989 to 61.5 per cent in 1992 and then recovered strongly with the fall in the unemployment rate and rising labour force participation, reaching 64.5 per cent in 2000. By 2000 there was a 3.1 per cent gap in employment rates between the two countries, compared to only 0.6 points in 1989.

Output

Real GDP advanced at a 2.4 per cent average annual rate in Canada in the 1990s (Chart 8). The decade started out very poorly with 0.3 per cent growth in 1990 and a 1.6 per cent decline in 1991, and a weak recovery in 1992 and 1993. The economy picked up steam in 1994, but faltered in 1995 and 1996. Only in 1997 did sustained robust economic growth emerge with increases averaging 4.1 per cent per year over the 1996-00 period.

The United States enjoyed annual average growth of 3.2 per cent over the 1989-2000 period. It also experienced a recession in the early years of the decade, albeit more shallow than experienced in Canada. Its recovery from the recession was also slightly more robust. Since 1996 economic growth has averaged a very strong 4.5 per cent per year.

Productivity

Productivity, defined as output per person employed in the aggregate economy, rose at a 1.2 per cent average annual rate in Canada in the 1989-2000 period (Chart 9). Productivity growth was weak in the early years of the decade because of the recession, but picked up in the second half of the decade growing at a rate of 1.4 percent when stronger economic growth resumed.

In the United States, productivity advanced at a 1.9 per cent average annual rate in the 1990s. Between 1989 and 1996 it advanced at a tepid 1.3 per cent average annual rate. Since 1996, it has picked up to a strong 2.8 per cent rate. This development is seen by many observers as evidence of an upward structural shift in trend productivity associated with the information technology revolution. Canada has not yet seen this burst in productivity growth, which may in part account for the stronger employment growth.

Common Trends in the Canadian and U.S. Labour Markets

This section of the paper identifies common trends in the Canadian and U.S. labour markets in the 1990s.

Concentration of Employment Growth in Service Industries

In both Canada and the United States, employment creation has been highly concentrated in the service sector. Between 1989 and 2000, employment in services-producing industries in Canada increased 16.3 per cent and accounted for 94.0 per cent of net employment growth. Employment in goods-producing industries only rose 1.9 per cent. In the United States, employment in service-producing industries grew 25.1 per cent over the 1989-99 period accounting for 100 per cent of net employment growth.

This common pattern reflects the influence of a number of factors. First, and most important, it is due to intrinsic limits on productivity improvements in many service sector industries due to the personal nature of the services, resulting in slower productivity growth in the service sector relative to the goods sector. For a given rate of output growth, employment growth is thus greater in the service sector than the goods sector. A second factor may be the greater income elasticity of services than goods, which with real income gains leads to faster demand growth for the output of service industries. A third less important factor may be the contracting out of service-type functions (e.g. legal services) previously performed within goods industries to firms in the service sector. The concentration of employment gains in the service sector represents an employment shift comparable to the fall in the share of employment in agriculture over the 1940-70 period, a structural development that also affected both countries.

Concentration of Employment Gains in Managerial and Professional Occupations

Managerial and professional occupations have accounted for the lions's share of employment gains in the two countries. Between 1989 and 2000 in Canada, employment in managerial and professional occupations (defined as management occupations;

professional occupations in business and finance; natural and applied sciences and related occupations; professional occupations in health; and occupations in social science, education, and government service; and occupations in art culture, recreation and sport) rose 19.6 per cent and accounted for 61.8 per cent of net employment growth. Their share of total employment rose from 26.0 per cent to 29.5 per cent.

In the United States, employment in managerial and professional occupations rose 33.1 per cent over the same period, and accounted for 48.6 percent of net employment growth. Their share of total employment rose from 28.2 per cent to 31.5 per cent.

This common pattern is explained by the increasing importance in a knowledge-based economy of the skills possessed by managers and professionals and by the declining importance of blue-collar occupations made redundant by skill-biased technical change.

Increased Labour Market Inequality

The United States has experienced a marked increase in wage or earnings inequality in the 1990s particularly in the first half of the decade, and Canada has experienced the same trend to a lesser degree. This development has resulted in a significant increase in total income inequality in the United States, but not in Canada due to the offsetting influence of government transfers.

The causes behind the increase in labour market inequality in North America are still poorly understood. Explanations include skills-biased technological change; increased competition from low wage countries; deregulation; reduced value of the minimum wage; and lower unionization. Whatever their relative importance, it appears that these factors have been operating in the same direction in both countries to increase inequality.

Downward Trend in the NAIRU

The most surprising development in the U.S. economy in recent years has been the fall in the unemployment rate without a rise in inflation. In 2000 the unemployment rate had reached a 24 year low of 4.0 per cent yet the rate of increase in the CPI was still below 3 per cent. In the past, inflation has picked up at a higher rate of unemployment, a rate that economists call the non-accelerating inflation rate of unemployment (NAIRU). The conventional wisdom was that this unemployment rate was around 6 per cent.

There is a vigorous academic debate whether the current situation is temporary in nature or represents a permanent development. Those that take the first view argue that positive supply shocks, such as low commodity prices, account for the failure of low unemployment to ignite wage and price pressures; and that if the current unemployment rate persists, we will soon see a resurgence of inflation (Gordon, 1998). Others argue that the world, and more particularly, labour markets, have changed and the NAIRU estimates based on past experience are no guide to future developments. The changes that have led to a decline in the NAIRU include:

- an upward shift in trend productivity due to information technologies which has reduced the rate of increase in unit labour costs for a given increase in wages;
- the aging of the labour force, with older workers having lower unemployment rates than younger workers;
- better labour market matching and hence lower frictional or job search unemployment due to the proliferation of internet-based labour exchanges;
- the perception of increased job insecurity on the part of workers, which dampens wage expectations;
- reduction in the social safety net (e.g. the abolition of Aid to Families with Dependent Children Act [AFDC] in 1996), which has increased the supply of workers seeking employment and is keeping wage increases down;
- the continued decline of union coverage, which have tempered wage demands; and
- increased international competition due to globalization, which has limited the ability of firms to raise prices.

In Canada, there has been less debate on the NAIRU as the unemployment rate, at least until recently, has not gone below the standard NAIRU estimate of around 7.5 per cent. Now that the unemployment rate had dropped below 7 per cent, the issue of whether the NAIRU has fallen takes on a new urgency for policy makers. A case can be made that the forces outlined above which may have reduced the NAIRU in the United States have also been at play in Canada (with the possible exception of reduced union coverage and the substitution of UI/EI reform for welfare reform). Hence the current NAIRU in Canada may be 5-6 per cent range or even lower.

Divergent Trends in the Canadian and U.S. Labour Markets

Despite the similarities in trends in the Canadian and U.S. labour market noted in the previous section, there have been a number of divergent developments in the two labour markets at least up to the late 1990's, including the widening of the Canada-U.S. unemployment rate gap, the emergence of a participation rate gap, and greater non-standard employment growth in Canada.

The Widening Canada-U.S. Unemployment Gap

In 1989, the unemployment rate in Canada at 7.5 per cent was 2.2 percentage points above that in the United States (5.3 per cent). In the early part of the 1990s, this gap widened dramatically, peaking at 4.5 percentage points in 1993. It remained in the 3.8-4.2 percentage point range for the next five years, before falling to 3.4 percentage points in 1999 (Chart 7).

Labour economists have devoted considerable effort to explaining this unemployment rate gap (Riddell and Sharpe, 1998). Differences in the measurement of unemployment between Canada and the United States have been found responsible for about one fifth of the gap (Zagorsky, 1996). In Canada, the definition of the unemployed includes persons engaged in only passive job search, namely looking at help wanted ads. In the United States these persons are not counted as unemployed. The Canadian unemployment rate in 1997 was 0.9 percentage points lower when the U.S. definition of unemployment was applied to Canada (Statistics Canada, 1998).

Canada's more generous social safety net, including employment/unemployment insurance and social assistance, has been found to result in a somewhat higher structural unemployment, although the generosity gap between Canadian and U.S. social programs has been falling in the 1990s. These institutional factors are estimated to explain about one quarter of the gap.

The most important factor behind the Canada-U.S. unemployment gap in the 1990s has been found to be the cyclical weakness of the Canadian economy in the 1990s. Since 1989, aggregate demand growth has been weaker in Canada than in the United States with that the result that labour demand growth has been weaker, consequently unemployment rose more during the recession of the early 1990s. It is estimated that Canada's poorer macroeconomic performance has been responsible for about one half the gap.

Canada's relatively weak economic growth since 1989 reflects the impact of tight monetary policy associated with the pursuit of low inflation, and in mid-decade, tight fiscal policy used to eliminate government deficits. The weakness of domestic expenditure growth compared to exports testifies to the made-in-Canada nature of our macroeconomic weakness (Fortin, 1996).

The Emergence of a Participation Rate Gap

In 1989, the aggregate labour force participation rate in Canada was 67.2 per cent, 0.7 percentage points above that in the United States at 66.5 per cent. By 1999, the participation rate in Canada had fallen to 65.6 per cent, while that in the United States had risen to 67.1 per cent, creating a 1.5 percentage point gap in favour of the United States (Chart 10).

Like the widening of the unemployment rate gap, the emergence of the participation rate gap is largely a macroeconomic phenomenon (Sharpe and Grignon, 1999). When unemployment is high and employment opportunities limited, individuals, particularly youth and older men, are more likely to leave, or not enter or re-enter, the labour force. The greater rise in the unemployment rate in Canada relative to the United States in the early 1990s consequently resulted in a greater decline in the participation rate and the continuation of high unemployment until late in the decade discouraged persons from joining the labour force.

Greater Non-standard Employment Growth in Canada

Standard employment is defined as paid full-time positions, while non-standard employment includes part-time employment and self-employment. In the 1990s, growth in both part-time and self-employment have been much stronger in Canada than in the United States.

Self-employment in Canada advanced 36.6 per cent between 1989 and 1999, accounting for 42.7 per cent of net job creation. Self-employment rose from 13.9 per cent to 16.2 per cent of total employment. The unincorporated self-employed with no paid help accounted for about two thirds of this increase in self-employment. In contrast, self employment in the United States grew a meager 0.8 per cent in the 1990s, accounting for well less than 1 per cent of net employment growth, and declined from 9.3 per cent of total employment in 1989 to 7.8 per cent in 1999.

Many persons enter self-employment when paid employment opportunities are scarce. The boom in self-employment in Canada in the 1990s is in part linked to the limited paid job opportunities caused by the laggard economy. In contrast, the almost non-existent growth in self-employment in the United States in the 1990s testifies to the ample paid employment opportunities.

Part-time employment grew 24.1 per cent in Canada during the 1989-2000 period, accounting for 27.2 per cent of net employment growth. Its share of total employment increased from 16.7 per cent to 18.1 per cent between 1989 and 2000. Over one half of the increase in part-time employment was involuntary in nature as persons took part-time positions because they could not find full-time work. The rate of growth of part-time employment has been similar in the United States (up 21.8 per cent in the 1990s), but because of much stronger full-time employment growth, it has only accounted for 16.2 percent of total employment growth, close to its share of total employment (14.6 per cent in 1999, up from 14.3 per cent in 1989).

Again this divergent development in the area of non-standard employment reflects the different macroeconomic performance of the two economies. With weaker labour demand, Canadians have accepted second-best employment situations, such as precarious and poorly remunerated self-employment and part-time positions. With stronger labour demand in the United States, relatively fewer Americans have been forced into these types of positions.

Summary and Conclusion

The 1990s have been in many ways a lost decade for the Canadian economy. Economic growth has been weak by historical standards, unemployment has been very high, and real personal income growth has been nil. A key question is whether this performance reflects structural impediments to growth or rather the cyclical weakness caused by restrictive macroeconomic policies. This paper argues strongly that it is the latter factor.

An examination of the performance of the Canadian and U.S. labour markets

reveals similarities in trends in a number of structural variables, including the industry and occupational composition of unemployment, earnings inequality, and the NAIRU or the structural unemployment rate. At the same time, it reveals differences in trends in a number of variables influenced by aggregate demand conditions, namely, the unemployment rate, the participation rate, and non-standard employment. This finding supports the view that the problems in Canada's labour market in the 1990s have been largely macroeconomic in nature. Had Canada enjoyed the same pace of economic growth as the U.S. in the 1990s, it is likely that there would have no increase in the Canada-U.S. unemployment rate gap, no emergence of a labour force participation rate gap, and slower growth in non-standard employment.

The precipitous decline in Canada's standard of living in the 1990s relative to that in the United States has its roots in both our poorer labour market performance and our weaker productivity growth. In terms of the decline in relative level of real GDP per capita, about three quarters is directly attributable to the relative decline in the employment/working age population ratio and one half to weaker productivity growth. These contributions sum to more than 100 per cent because of the positive contribution of trends in Canada's demographic structure to real GDP per capita. Both the falling employment rate and lagging productivity growth are a reflection of the high level of underutilized capacity that has characterized the Canadian economy through out the 1990s.

Over long-periods economies have certain equilibrating tendencies, with the poor performance in one period setting up conditions for strong rebound in the following period. For this reason there may be a possible silver lining in the dark clouds of poor economic performance in the 1990s and the conditions may now be ripe for a solid and sustained economic growth. For example, weak labour market conditions in the 1990s resulted in many younger Canadians enrolling in postsecondary education, giving Canada the highest enrollment rate in the OECD. This increased supply of human capital may serve Canada well in the future and contribute greatly to economic growth. Such positive developments do not of course justify policy decisions that contributed to poor economic performance in the 1990s, but they do illustrate the complex nature of the long-term economic growth process.

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Table A1: Main Labour Market Variables, Canada

	Population '000	WAP Population, '000	LF PR, %	Empl / WAP ratio. %	Labour Force '000	Employ- ment '000	Unemp- loyment '000	UR, %
1976	23,414.2	17,095.8	61.50	57.18	10,514.4	9,776.2	738.2	7.02
1977	23,694.4	17,435.4	61.80	56.87	10,774.4	9,914.7	859.7	7.98
1978	23,936.3	17,778.9	62.65	57.44	11,138.4	10,212.2	926.2	8.32
1979	24,170.8	18,119.5	63.58	58.82	11,521.0	10,657.7	863.3	7.49
1980	24,471.4	18,483.6	64.17	59.35	11,860.2	10,970.1	890.1	7.50
1981	24,785.1	18,814.2	64.96	60.04	12,222.3	11,296.8	925.5	7.57
1982	25,083.5	19,103.1	64.37	57.30	12,295.8	10,947.0	1,348.8	10.97
1983	25,336.5	19,354.8	64.70	56.97	12,522.6	11,027.0	1,495.6	11.94
1984	25,577.3	19,598.0	65.00	57.66	12,739.4	11,300.0	1,439.4	11.30
1985	25,813.7	19,842.5	65.53	58.55	13,002.1	11,617.3	1,384.8	10.65
1986	26,068.6	20,092.8	65.98	59.62	13,257.1	11,979.0	1,278.1	9.64
1987	26,402.3	20,349.0	66.40	60.55	13,511.7	12,320.7	1,191.0	8.81
1988	26,758.9	20,614.6	66.84	61.66	13,778.5	12,710.3	1,068.2	7.75
1989	27,224.8	20,901.9	67.20	62.13	14,046.6	12,986.4	1,060.2	7.55
1990	27,642.9	21,217.0	67.12	61.67	14,240.9	13,084.0	1,156.9	8.12
1991	27,989.7	21,540.6	66.53	59.66	14,330.1	12,850.7	1,479.4	10.32
1992	28,329.7	21,867.3	65.68	58.35	14,362.2	12,760.0	1,602.2	11.16
1993	28,670.2	22,179.7	65.40	57.97	14,504.5	12,857.5	1,647.0	11.36
1994	28,995.4	22,440.0	65.18	58.43	14,626.7	13,111.7	1,515.0	10.36
1995	29,315.3	22,726.5	64.90	58.77	14,750.1	13,356.9	1,393.2	9.45
1996	29,632.6	23,030.7	64.69	58.46	14,899.5	13,462.6	1,436.9	9.64
1997	29,943.7	23,359.3	64.87	58.97	15,153.0	13,774.4	1,378.6	9.10
1998	30,211.7	23,671.1	65.13	59.74	15,417.7	14,140.4	1,277.3	8.28
1999	30,454.1	23,969.0	65.59	60.62	15,721.2	14,531.2	1,190.0	7.57
2000	30,750.1	24,284.9	65.90	61.39	15,999.2	14,909.7	1,089.6	6.81

Average annual rates of growth

81-89	1.18	1.32	0.42	0.43	1.75	1.76	1.71	-0.04
89-2000	1.11	1.37	-0.18	-0.11	1.19	1.26	0.25	-0.93
89-96	1.22	1.40	-0.54	-0.87	0.85	0.52	4.44	3.56
96-2000	0.93	1.33	0.46	1.23	1.80	2.59	-6.68	-8.33

Source: Statistics Canada, CANSIM data base (<http://www.statcan.ca/english/CANSIM/>).

Table A1 (Cont'd): Main Labour Market Variables, Annual Rate of Change, Canada

	Population	WAP Population	LF PR	Empl / WAP ratio	Labour Force	Employ- ment	Unemp- loyment	UR
1977	1.196	1.986	0.477	-0.559	2.473	1.417	16.459	13.649
1978	1.021	1.970	1.381	1.011	3.378	3.001	7.735	4.214
1979	0.980	1.916	1.491	2.401	3.435	4.362	-6.791	-9.887
1980	1.243	2.009	0.916	0.904	2.944	2.931	3.104	0.156
1981	1.282	1.789	1.242	1.169	3.053	2.978	3.977	0.897
1982	1.204	1.536	-0.920	-4.562	0.601	-3.096	45.737	44.866
1983	1.009	1.318	0.520	-0.579	1.845	0.731	10.884	8.876
1984	0.950	1.257	0.469	1.204	1.731	2.476	-3.758	-5.396
1985	0.924	1.248	0.804	1.541	2.062	2.808	-3.793	-5.737
1986	0.987	1.261	0.691	1.829	1.961	3.113	-7.705	-9.480
1987	1.280	1.275	0.637	1.558	1.920	2.852	-6.815	-8.571
1988	1.351	1.305	0.661	1.833	1.975	3.162	-10.311	-12.047
1989	1.741	1.394	0.545	0.768	1.946	2.172	-0.749	-2.643
1990	1.536	1.508	-0.122	-0.745	1.383	0.752	9.121	7.632
1991	1.255	1.525	-0.885	-3.259	0.626	-1.783	27.876	27.080
1992	1.215	1.517	-1.273	-2.189	0.224	-0.706	8.301	8.059
1993	1.202	1.429	-0.432	-0.655	0.991	0.764	2.796	1.788
1994	1.134	1.174	-0.327	0.794	0.842	1.977	-8.015	-8.783
1995	1.103	1.277	-0.428	0.586	0.844	1.870	-8.040	-8.809
1996	1.083	1.339	-0.321	-0.540	1.013	0.791	3.137	2.102
1997	1.050	1.427	0.271	0.877	1.701	2.316	-4.057	-5.662
1998	0.895	1.335	0.407	1.305	1.747	2.657	-7.348	-8.939
1999	0.802	1.258	0.701	1.487	1.969	2.764	-6.835	-8.633
2000	0.972	1.318	0.473	1.270	1.768	2.605	-8.437	-10.028

Table A2: Main Labour Market Variables, US

	Population '000	WAP Population, '000 (LFU80000 0000)	LF PR, %	Empl / WAP ratio, %	Labour Force '000 (LFS40000 000)	Employ- ment '000 (LFS110000 00)	Unemp- loyment '000 (LFS22000 000)	UR, %
1976	218,035	156,150	61.58	56.84	96,151	88,753	7,398.2	7.69
1977	220,239	159,033	62.24	57.86	98,984	92,017	6,966.9	7.04
1978	222,585	161,910	63.14	59.32	102,233	96,046	6,187.1	6.05
1979	225,055	164,863	63.67	59.94	104,961	98,825	6,135.3	5.85
1980	227,726	167,745	63.77	59.20	106,974	99,303	7,670.7	7.17
1981	229,966	170,130	63.88	59.01	108,676	100,400	8,276.3	7.62
1982	232,188	172,271	63.99	57.77	110,244	99,529	10,714.9	9.72
1983	234,307	174,215	64.01	57.87	111,515	100,822	10,693.8	9.59
1984	236,348	176,383	64.37	59.53	113,532	105,003	8,529.1	7.51
1985	238,466	178,206	64.79	60.13	115,467	107,154	8,313.4	7.20
1986	240,651	180,587	65.26	60.69	117,846	109,601	8,245.0	7.00
1987	242,804	182,753	65.58	61.53	119,853	112,439	7,413.5	6.19
1988	245,021	184,613	65.91	62.28	121,671	114,974	6,696.6	5.50
1989	247,342	186,393	66.45	62.95	123,851	117,327	6,523.7	5.27
1990	249,949	189,164	66.53	62.80	125,857	118,796	7,061.0	5.61
1991	252,636	190,925	66.18	61.65	126,352	117,713	8,639.8	6.84
1992	255,382	192,805	66.44	61.45	128,099	118,488	9,611.2	7.50
1993	258,089	194,838	66.30	61.72	129,185	120,259	8,926.7	6.91
1994	260,602	196,814	66.58	62.53	131,047	123,071	7,975.5	6.09
1995	263,039	198,584	66.63	62.90	132,315	124,908	7,406.9	5.60
1996	265,453	200,591	66.77	63.17	133,945	126,715	7,229.4	5.40
1997	267,901	203,133	67.09	63.78	136,290	129,565	6,725.3	4.93
1998	270,595	205,220	67.09	64.06	137,665	131,463	6,202.1	4.51
1999	273,160	207,753	67.09	64.26	139,369	133,492	5,876.4	4.22
2000	275,372	209,699	67.16	64.48	140,866	135,208	5,651.6	4.01

Average annual rates of growth

81-89	0.91	1.15	0.49	0.81	1.65	1.97	-2.93	-4.50
89-2000	0.98	1.08	0.10	0.22	1.18	1.30	-1.30	-2.44
89-96	1.01	1.05	0.07	0.05	1.13	1.11	1.48	0.35
96-2000	0.92	1.12	0.14	0.51	1.27	1.64	-5.97	-7.15

Source: Economic Report of the President, 1999. <http://ssdc.ucsd.edu/gpogate/erp99/>

Data for 1999 are from BLS (<http://www.bls.gov/>). Population for 1999: Personal Income and Outlays news release <http://www.bea.doc.gov/bea/newsrel/pi1299.htm>

Data for 2000 are from the Economic Report of the President 2001, and the BLS and BEA.

Table A2 (Cont'd): Main Labour Market Variables, Annual Rate of Change, US

	Population	WAP Population	LF PR	Empl / WAP ratio	Labour Force	Employ- ment	Unemp- loyment	UR
1977	1.011	1.846	1.081	1.799	2.947	3.678	-5.829	-8.525
1978	1.065	1.809	1.447	2.524	3.282	4.378	-11.193	-14.016
1979	1.110	1.824	0.829	1.050	2.668	2.893	-0.836	-3.413
1980	1.187	1.748	0.167	-1.243	1.918	0.484	25.024	22.671
1981	0.984	1.422	0.167	-0.313	1.591	1.104	7.896	6.206
1982	0.966	1.258	0.182	-2.099	1.443	-0.867	29.465	27.623
1983	0.913	1.128	0.024	0.168	1.153	1.299	-0.198	-1.335
1984	0.871	1.244	0.557	2.867	1.808	4.147	-20.242	-21.659
1985	0.896	1.034	0.664	1.005	1.705	2.049	-2.529	-4.163
1986	0.916	1.336	0.714	0.935	2.060	2.283	-0.823	-2.824
1987	0.895	1.199	0.498	1.374	1.703	2.590	-10.085	-11.591
1988	0.913	1.018	0.494	1.224	1.517	2.254	-9.670	-11.020
1989	0.947	0.964	0.820	1.072	1.792	2.046	-2.582	-4.297
1990	1.054	1.487	0.131	-0.231	1.620	1.252	8.237	6.512
1991	1.075	0.931	-0.532	-1.826	0.394	-0.912	22.360	21.880
1992	1.087	0.985	0.394	-0.323	1.382	0.659	11.243	9.726
1993	1.060	1.054	-0.204	0.435	0.848	1.494	-7.122	-7.903
1994	0.974	1.014	0.422	1.311	1.441	2.339	-10.655	-11.924
1995	0.935	0.899	0.068	0.588	0.968	1.493	-7.129	-8.019
1996	0.918	1.011	0.219	0.432	1.231	1.447	-2.396	-3.584
1997	0.922	1.267	0.478	0.969	1.751	2.249	-6.973	-8.574
1998	1.006	1.027	-0.012	0.433	1.009	1.465	-7.780	-8.701
1999	0.948	1.234	0.000	0.306	1.238	1.544	-5.251	-6.409
2000	0.810	0.937	0.111	0.345	1.074	1.285	-3.826	-4.848

Table A3: Relative Aggregate Income Trends in Canada and US

Year	Canada				United States				Canada as % of US		
	GDP per capita, 1992 US\$	PI per capita, 1992 US\$	PDI per capita, 1992 US\$	PDI/PI ratio, %	GDP per capita, 1992 US\$	PI per capita, 1992 US\$	PDI per capita, 1992 US\$	PDI/PI ratio, %	GDP per capita	PI per capita	PDI per capita
1961	9,851	7,293	6,599	90.47	12,140	10,992	9,768	88.87	81.14	66.35	67.55
1962	10,327	7,699	6,971	90.54	12,677	11,404	10,101	88.58	81.47	67.51	69.01
1963	10,655	7,940	7,189	90.55	13,036	11,654	10,316	88.52	81.73	68.13	69.69
1964	11,141	8,208	7,369	89.78	13,602	12,165	10,920	89.76	81.91	67.47	67.48
1965	11,646	8,676	7,762	89.47	14,292	12,777	11,436	89.50	81.49	67.90	67.87
1966	12,184	9,206	8,080	87.77	15,057	13,359	11,876	88.90	80.92	68.91	68.03
1967	12,322	9,546	8,256	86.49	15,266	13,749	12,180	88.59	80.71	69.43	67.78
1968	12,775	9,867	8,420	85.33	15,836	14,352	12,579	87.64	80.67	68.75	66.94
1969	13,262	10,368	8,675	83.67	16,158	14,727	12,732	86.45	82.08	70.40	68.14
1970	13,422	10,721	8,844	82.50	16,000	14,832	12,988	87.56	83.89	72.28	68.10
1971	13,864	11,208	9,200	82.08	16,328	15,099	13,374	88.58	84.91	74.23	68.79
1972	14,316	11,868	9,789	82.49	17,031	15,900	13,890	87.36	84.06	74.64	70.48
1973	15,163	12,717	10,492	82.51	17,843	16,603	14,598	87.93	84.98	76.59	71.87
1974	15,571	13,561	11,102	81.87	17,576	16,310	14,270	87.49	88.59	83.15	77.80
1975	15,689	13,999	11,525	82.33	17,341	16,080	14,265	88.71	90.47	87.06	80.79
1976	16,330	14,666	11,989	81.74	18,133	16,685	14,700	88.10	90.05	87.90	81.55
1977	16,695	14,898	12,188	81.81	18,785	17,209	15,095	87.72	88.88	86.57	80.74
1978	17,201	15,109	12,505	82.77	19,612	17,868	15,611	87.37	87.70	84.56	80.10
1979	17,750	15,432	12,807	82.99	20,014	17,873	15,527	86.87	88.69	86.34	82.48
1980	17,774	15,772	13,078	82.92	19,734	17,375	15,102	86.91	90.07	90.77	86.60
1981	18,084	16,201	13,326	82.26	20,021	17,446	15,087	86.48	90.33	92.86	88.33
1982	17,344	15,978	13,112	82.07	19,427	17,335	15,071	86.94	89.28	92.17	87.01
1983	17,644	15,751	12,832	81.47	20,085	17,717	15,547	87.75	87.84	88.90	82.54
1984	18,469	16,202	13,229	81.65	21,359	18,710	16,498	88.18	86.47	86.60	80.19
1985	19,288	16,715	13,601	81.37	21,984	19,220	16,877	87.81	87.74	86.97	80.59
1986	19,604	17,011	13,633	80.14	22,528	19,748	17,354	87.88	87.02	86.14	78.55
1987	20,150	17,306	13,729	79.33	23,087	20,155	17,597	87.31	87.28	85.86	78.02
1988	20,848	18,014	14,203	78.84	23,833	20,678	18,163	87.84	87.47	87.12	78.20
1989	21,011	18,339	14,565	79.42	24,438	21,042	18,372	87.31	85.98	87.16	79.28
1990	20,749	18,500	14,466	78.20	24,609	21,058	18,440	87.57	84.31	87.85	78.45
1991	20,107	17,854	13,975	78.28	24,232	20,735	18,245	87.99	82.98	86.10	76.60
1992	20,047	17,822	13,923	78.12	24,704	21,108	18,618	88.20	81.15	84.43	74.78
1993	20,264	17,654	13,850	78.45	25,093	21,105	18,567	87.97	80.75	83.65	74.60
1994	20,983	17,777	13,840	77.85	25,854	21,390	18,765	87.73	81.16	83.11	73.76
1995	21,329	17,897	13,878	77.54	26,298	21,702	18,978	87.45	81.11	82.47	73.12
1996	21,425	17,817	13,726	77.04	26,988	22,055	19,125	86.72	79.39	80.79	71.77
1997	22,129	18,033	13,797	76.51	27,917	22,626	19,466	86.03	79.27	79.70	70.88
1998	22,659	18,483	14,074	76.14	28,861	23,513	20,106	85.51	78.51	78.61	70.00
1999	23,499	18,751	14,269	76.10	29,798	24,017	20,466	85.21	78.86	78.07	69.72
2000	24,363	19,174	14,529	75.78	31,036	24,494	20,673	84.40	78.50	78.28	70.28
Average annual rates of growth, %											
61-73	3.66	4.74	3.94	-0.77	3.26	3.50	3.40	-0.09	0.39	1.20	0.52
73-81	2.23	3.07	3.03	-0.04	1.45	0.62	0.41	-0.21	0.77	2.44	2.61
81-89	1.89	1.56	1.12	-0.44	2.52	2.37	2.49	0.12	-0.62	-0.79	-1.34
89-00	1.35	0.41	-0.02	-0.43	2.20	1.39	1.08	-0.31	-0.82	-0.97	-1.09
89-96	0.28	-0.41	-0.84	-0.43	1.43	0.67	0.58	-0.10	-1.13	-1.08	-1.41
96-2000	3.26	1.85	1.43	-0.41	3.56	2.66	1.96	-0.67	-0.28	-0.78	-0.52

Source: Statistics Canada, Bureau of Economic Analysis and Bureau of Labor Statistics.

Data for U.S. for 2000 are obtained from the BEA, (<http://www.bea.doc.gov/bea/dn/dpqa.txt>).

Personal income and personal disposable income values are deflated using the CPI.

Note: data for GDP per capita for US recalculated from 1996\$ into 1992\$ with GDP price deflator ratio 1992/1996=0.917

Data for PI and PDI per capita for US recalculated from 1996\$ into 1992\$ with CPI ratio 1992/1996=0.8942

Table A4: GDP per capita decomposition into Productivity and Labour Market Components, Canada

	GDP / Population 1992 \$	GDP / Employment 1992 \$	Employment / Population %	WAP / Population %	Employment / WAP %	LF / WAP %	Unemployment / WAP %
	A=B*C	B	C=D*E	D	E=F-G	F	G
1976	20,086	48,106	41.75	73.01	57.18	61.50	4.32
1977	20,535	49,075	41.84	73.58	56.87	61.80	4.93
1978	21,157	49,589	42.66	74.28	57.44	62.65	5.21
1979	21,832	49,514	44.09	74.96	58.82	63.58	4.76
1980	21,863	48,770	44.83	75.53	59.35	64.17	4.82
1981	22,243	48,802	45.58	75.91	60.04	64.96	4.92
1982	21,333	48,882	43.64	76.16	57.30	64.37	7.06
1983	21,702	49,863	43.52	76.39	56.97	64.70	7.73
1984	22,717	51,419	44.18	76.62	57.66	65.00	7.34
1985	23,724	52,716	45.00	76.87	58.55	65.53	6.98
1986	24,112	52,473	45.95	77.08	59.62	65.98	6.36
1987	24,784	53,111	46.67	77.07	60.55	66.40	5.85
1988	25,643	53,986	47.50	77.04	61.66	66.84	5.18
1989	25,843	54,178	47.70	76.78	62.13	67.20	5.07
1990	25,521	53,918	47.33	76.75	61.67	67.12	5.45
1991	24,732	53,868	45.91	76.96	59.66	66.53	6.87
1992	24,658	54,745	45.04	77.19	58.35	65.68	7.33
1993	24,924	55,577	44.85	77.36	57.97	65.40	7.43
1994	25,809	57,075	45.22	77.39	58.43	65.18	6.75
1995	26,235	57,579	45.56	77.52	58.77	64.90	6.13
1996	26,353	58,006	45.43	77.72	58.46	64.69	6.24
1997	27,218	59,169	46.00	78.01	58.97	64.87	5.90
1998	27,870	59,546	46.80	78.35	59.74	65.13	5.40
1999	28,904	60,577	47.72	78.71	60.62	65.59	4.97
2000	29,967	61,807	48.48	78.98	61.39	65.89	4.50
Average annual rates of growth							
81-89	1.89	1.31	0.57	0.14	0.43	0.42	0.38
89-00	1.35	1.20	0.15	0.26	-0.11	-0.18	-1.09
89-96	0.28	0.98	-0.69	0.18	-0.87	-0.54	3.00
96-2000	3.26	1.60	1.64	0.40	1.23	0.46	-7.86

Source: Calculated from Statistics Canada, Labour Force Survey 2000.

1. $(\text{GDP} / \text{Population}) = (\text{GDP} / \text{Employment}) * (\text{Employment} / \text{Population})$
2. $(\text{Employment} / \text{Population}) = (\text{WAP} / \text{Population}) * (\text{Employment} / \text{WAP})$
3. $(\text{Employment} / \text{WAP}) = (\text{Labour Force} / \text{WAP}) - (\text{Unemployment} / \text{WAP})$

Table A5: GDP per capita decomposition into Productivity and Labour Market Components, US

	GDP / Population 1996 \$	GDP / Employment 1996 \$	Employment / Population %	WAP / Population %	Employment / WAP %	LF / WAP %	Unemployment / WAP %
	A=B*C	B	C=D*E	D	E=F-G	F	G
1976	19,775	48,581	40.71	71.62	56.84	61.58	4.74
1977	20,486	49,032	41.78	72.21	57.86	62.24	4.38
1978	21,388	49,565	43.15	72.74	59.32	63.14	3.82
1979	21,826	49,706	43.91	73.25	59.94	63.67	3.72
1980	21,521	49,353	43.61	73.66	59.20	63.77	4.57
1981	21,834	50,011	43.66	73.98	59.01	63.88	4.86
1982	21,187	49,427	42.86	74.19	57.77	63.99	6.22
1983	21,904	50,899	43.03	74.35	57.88	64.01	6.14
1984	23,293	52,428	44.43	74.63	59.53	64.37	4.84
1985	23,974	53,356	44.93	74.73	60.13	64.79	4.67
1986	24,568	53,947	45.54	75.04	60.69	65.26	4.57
1987	25,178	54,369	46.31	75.27	61.53	65.58	4.06
1988	25,991	55,393	46.92	75.35	62.28	65.91	3.63
1989	26,651	56,176	47.44	75.36	62.95	66.45	3.50
1990	26,837	56,467	47.53	75.68	62.80	66.53	3.73
1991	26,427	56,715	46.60	75.57	61.66	66.18	4.53
1992	26,941	58,063	46.40	75.50	61.46	66.44	4.98
1993	27,366	58,728	46.60	75.49	61.72	66.30	4.58
1994	28,195	59,708	47.22	75.52	62.53	66.58	4.05
1995	28,679	60,399	47.48	75.49	62.90	66.63	3.73
1996	29,432	61,663	47.73	75.56	63.17	66.77	3.60
1997	30,445	62,980	48.34	75.79	63.78	67.09	3.31
1998	31,474	64,776	48.59	75.85	64.06	67.08	3.02
1999	32,496	66,501	48.87	76.06	64.24	67.08	2.83
2000	33,847	68,934	49.10	76.15	64.48	67.18	2.70
Average annual rates of growth							
81-89	2.52	1.46	1.04	0.23	0.81	0.49	-4.03
89-00	2.20	1.88	0.31	0.10	0.22	0.10	-2.35
89-96	1.43	1.34	0.09	0.04	0.05	0.07	0.42
96-2000	3.56	2.83	0.71	0.19	0.51	0.15	-7.01

Source: Calculated from the Economic Report of the President, 1999.

Data for 2000 are from the BLS and BEA

<http://ssdc.ucsd.edu/gpogate/erp99/> and BEA.

1. (GDP / Population) = (GDP / Employment) * (Employment / Population)

2. (Employment / Population) = (WAP / Population) * (Employment / WAP)

Chart 1: Relative Aggregate Income Trends in Canada (Canada as % of US)

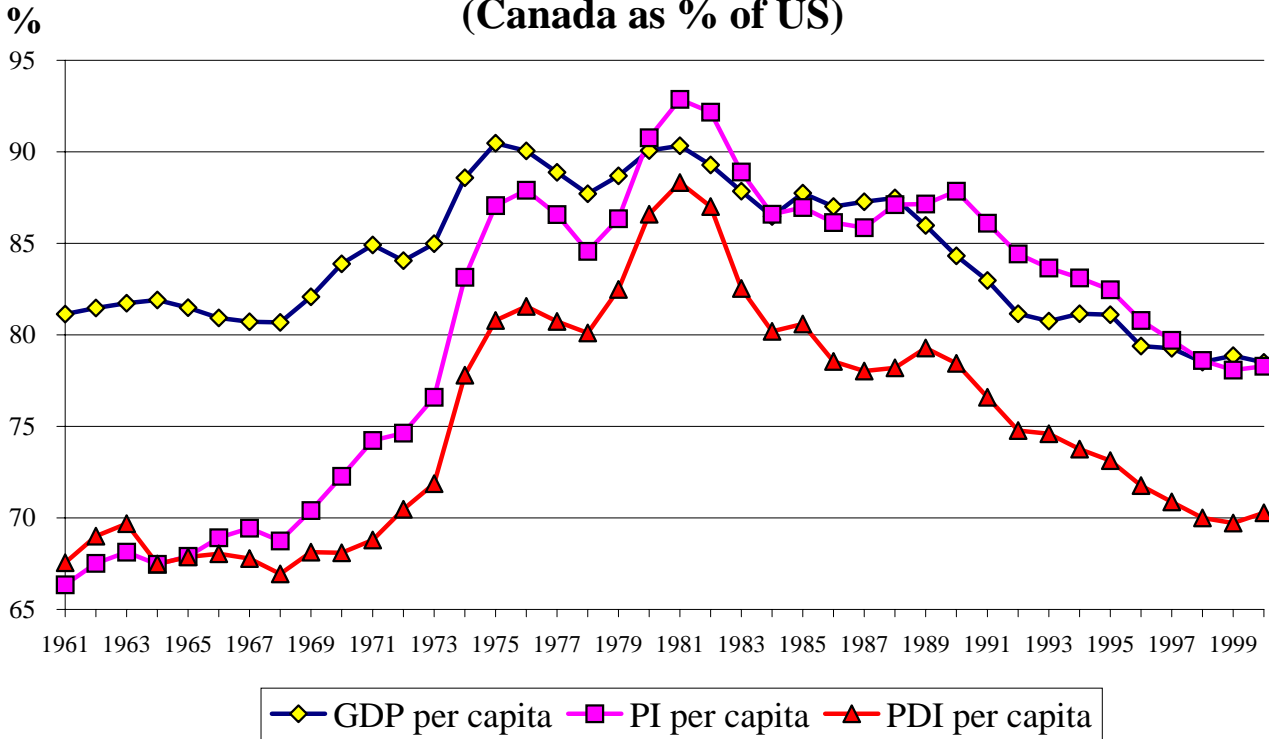


Chart 2: Personal Disposable Income as Share of Personal Income in Canada and US

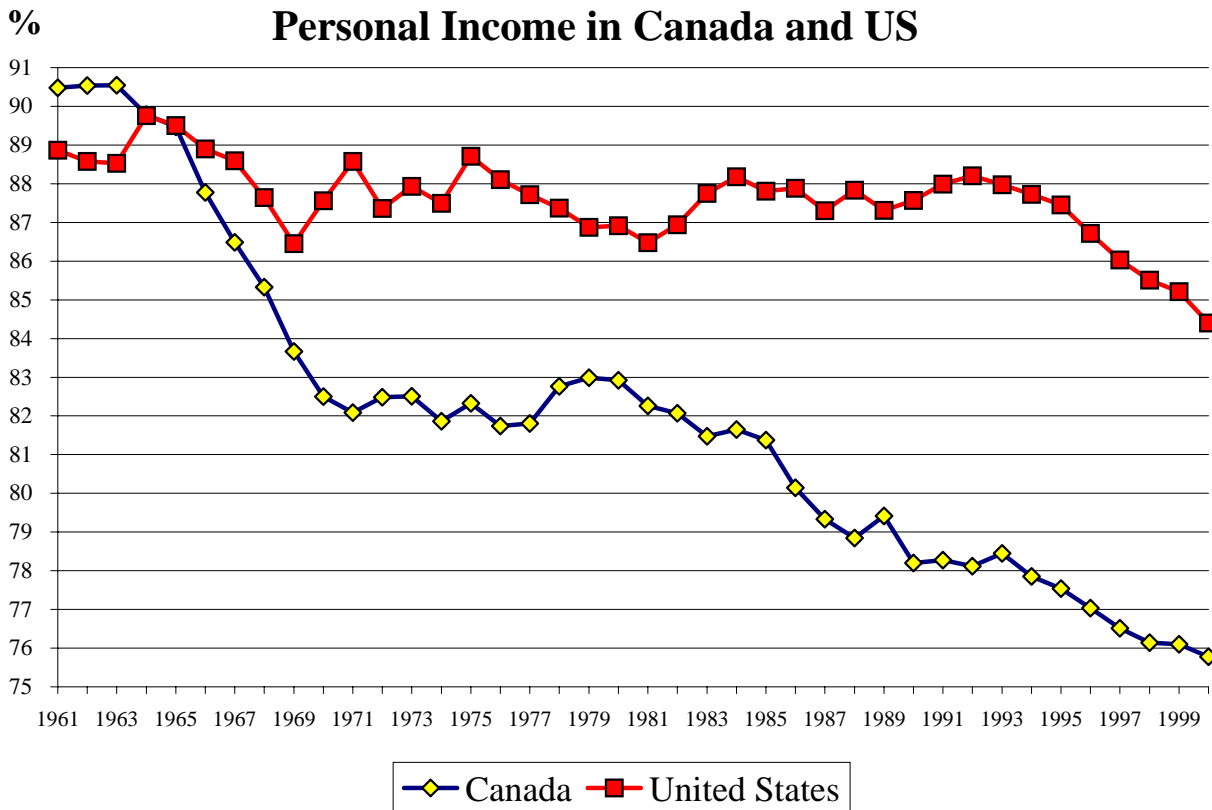


Chart 3: Relative Labour Productivity Trends in Canada (Canada as % of US)

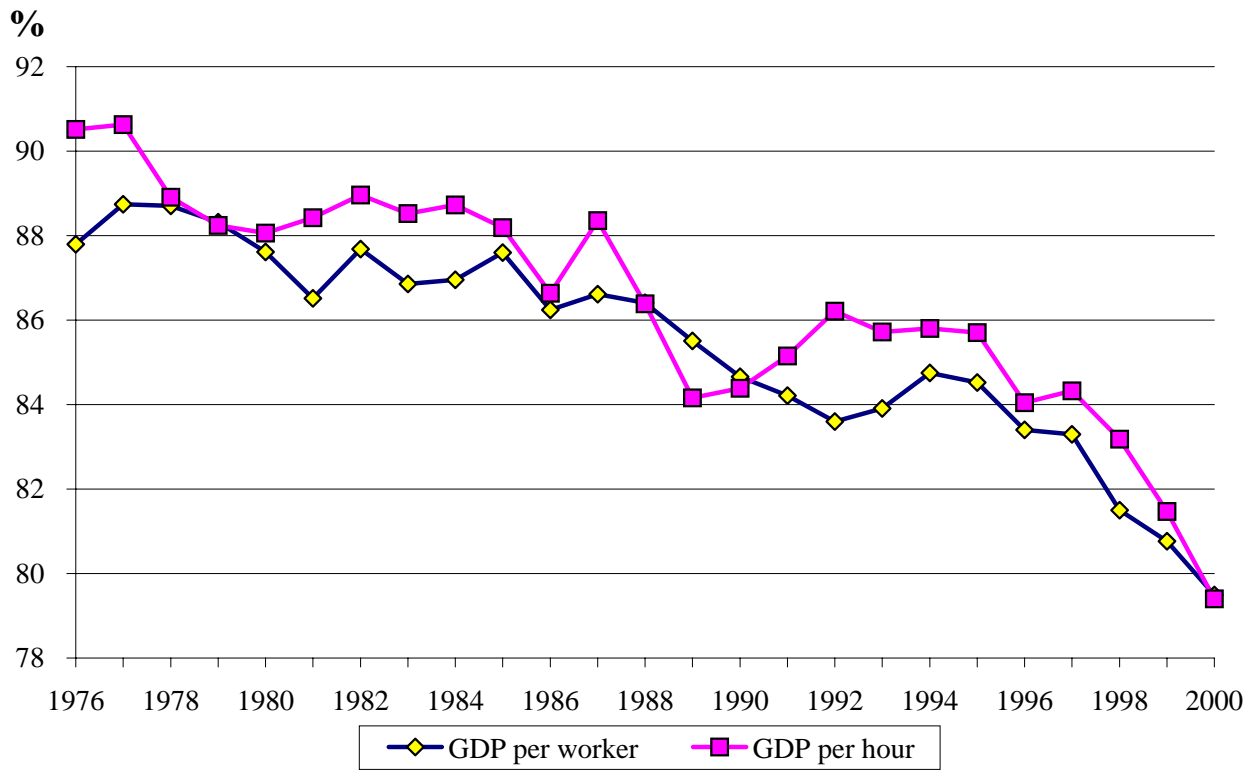


Chart 4: Working Age Population in Canada and the United States, 1989-1999

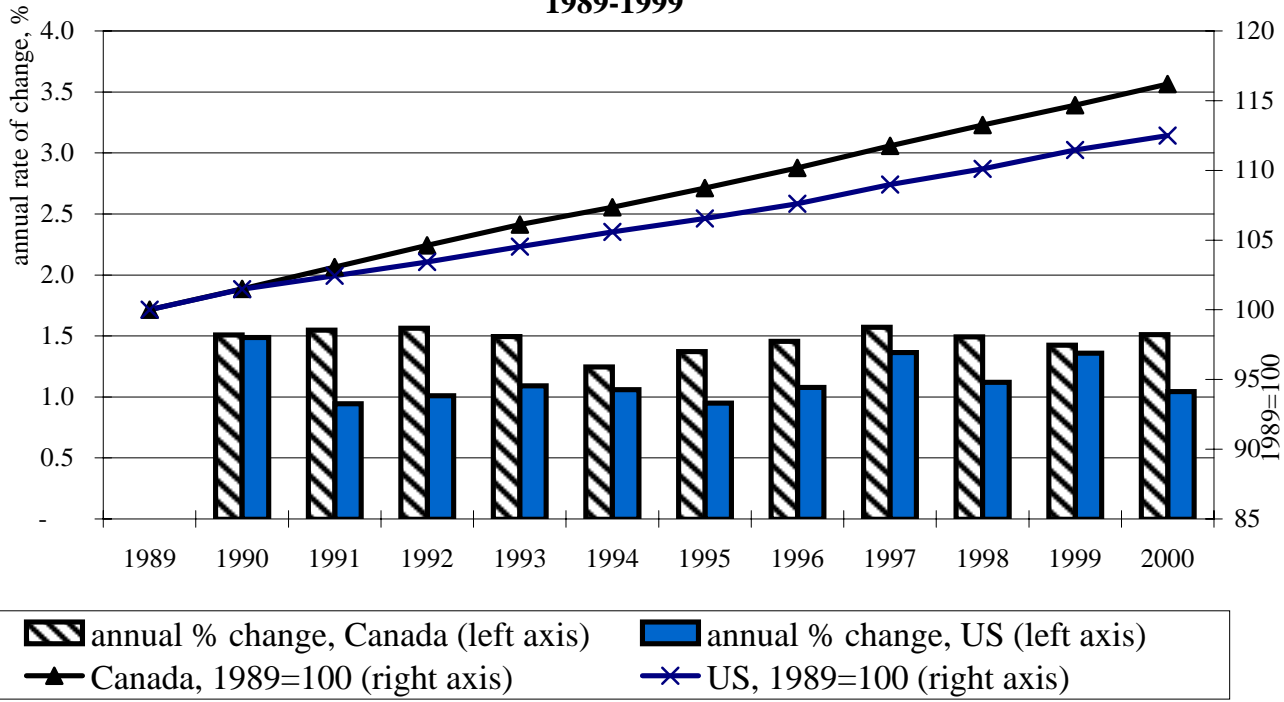


Chart 5: Labour Force in Canada and the United States, 1989-1999

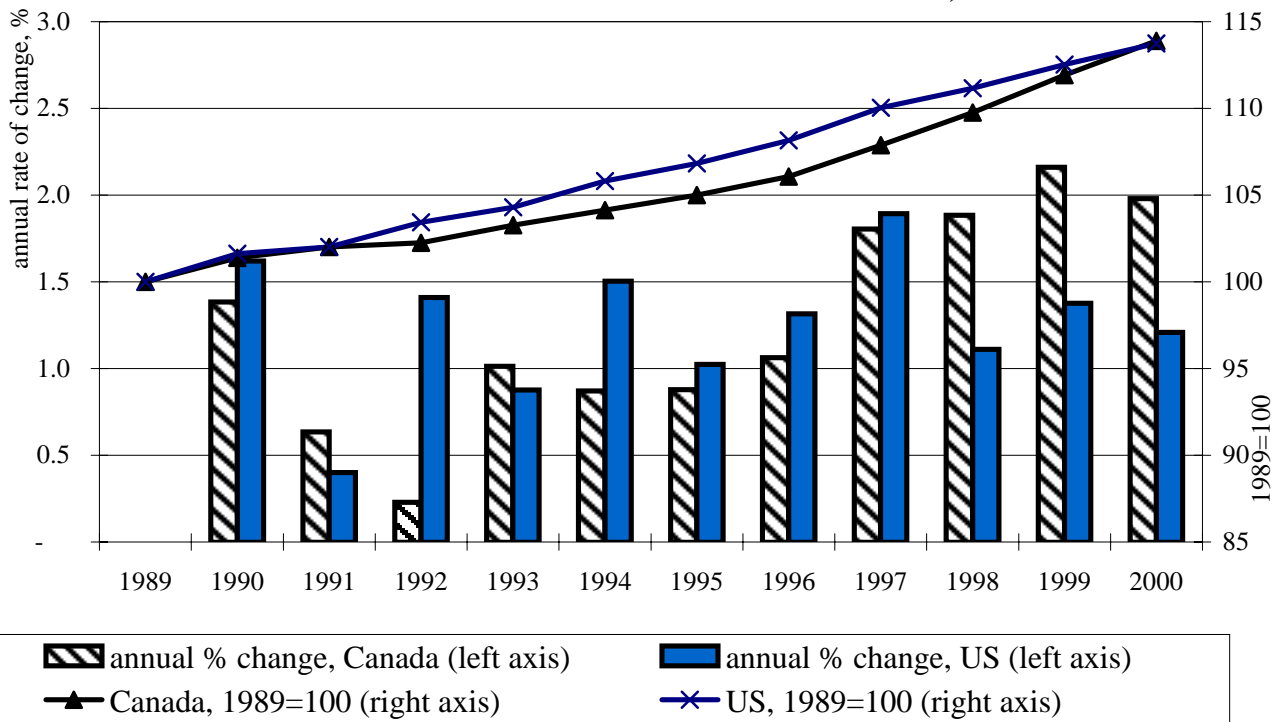


Chart 6: Employment in Canada and the United States, 1989-1999

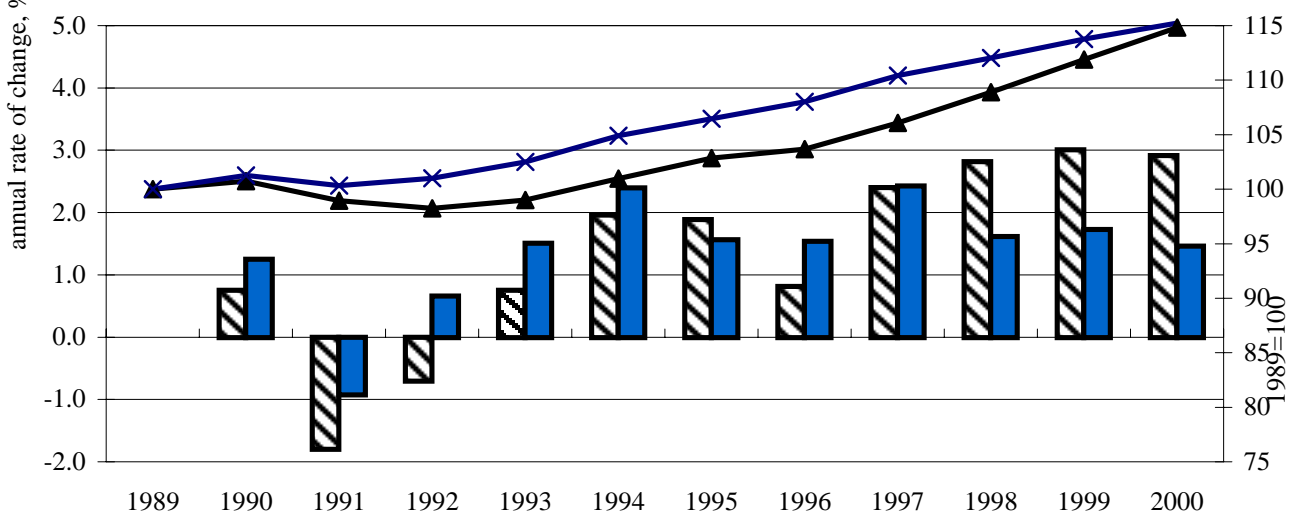


Chart 7: Unemployment in Canada and the United States, 1989-1999

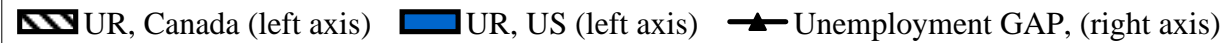
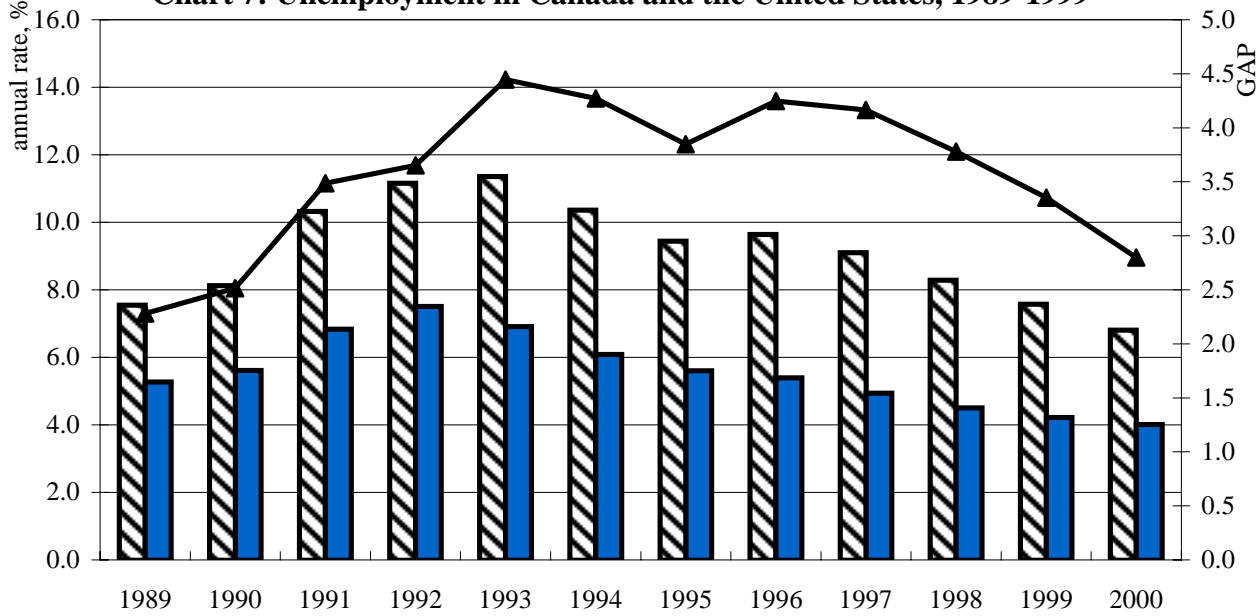
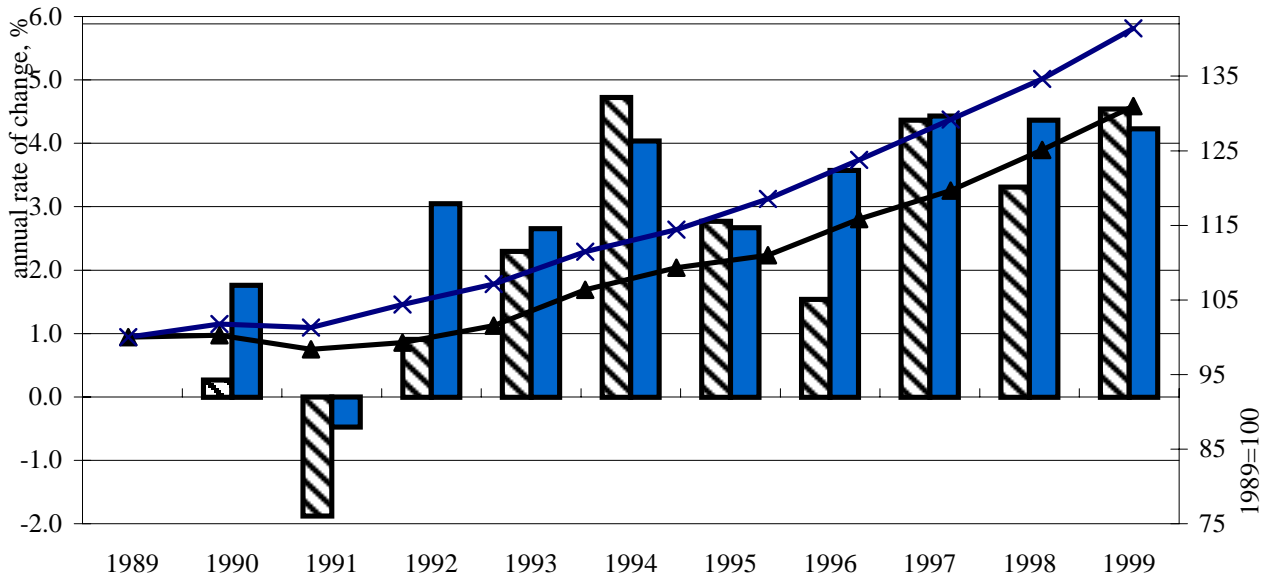


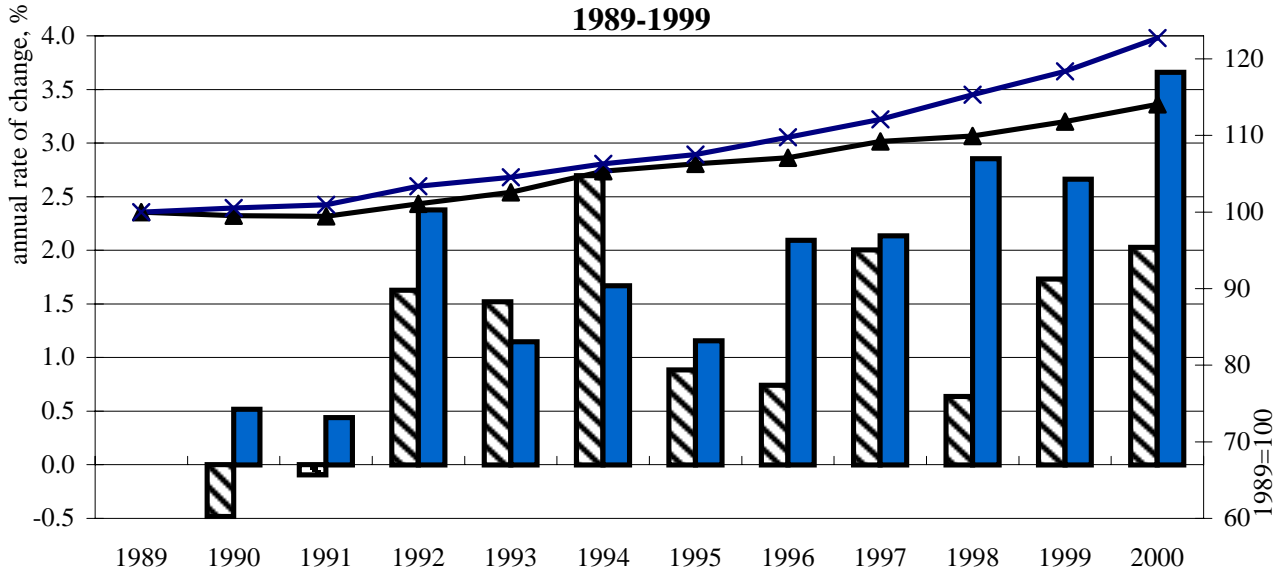
Chart 8: Real GDP in Canada and the United States, 1989-1999



annual % change, Canada (left axis)
 annual % change, US (left axis)

Canada, 1989=100 (right axis)
 US, 1989=100 (right axis)

Chart 9: Real GDP per worker in Canada and the United States, 1989-1999



annual % change, Canada (left axis)
 annual % change, US (left axis)

Canada, 1989=100 (right axis)
 US, 1989=100 (right axis)

Chart 10: Labour Force Participation Rate in Canada and the United States, 1989-1999

