

September 2008



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STANDARDS

ICT INVESTMENT AND PRODUCTIVITY: A PROVINCIAL PERSPECTIVE

CSLS Research Report No. 2008-6
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ICT Investment and Productivity: A Provincial Perspective

Abstract

In 2008, Statistics Canada, for the first time, made available estimates of information and communication technology (ICT) investment by province. Given the importance of ICT investment for productivity growth, these data are important for the comparative analysis and understanding of productivity growth by province. The objective of this report is to present the basic data on ICT investment and ICT investment per worker in Canada and the ten provinces over the 1981-2007 period. The first part of the report reviews the literature on why ICT investment is important for productivity. The second part examines ICT investment levels and trends by province. The third part decomposes the gap in ICT investment per worker by province, relative to the national average, into three effects: that related to income levels, to the total investment/GDP share, and to the ICT investment/total investment share.

ICT Investment and Productivity: A Provincial Perspective

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Executive Summary

In 2008, Statistics Canada, for the first time, made available estimates of ICT investment by province. Given the importance of ICT investment for productivity growth, these data are important for the comparative analysis and understanding of productivity growth by province. The objective of this report is to present the basic data on ICT investment and ICT investment per worker in Canada and the ten provinces over the 1981-2007 period. The first part of the report reviews the literature on why ICT investment is important for productivity. The second part examines ICT investment levels and trends by province. The third part decomposes the gap in ICT investment per worker by province, relative to the national average, into three effects: that related to income levels, to the total investment/GDP share, and to the ICT investment/total investment share.

The key findings of the report are as follows:

- There is an emerging consensus in the literature that machinery and equipment (M&E) investment, and the subclass of ICT investment in particular, is a uniquely important driver of productivity growth.
- All provinces have experienced strong growth in ICT investment in recent years. From 2000 to 2007 Newfoundland experienced the most rapid growth (14.7 per cent per year) and Quebec the weakest (8.4 per cent).
- Investment in computers and related equipment experienced the fastest growth of the three ICT components (telecommunication equipment, software and computer and related equipment), ranging in the 2000-2007 period from a high of 24.6 per cent per year in Newfoundland to a low of 14.1 per cent in Quebec.
- The level of ICT investment per worker in 2007 was highest in Ontario at \$3,870 per worker (2002 chain dollars), and second highest in Alberta (\$3,050) and lowest in New Brunswick (\$2,445). Ontario had the highest level of software and computer and related equipment investment per worker among the 10 provinces and the second highest level of telecommunications investment per worker (Newfoundland was highest).
- A decomposition analysis reveals that for the eight provinces with levels of ICT investment per worker below the national average, below average income levels was the most important explanation, followed by below average shares of total investment in GDP.

The report concludes that given the importance of ICT investment for productivity growth, identifying the underlying reasons behind provincial disparities in ICT investment intensity beyond the decomposition stage should rank high on any productivity research agenda.

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ICT Investment and Productivity: A Provincial Perspective

I. Introduction

A. Motivation

In 2005, the Centre for the Study of Living Standards (CSLS) published a report that examined investment on information and communication technologies (ICT) in Canada and the United States between 1987 and 2004 (CSLS, 2005). It found that Canadian firms lagged considerably behind US firms in ICT spending and that this situation accounted to some extent for the lower labour productivity growth experienced in Canada. More recently, the CSLS published an update (Sharpe and Arsenault, 2008) which underlined the steady relative improvement of Canada since 2000 in terms of purchasing-power-parity-adjusted ICT investment per worker relative to the US. While encouraging, this improvement may prove unsustainable as it appears to rely largely on the appreciation of the Canadian dollar. More importantly, this positive trend should not obscure the fact that there remains a massive gap in ICT investment intensity between Canada and the United States, with the level of PPP-adjusted ICT investment per worker in Canada still below 60 per cent that of the United States in 2006.

In 2008, Statistics Canada, for the first time, made available estimates of ICT investment by province. Given the importance of ICT investment for productivity growth, these data are important for the comparative analysis and understanding of productivity growth by province. The objective of this report is to present the basic data on ICT investment and ICT investment per worker in Canada and the ten provinces over the 1981-2007 period. The first part of the report reviews the literature on why ICT investment is important for productivity. The second part examines ICT investment levels and trends by province. The third part decomposes the gap in ICT investment per worker by province, relative to the national level into three effects related to income, the total investment/GDP share, and the ICT investment/total investment share.¹

B. Structure of the Report

This report is divided into four sections. In the first section, we establish the relationship between ICT investment and productivity with a concise review of the literature on the subject. The second section reviews trends in the provinces. The third section decomposes differences in ICT investment per worker between the provinces and the national average. The final section concludes.

¹ A set of tables on ICT investment by province for the 1981-2007 period are found at the end of this report. In addition, a more detailed set of tables on ICT investment by province are posted with this report as an appendix on the CSLS website: www.csls.ca.

I. Why is ICT Investment Important for Productivity?

Over the past twenty years, economists have gained a sharper perspective on the relationship between investment and productivity by investigating the effects of investment in different types of capital. The standard neoclassical growth accounting approach, with its aggregate stock of undifferentiated capital, has largely given way to a more detailed approach in which capital is divided into several subcategories. The broadest of these are machinery and equipment (M&E) and structures (or non-M&E). M&E can be further decomposed into information and communications technology (ICT) and non-ICT capital. The examination of these subcategories of capital has yielded a firmer understanding of the relationships between capital investment, productivity, and growth than had been possible before.

A. On the Importance of M&E

A string of cross-country empirical studies have found M&E investment to have a particularly strong positive relationship with economic growth and productivity growth. The classic work from this literature is that of De Long and Summers (1991), who use cross-country regression analysis to relate M&E and structures investment to per-worker GDP growth. They find that a one percentage-point increase in M&E investment as a share of GDP is associated with an increase of 0.3 percentage points in the annual rate of per-worker GDP growth. This is a significant effect; it amounts to 29 per cent faster per-worker GDP growth over their 25-year sample period. By contrast, De Long and Summers find no statistically significant relationship between per-worker GDP growth and investment in structures.

Most subsequent studies corroborate the De Long and Summers result for M&E investment. De Long and Summers (1992) use updated data and statistical techniques to test their previous results and find them to be robust. Sala-i-Martin (1997) finds a positive relationship between M&E investment and economic growth, similar in magnitude to the relationship identified by De Long and Summers; a one percentage-point increase in the M&E investment share of GDP is associated with a 0.2 percentage-point increase in per-worker GDP growth. This M&E investment effect is about four times the size of the effect of structures investment. Lee (1995) finds a positive cross-country relationship between productivity and the ratio of imported equipment to total investment; since M&E is more easily tradable than structural capital, this measure is likely to reflect the share of M&E in total investment. Jalilian and Odedokun (2000) further subdivide capital investment into five categories (business, machinery, transport, residential, and ‘other’) and find that investment in machinery remains statistically significant in most of their cross-country regression specifications.

B. On the Importance of ICT

Within the subcategory of M&E, the distinction between ICT and non-ICT investment also appears to be important. Fuss and Waverman (2005) develop an econometric model to relate the Canada-US gap in labour productivity to various types of investment. They find that when both the effect of ICT intensity and ICT spillovers are

taken into account, differences in the stock of ICT accounts for 56 per cent of the Canada-US productivity gap in 2000 and 60 per cent of the gap in 2003. In comparison, increases in non-ICT capital per worker (non-ICT capital deepening) accounts for just about 5 per cent of the productivity gap. Digging further, they find that slightly less than half of the ICT contribution to the gap is attributable not to simple capital deepening but to investment spillover effects; information and telecommunications technologies become increasingly important as they spread throughout the economy. Thus, they attribute much of the persistent Canada-US gap in labour productivity to different levels of prior investment in ICT.

The results of Fuss and Waverman (2005) emphasize the importance of the network effects of ICT investment. The internet would be useless if only one computer were connected to it; its transformative economic power is realized only when a large part of the economy has access to it. This idea of ICT as a so-called ‘general purpose technology’ has advocates (Helpman and Trajtenberg 1998) and detractors (Gordon 2003), but it is broadly consistent with the empirical regularities we have already discussed. ICT has fundamentally altered production and organization processes in at least some sectors. For instance, the US retail market has been revolutionized by the Wal-Mart model of just-in-time inventory management, which would be impossible without the power to collect and transfer large amounts of sales data quickly and cheaply.² If ICT investment stimulates the development of new complementary technologies (Basu *et al.*, 2003), then ICT investment may also have spillover effects that make non-ICT investment more effective in promoting productivity growth (Pakko, 2002; Gort *et al.*, 1999).

Abdi (2008) finds empirical support for such spillover effects within the Canadian manufacturing sector. He notes that the elasticity of output with respect to M&E capital is generally found to be greater than M&E’s factor share of output, which implies that the level of M&E investment is below the socially efficient level (in line with the predictions of the New Growth Theory of Romer (1986 and 1987), Lucas (1988) and others). This evidence is consistent with the idea that ICT investment has important network effects on economy-wide productivity; one firm’s investments in ICT may provide external benefits to the rest of the economy, and since firms cannot capture external benefits, the level of ICT investment will be suboptimal.

C. Summary of Findings

There is an emerging consensus that M&E investment, and the subclass of ICT investment in particular, is a uniquely important driver of productivity growth. However, the results of Fuss and Waverman (2005) suggest that Canadian ICT investment is not keeping pace with that of the US and that Canada’s relative productivity performance is adversely affected by this investment disparity.³ The focus of this paper, however, is not on the Canadian situation relative to that of the US. Instead, we focus on the situation

² Harvard economist Kenneth Rogoff (2006) suggests that Wal-Mart (and a small number of other big-box retailers) may account for as much as 50 per cent of the US productivity growth advantage over Europe in the past decade, and that general ICT-related advances in wholesaling supply chains may account for a further 25 per cent of the gap.

³ For an investigation into the causes of the Canada-US ICT investment gap see CSLS (2005).

within Canada itself using the newly available ICT data by provinces. Important ICT investment disparities exist between Canadian provinces and a first investigation may shed light on some of the reasons for these differences. This paper is a first step as it aims mainly to present and discuss the new data. Further research will be needed to explain the relationship between ICT investment and productivity in the context of the Canadian provinces.

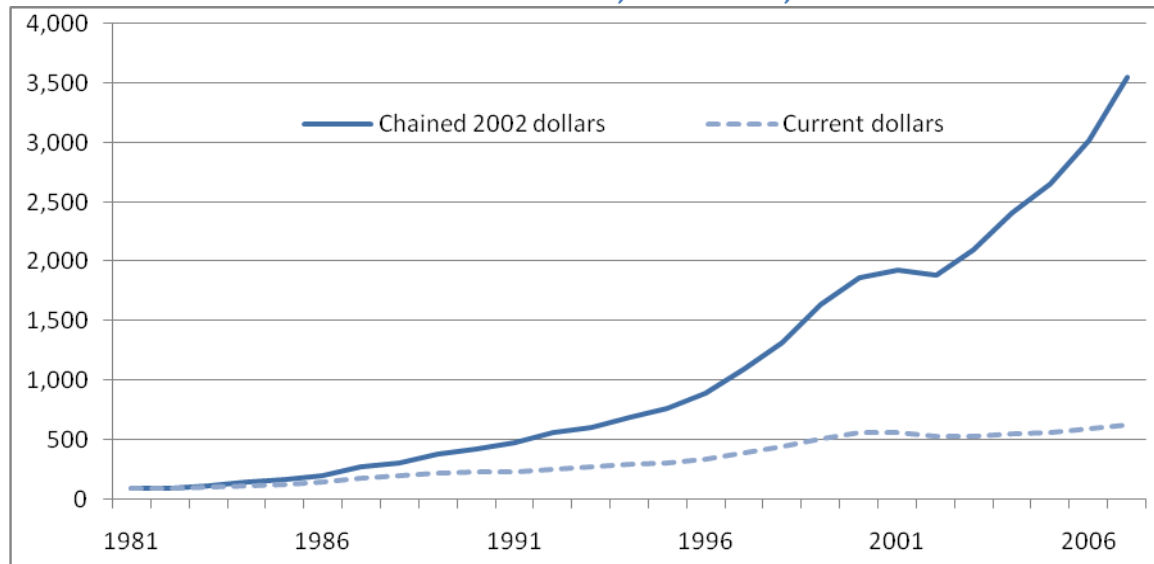
II. Trends in ICT Investment

This section first reviews broad trends in real ICT investment in the Canadian provinces since 1990, and compares them to that of other asset types. It then provides an overview of provincial differences in ICT investment per worker.

A. The National Context

ICT investment in Canada has grown enormously in recent decades (Chart 1). Measured in real terms, ICT investment at the total economy level rose 35 fold to \$56.6 billion 2002 dollars in 2007 from \$1.6 billion in 1981, or to 4.3 per cent of GDP from 0.2 per cent. In current dollars, ICT investment increased 6 times to \$35.7 billion in 2007 from \$5.7 billion in 1981 or to 2.3 per cent from 1.6 per cent of GDP. This slower growth in nominal ICT investment reflects the very large fall in the quality-adjusted price of ICT investment goods, which declined at a compound rate of 6.5 per cent between 1981 and 2007.

Chart 1: Real and Nominal ICT Investment, 1981=100, 1981-2007



Since the early 1980s ICT investment has advanced strongly every year, except in the early 2000s when it rose weakly in 2001 and fell in 2002 because of the downturn in the high-tech sector. This weakness has meant that ICT investment growth since 2000 has been slower than in the 1980s and 1990s (9.6 per cent in 2000-2007 versus 16.7 per cent

in 1981-2000 and 15.8 per cent in 1990-2000). But since 2002, the ICT investment growth has again taken off, advancing at a 13.4 per cent compound annual rate.

ICT investment consists of three components: computers and related equipment, software, and telecommunications equipment. At the national level, the growth rate for computers and related equipment has tended to be roughly double that of software, and the growth rate for software has tended to be double that of telecommunications equipment. For example, over the 1981-2007 period, real investment in computers advanced at a 24.7 per cent compound annual rate, compared to 13.5 per cent for software and 5.4 per cent for telecommunications equipment (Tables 1a-c at the end of the report).

Summary Table 1: Real Investment (\$2002 Chained) Growth by Province and Investment Asset Type, compound annual growth rate in per cent, 1990-2000 and 2000-2007

| | Canada | Newfoundland | PEI | Nova Scotia | New Brunswick | Québec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|---------------------------------|--------|--------------|------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1990-2000 | | | | | | | | | | | |
| Total | 3.5 | 5.1 | 3.7 | 2.6 | 3.4 | 2.4 | 3.1 | 2.7 | 2.8 | 7.0 | 2.4 |
| Structures | 0.7 | 3.9 | -0.7 | 0.8 | 2.3 | -2.2 | -1.7 | -2.8 | 2.1 | 5.7 | 0.5 |
| M&E | 5.9 | 7.0 | 7.6 | 4.3 | 4.6 | 5.5 | 5.8 | 7.4 | 3.9 | 9.2 | 4.1 |
| ICT | 15.8 | 8.4 | 15.9 | 12.2 | 13.2 | 16.5 | 15.5 | 15.9 | 14.4 | 18.1 | 15.8 |
| Telecommunications Equipment | 6.7 | 2.3 | 1.8 | 5.4 | 7.6 | 8.9 | 6.4 | 4.1 | 5.8 | 6.1 | 6.6 |
| Software | 11.3 | 4.1 | 10.9 | 6.5 | 10.3 | 11.0 | 10.7 | 11.6 | 10.8 | 17.3 | 10.5 |
| Computers and Related Equipment | 29.8 | 23.9 | 35.9 | 26.5 | 25.5 | 30.7 | 29.5 | 30.3 | 27.8 | 29.6 | 30.6 |
| 2000-2007 | | | | | | | | | | | |
| Total | 5.3 | 0.8 | 5.5 | 3.2 | 3.8 | 4.3 | 4.7 | 5.7 | 3.1 | 7.6 | 5.7 |
| Structures | 4.6 | 1.1 | 0.6 | 0.3 | 1.7 | 5.4 | 3.7 | 6.0 | 0.2 | 6.2 | 4.7 |
| M&E | 6.0 | 1.1 | 8.7 | 5.7 | 5.2 | 3.8 | 5.5 | 5.5 | 7.1 | 9.8 | 7.0 |
| ICT | 9.6 | 14.7 | 13.6 | 9.9 | 9.1 | 8.4 | 9.1 | 9.9 | 13.0 | 11.2 | 10.6 |
| Telecommunications Equipment | 3.1 | 4.1 | 4.3 | 2.3 | 3.1 | 0.8 | 2.5 | 7.4 | 5.8 | 5.2 | 6.0 |
| Software | 7.8 | 18.6 | 18.0 | 9.8 | 8.3 | 8.3 | 7.3 | 7.9 | 11.9 | 5.9 | 9.0 |
| Computers and Related Equipment | 16.7 | 24.6 | 14.6 | 20.0 | 18.7 | 14.1 | 16.1 | 14.4 | 20.7 | 23.9 | 16.7 |

B. Provincial Trends in Real ICT Investment

Summary Table 1 provides an overview of trends in the different types of investment for Canada and the 10 provinces for the 1990-2000 and 2000-2007 periods. In general, the national ICT investment trends played out at the provincial level, as the following examples illustrate.

- At the national level, ICT investment grew much faster than structures and M&E investment (which includes both ICT and non-ICT M&E) in both

the 1990-2000 and 2000-2007 periods. This was the case for all the provinces in both periods.

- At the national level, computers and related equipment investment grew faster than software, and software faster than telecommunications equipment in both the 1990-2000 and 2000-2007 periods. Again this was also the case for all provinces in both periods.
- At the national level both total ICT investment and each of the three components grew at a slower rate in the 2000-2007 period relative to the 1990-2000 period. This was the case for total ICT for all provinces except Newfoundland, for telecommunications equipment for all provinces except Newfoundland, Prince Edward Island, and Manitoba, for software for all provinces except Newfoundland, PEI, Nova Scotia, Manitoba and Saskatchewan, and for computers and related equipment for all provinces except Newfoundland.

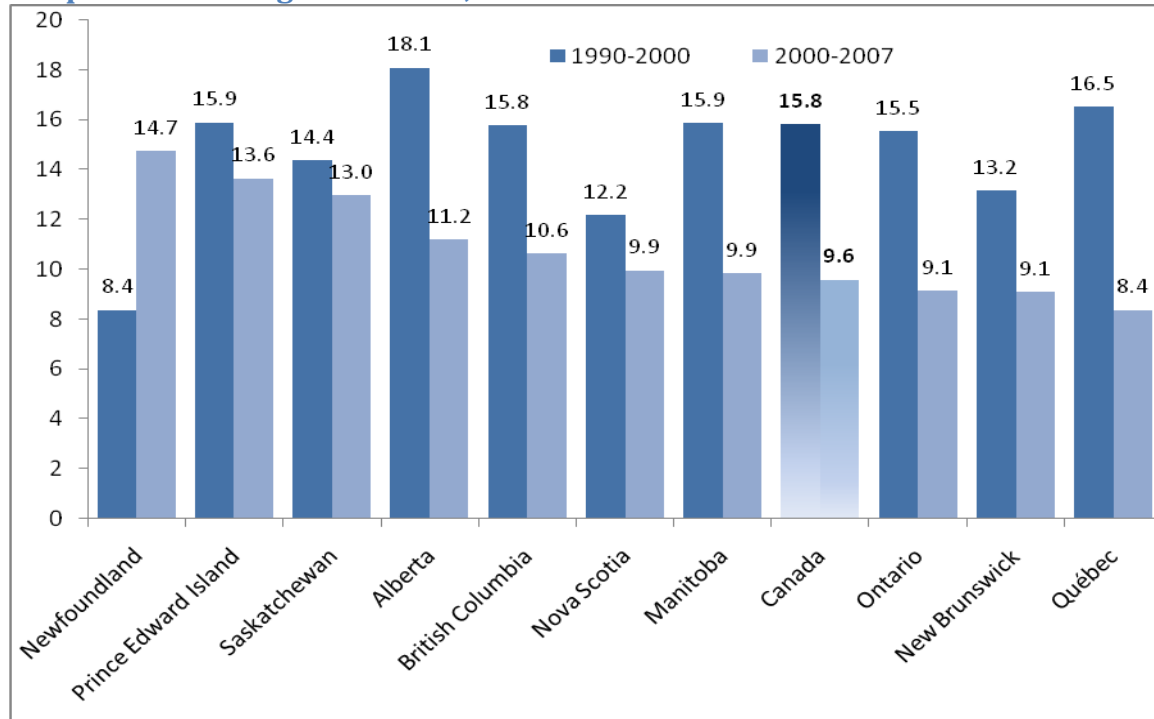
Between 1990 and 2000, real ICT investment grew on average fastest in Alberta (18.1 per cent per year) and Quebec (16.5 per cent) and slowest in Newfoundland (8.4 per cent) and Nova Scotia (12.2 per cent). Quebec's performance was particularly notable given that the province experienced the slowest rate of growth of total investment of all provinces over the period, only 2.4 per cent per year. In comparison, Alberta's strong ICT investment growth was in part the result of its strong overall investment growth, with the province reporting an average annual growth rate of total investment of 7.0 per cent, well above second-place Newfoundland (5.1 per cent).

Strong real ICT investment growth at the provincial level over the 1990-2000 period was spurred primarily by strong investment growth in computers and related equipment. The province experiencing the slowest growth in this type of ICT investment was Newfoundland at the robust rate of 23.9 per cent per year, while Prince Edward Island had the fastest growth at 35.9 per cent. Real software investment also experienced relatively strong growth across the country, ranging from a low of 4.1 per cent per year in Newfoundland to a high of 17.3 per cent per year in Alberta). Real investment growth in telecommunications equipment exhibited the slowest growth of the three ICT investment components, and the least provincial variation ranging from 1.8 per cent in Prince Edward Island to 8.9 per cent in Quebec.

In the 2000-2007 period, total ICT investment growth was strongest in Newfoundland, advancing 14.7 per cent per year and, weakest in Quebec at 8.4 per cent (Chart 2). For computers and related equipment, again the fastest growth ICT component, Newfoundland enjoyed the most rapid growth at 24.6 per cent per year, while Quebec experienced the weakest (14.1 per cent). For software, Newfoundland again had the fastest growth (18.6 per cent), with Alberta the lowest (5.6 per cent). Manitoba had the most rapid telecommunication equipment growth (7.4 per cent) and Quebec the lowest (0.8 per cent).

As noted earlier, ICT investment growth was significantly lower in the 2000-2007 period than in the 1990-2000 period across all provinces but Newfoundland (Chart 2). Quebec and Ontario were the provinces most affected by the slowdown, with ICT investment growth in Quebec halving between the two periods and that of Ontario falling by about 40 per cent. The slowdown in total ICT investment growth was not generally due to a fall in one particular component, but rather reflected a slowdown in investment growth in each of the three components.

Chart 2: Real ICT Investment Growth by Province, chained 2002 dollars, compound annual growth rates, 1990-2000 and 2000-2007



B. Relative ICT Investment per Worker Levels by Province

ICT investment growth rates are important because investment determines the amount of ICT goods that workers have to work with in production. Absolute investment figures alone, however, cannot reveal the whole story because ICT capital per worker or ICT capital intensity depends on both the amount of investment and the number of workers. It is ICT investment per worker that is of greater interest. Summary Table 2 contains comprehensive comparative data on the level of ICT investment per worker in Canada and the provinces in 1990, 2000, and 2007 for total ICT and the three components in absolute terms and relative to the national average.

The most striking characteristic of the data is that only two provinces – Ontario and Alberta – had ICT investment per worker above the national average in 2007 (Chart 3). Indeed, ICT investment per worker in Ontario was above the national average in every year over the 1981-2007 period (see Table 5 at the end of the report), although the differential has decreased slightly over time. Per-worker ICT investment was 15.4 per cent above the national average in 2007, down from a relative peak of 24.9 per cent

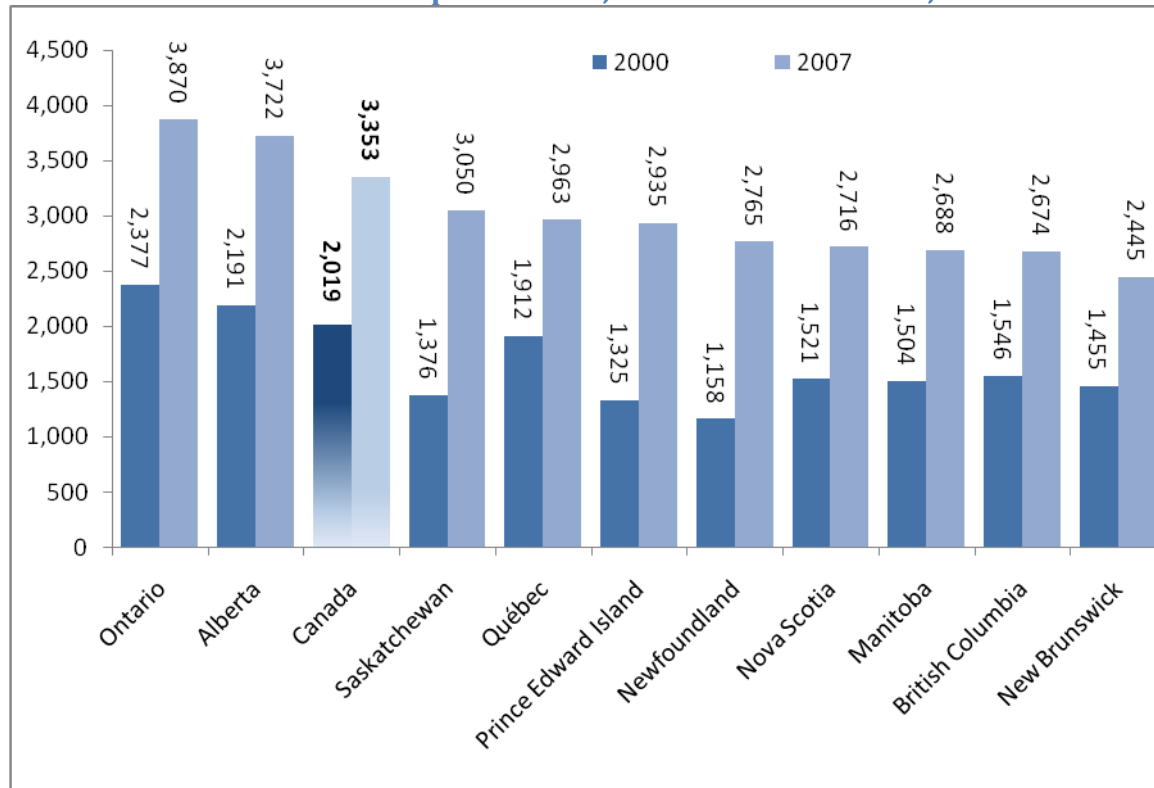
above the national average in 1996. In Alberta, ICT investment per worker was below the national average prior to 1995, but was 11.0 per cent above it in 2007. Meanwhile, New Brunswick and British Columbia had the lowest per-worker ICT investment in 2007, at 72.9 and 79.7 per cent of the national average respectively.

Summary Table 2: Real ICT Investment per Worker, Levels and as a Proportion of the National Average

| | Canada | Newfoundland | PEI | Nova Scotia | New Brunswick | Québec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|--|--|--------------|-------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| In chained \$2002 | | | | | | | | | | | |
| | Total ICT | | | | | | | | | | |
| 1990 | 525 | 497 | 345 | 515 | 466 | 448 | 629 | 371 | 375 | 515 | 443 |
| 2000 | 2,019 | 1,158 | 1,325 | 1,521 | 1,455 | 1,912 | 2,377 | 1,504 | 1,376 | 2,191 | 1,546 |
| 2007 | 3,353 | 2,765 | 2,935 | 2,716 | 2,445 | 2,963 | 3,870 | 2,688 | 3,050 | 3,722 | 2,674 |
| CAGR: 1990-2000 | 14.4 | 8.8 | 14.4 | 11.4 | 12.1 | 15.6 | 14.2 | 15.0 | 13.9 | 15.6 | 13.3 |
| CAGR: 2000-2007 | 7.5 | 13.2 | 12.0 | 8.6 | 7.7 | 6.5 | 7.2 | 8.6 | 12.0 | 7.9 | 8.1 |
| | Telecommunication Equipment | | | | | | | | | | |
| 1990 | 340 | 461 | 347 | 445 | 315 | 250 | 389 | 289 | 279 | 403 | 287 |
| 2000 | 577 | 605 | 366 | 708 | 597 | 541 | 646 | 400 | 469 | 586 | 439 |
| 2007 | 628 | 732 | 445 | 763 | 675 | 507 | 677 | 610 | 657 | 678 | 563 |
| CAGR: 1990-2000 | 5.4 | 2.8 | 0.5 | 4.7 | 6.6 | 8.0 | 5.2 | 3.3 | 5.3 | 3.8 | 4.4 |
| CAGR: 2000-2007 | 1.2 | 2.8 | 2.8 | 1.1 | 1.8 | -0.9 | 0.7 | 6.2 | 4.9 | 2.1 | 3.6 |
| | Software | | | | | | | | | | |
| 1990 | 317 | 203 | 196 | 267 | 234 | 288 | 389 | 217 | 210 | 278 | 273 |
| 2000 | 823 | 316 | 484 | 470 | 567 | 756 | 960 | 603 | 562 | 1,105 | 599 |
| 2007 | 1,221 | 949 | 1,396 | 834 | 907 | 1,170 | 1,383 | 953 | 1,161 | 1,331 | 937 |
| CAGR: 1990-2000 | 10.0 | 4.5 | 9.5 | 5.8 | 9.2 | 10.1 | 9.5 | 10.8 | 10.3 | 14.8 | 8.2 |
| CAGR: 2000-2007 | 5.8 | 17.0 | 16.3 | 8.5 | 6.9 | 6.4 | 5.4 | 6.8 | 10.9 | 2.7 | 6.6 |
| | Computers and Related Equipment | | | | | | | | | | |
| 1990 | 52 | 28 | 25 | 35 | 34 | 46 | 65 | 38 | 33 | 47 | 43 |
| 2000 | 621 | 252 | 470 | 349 | 300 | 619 | 774 | 501 | 366 | 502 | 496 |
| 2007 | 1,606 | 1,071 | 1,101 | 1,152 | 910 | 1,381 | 1,941 | 1,188 | 1,291 | 1,814 | 1,246 |
| CAGR: 1990-2000 | 28.2 | 24.4 | 34.1 | 25.7 | 24.3 | 29.7 | 28.0 | 29.4 | 27.2 | 26.8 | 27.8 |
| CAGR: 2000-2007 | 14.5 | 23.0 | 12.9 | 18.6 | 17.2 | 12.1 | 14.0 | 13.1 | 19.7 | 20.1 | 14.0 |
| As a proportion of the national average | | | | | | | | | | | |
| | Total ICT | | | | | | | | | | |
| 1990 | 100 | 94.6 | 65.7 | 98.2 | 88.9 | 85.5 | 119.8 | 70.7 | 71.4 | 98.2 | 84.4 |
| 2000 | 100 | 57.4 | 65.6 | 75.4 | 72.1 | 94.7 | 117.8 | 74.5 | 68.2 | 108.5 | 76.6 |
| 2007 | 100 | 82.5 | 87.5 | 81.0 | 72.9 | 88.4 | 115.4 | 80.2 | 91.0 | 111.0 | 79.7 |
| | Telecommunication Equipment | | | | | | | | | | |
| 1990 | 100 | 135.4 | 102.0 | 130.9 | 92.6 | 73.5 | 114.4 | 84.9 | 81.9 | 118.5 | 84.2 |
| 2000 | 100 | 104.8 | 63.4 | 122.6 | 103.4 | 93.8 | 112.0 | 69.3 | 81.2 | 101.6 | 76.1 |
| 2007 | 100 | 116.5 | 70.8 | 121.6 | 107.6 | 80.8 | 107.9 | 97.2 | 104.7 | 108.0 | 89.7 |
| | Software | | | | | | | | | | |
| 1990 | 100 | 63.8 | 61.6 | 84.1 | 73.9 | 90.6 | 122.4 | 68.3 | 66.1 | 87.6 | 86.0 |
| 2000 | 100 | 38.4 | 58.8 | 57.2 | 69.0 | 91.8 | 116.7 | 73.3 | 68.3 | 134.3 | 72.9 |
| 2007 | 100 | 77.7 | 114.3 | 68.3 | 74.3 | 95.8 | 113.2 | 78.1 | 95.1 | 109.0 | 76.7 |
| | Computers and Related Equipment | | | | | | | | | | |
| 1990 | 100 | 54.6 | 48.2 | 68.6 | 66.0 | 89.0 | 126.4 | 73.8 | 63.5 | 90.1 | 82.2 |
| 2000 | 100 | 40.5 | 75.7 | 56.3 | 48.3 | 99.8 | 124.6 | 80.7 | 58.9 | 80.9 | 80.0 |
| 2007 | 100 | 66.7 | 68.6 | 71.7 | 56.7 | 86.0 | 120.9 | 74.0 | 80.4 | 113.0 | 77.6 |

Between 2000 and 2007, there were only minor changes in the ranking of provinces in terms of real ICT investment per worker (Chart 3). Saskatchewan and Newfoundland performed particularly well, with real ICT per worker increasing a total of 122 and 139 per cent respectively in these two provinces. Saskatchewan thus went from eighth place in 2000 to third place in 2007, while Newfoundland went from last to sixth. The worst performing province was by far Quebec, whose real ICT investment per worker increased only \$1,051 (chained 2002) or 55 per cent. While New Brunswick performed worst in absolute terms, with real ICT investment per worker increasing only \$990, it performed much better in relative terms (68 per cent).

Chart 3: Real ICT Investment per Worker, 2002 chained dollars, 2000 and 2007



These disparities in the level and growth of ICT investment per worker across provinces may stem from many sources: lower levels of income, a lack of investment-friendly policies, policies favouring investment in other asset types or industrial structure. While a thorough investigation of the sources for ICT per worker differences across provinces is beyond the scope of this paper, the following section attempts to identify its proximate sources through a decomposition methodology..

III. A Decomposition of Provincial ICT Investment per Worker Gaps

There are several reasons why per-worker ICT investment may vary across provinces. From a static growth accounting perspective, the level of per-worker investment may be regarded as an outcome based on the following factor analysis:

$$\frac{ICT}{Worker} = \frac{GDP}{Worker} * \frac{Investment}{GDP} * \frac{ICT}{Investment} \quad (1)$$

According to Equation (1), ICT investment per worker in a given province depends upon three variables: provincial GDP per worker, the share of total investment in provincial GDP, and the share of provincial investment spent on ICT.⁴ All else equal, we would expect higher-income provinces to have higher ICT investment per worker because they have more resources to spend; provinces with high investment rates to have higher ICT per worker simply because they invest more in everything; and provinces with a high ICT share of total investment to invest more per worker in ICT because they focus more on ICT than other forms of investment.

Summary Table 3 gives provincial estimates for 2007 of GDP per worker, the share of non-residential investment in GDP, and the share of ICT investment in total non-residential investment. The product of these last two variables is the share of ICT investment in GDP, also given in the table.

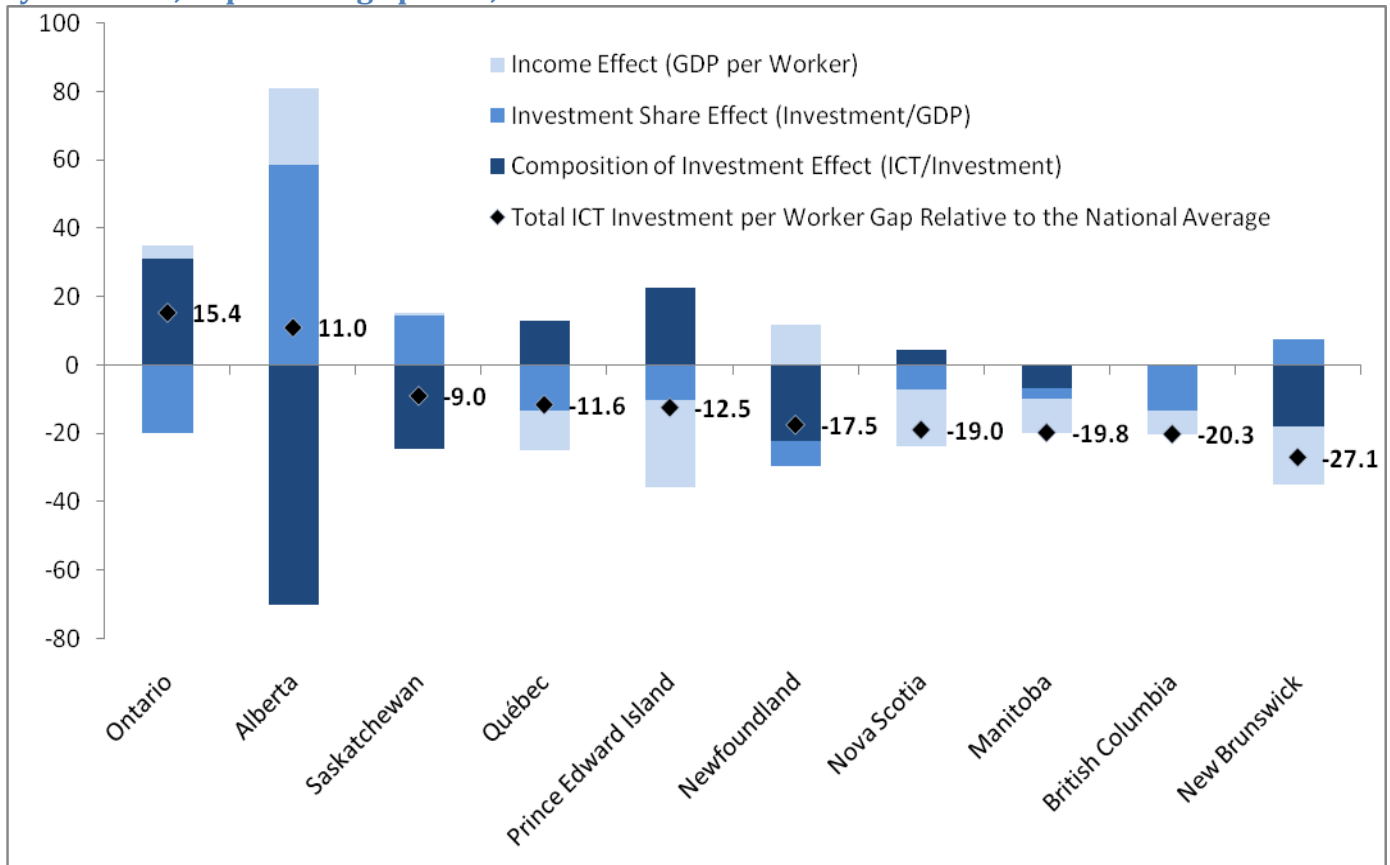
Summary Table 3: Productivity, Investment as a Share of GDP and ICT Investment as a Share of Investment by Province (chained 2002 dollars), 2007

| | Productivity (GDP per Worker) Chained \$2002 | Investment Share (Investment/GDP) Per Cent | Composition of Investment (ICT/Investment) Per Cent | ICT Share of GDP (ICT/GDP) Per Cent |
|----------------------|--|--|--|---|
| | A | B | C | D = B * C |
| Canada | \$78,038 | 17.5 | 24.6 | 4.3 |
| Newfoundland | 89,065 | 16.1 | 19.3 | 3.1 |
| Prince Edward Island | 59,582 | 15.7 | 31.4 | 4.9 |
| Nova Scotia | 64,884 | 16.2 | 25.8 | 4.2 |
| New Brunswick | 63,983 | 19.1 | 20.0 | 3.8 |
| Quebec | 69,087 | 15.2 | 28.2 | 4.3 |
| Ontario | 80,810 | 14.6 | 32.9 | 4.8 |
| Manitoba | 69,814 | 16.8 | 22.9 | 3.9 |
| Saskatchewan | 78,717 | 20.4 | 19.0 | 3.9 |
| Alberta | 96,698 | 30.5 | 12.6 | 3.8 |
| British Columbia | 72,012 | 15.1 | 24.6 | 3.7 |

⁴ See the Appendix for a mathematical representation of the decomposition formula.

In 2007, GDP per worker in Canada ranged from a high of \$96,698 (2002 chain dollars) in Alberta to a low of \$59,582 in Prince Edward Island. The non-residential investment shares ranged from a high of 30.5 per cent in Alberta to a low of 14.6 per cent in Ontario. Alberta's high share was linked to the high level of energy-related investment. The ICT share of investment ranged from a high of 32.6 per cent of nominal GDP in Ontario to a low of 12.6 per cent in Alberta. The low share in Alberta is related to the very low proportion of ICT investment in mining and oil and gas extraction, less than 1 per cent (Table 12 at the end of the report).

Chart 4: Real ICT Investment per Worker Gap Relative to the National Average, Decomposition by Province, in percentage points, 2007



Summary Table 4 provides estimates of the relative size of the gap between ICT investment per worker by province and the national average. Only two provinces were above the national average, Ontario 15.4 per cent above and Alberta 11.0 per cent above. The other eight provinces were below the national average. New Brunswick had the lowest level of ICT investment per worker, 27.1 per cent below the national average.

Decomposing the provincial ICT investment per worker figures according to Equation (1) allows us to investigate the factors behind for the cross-province variation. Chart 4 and Summary Table 4 provide estimates of the impact of the three components in each province in 2007 relative to the national average.⁵ It is clear that the cross-province

⁵ See Tables 6a-6c for estimates for the 1981-2007 period.

variation in per-worker ICT investment reflects variation in the three components in Equation (1).

Above average ICT investment per worker in Ontario and Alberta stems from different factors.⁶ In Ontario, it is mainly the higher ICT/GDP ratio, in turn due to the high ICT composition of investment, that explains the situation. Ontario's high ICT investment content reflects in part its industrial structure (Table 10 at the end of the report), as the province has above average output shares in a number of industries with high ICT investment/total investment ratios, such as finance, insurance and real estate, information and cultural industries, professional, technical and scientific services, and wholesale trade.

Summary Table 4: Real ICT Investment per Worker Gap Relative to the National Average, Decomposition by Province, 2007

| | Total ICT Investment per Worker Gap | Income Effect (GDP per Worker) | ICT Investment Intensity (ICT/GDP) | Investment Intensity Effect (Investment/GDP) | Composition of Investment Effect (ICT/Investment) |
|-----------------------------|--|---------------------------------------|---|---|--|
| | A = B + C | B | C = D + E | D | E |
| In Percentage Points | | | | | |
| Ontario | 15.4 | 3.8 | 11.6 | -19.8 | 31.4 |
| Alberta | 11.0 | 22.6 | -11.6 | 58.5 | -70.1 |
| Saskatchewan | -9.0 | 0.8 | -9.9 | 14.6 | -24.5 |
| Québec | -11.6 | -11.5 | -0.2 | -13.2 | 13.1 |
| Prince Edward Island | -12.5 | -25.3 | 12.8 | -10.1 | 22.9 |
| Newfoundland | -17.5 | 12.0 | -29.6 | -7.6 | -21.9 |
| Nova Scotia | -19.0 | -16.6 | -2.4 | -6.9 | 4.6 |
| Manitoba | -19.8 | -10.0 | -9.8 | -3.4 | -6.5 |
| British Columbia | -20.3 | -7.2 | -13.1 | -13.1 | 0.0 |
| New Brunswick | -27.1 | -17.0 | -10.1 | 7.8 | -17.8 |
| In Per Cent | | | | | |
| Ontario | 100.0 | 24.4 | 75.6 | -128.4 | 204.0 |
| Alberta | 100.0 | 205.7 | -105.7 | 532.6 | -638.3 |
| Saskatchewan | 100.0 | -9.1 | 109.1 | -161.2 | 270.3 |
| Québec | 100.0 | 98.4 | 1.6 | 113.7 | -112.0 |
| Prince Edward Island | 100.0 | 202.4 | -102.4 | 81.2 | -183.6 |
| Newfoundland | 100.0 | -68.5 | 168.5 | 43.4 | 125.1 |
| Nova Scotia | 100.0 | 87.5 | 12.5 | 36.4 | -24.0 |
| Manitoba | 100.0 | 50.4 | 49.6 | 17.0 | 32.6 |
| British Columbia | 100.0 | 35.5 | 64.5 | 64.7 | -0.2 |
| New Brunswick | 100.0 | 62.8 | 37.2 | -28.7 | 65.8 |

In Alberta, by contrast, above average ICT investment per worker stems completely from high GDP per worker. While Alberta has a very high investment rate, a

⁶ This decomposition was done using chained 2002 dollars estimates for ICT investment, total investment and GDP. The same decomposition using current dollar estimates showed no significant differences.

very small proportion of this investment is ICT investment. This means that ICT investment as a share of GDP in Alberta (3.8 per cent) is actually below the national average (4.3 per cent).

In terms of the eight provinces with ICT investment per worker below the national average, the income effect explains at least part of the gap in seven of the provinces (Saskatchewan was the exception) and was the most important factor (relative to ICT investment/GDP) in five provinces (Quebec, Prince Edward Island, Nova Scotia, Manitoba, and New Brunswick). In three provinces, Saskatchewan, British Columbia and Newfoundland, below average ICT investment/GDP ratios were the principal reason why the ICT investment per worker was below the national average. In Saskatchewan and Newfoundland this situation was explained by the low ICT content of investment, which was linked to the high proportion of investment in mining and oil and gas extraction. The situation in British Columbia was due to low investment/GDP ratio, at 15.1 per cent in 2007 the second lowest among the provinces.

IV. Conclusion

New data on ICT investment at the provincial level now make it possible to analyze ICT investment within Canada. We find that Ontario and Alberta are the only two provinces with above-average ICT per worker levels in 2007. New Brunswick (27.1 percent below average) and British Columbia (20.3 per cent below average) rank last and second to last in terms of ICT per worker in 2007. A simple decomposition shows that industrial structure, and particularly the importance of the mining and oil and gas extraction sector, have an effect on the provincial comparisons of ICT per worker. Yet, the significant differences in ICT investment between provinces suggest that policy differences may be important in driving ICT investment. Given the importance of ICT investment for productivity growth, identifying the underlying reasons behind provincial disparities in ICT investment intensity should rank high on any productivity research agenda.

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Table 1: Total Economy Investment in ICT, by province, millions of 2002 chained dollars, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 1,594 | 33 | 5 | 57 | 43 | 309 | 565 | 56 | 69 | 254 | 206 |
| 1982 | 1,569 | 31 | 5 | 56 | 46 | 298 | 578 | 55 | 57 | 228 | 214 |
| 1983 | 1,915 | 42 | 6 | 60 | 48 | 387 | 773 | 69 | 76 | 221 | 226 |
| 1984 | 2,333 | 49 | 8 | 85 | 60 | 492 | 950 | 87 | 88 | 246 | 264 |
| 1985 | 2,674 | 51 | 9 | 79 | 59 | 576 | 1,177 | 109 | 89 | 225 | 292 |
| 1986 | 3,270 | 84 | 13 | 112 | 77 | 710 | 1,413 | 125 | 114 | 283 | 332 |
| 1987 | 4,439 | 81 | 14 | 124 | 93 | 996 | 2,013 | 137 | 152 | 399 | 414 |
| 1988 | 5,021 | 80 | 14 | 140 | 107 | 1,137 | 2,289 | 154 | 144 | 458 | 477 |
| 1989 | 6,229 | 113 | 18 | 201 | 119 | 1,372 | 2,904 | 181 | 161 | 518 | 615 |
| 1990 | 6,866 | 103 | 19 | 199 | 140 | 1,408 | 3,265 | 190 | 170 | 658 | 691 |
| 1991 | 7,639 | 95 | 19 | 181 | 144 | 1,592 | 3,714 | 214 | 175 | 659 | 807 |
| 1992 | 8,968 | 109 | 23 | 188 | 198 | 1,928 | 4,401 | 204 | 204 | 813 | 877 |
| 1993 | 9,652 | 121 | 31 | 250 | 228 | 2,063 | 4,524 | 252 | 216 | 885 | 1,066 |
| 1994 | 11,007 | 115 | 33 | 308 | 202 | 2,275 | 5,054 | 241 | 255 | 1,217 | 1,275 |
| 1995 | 12,276 | 130 | 32 | 273 | 220 | 2,592 | 5,780 | 295 | 345 | 1,162 | 1,402 |
| 1996 | 14,276 | 145 | 37 | 297 | 280 | 3,124 | 6,867 | 351 | 366 | 1,245 | 1,525 |
| 1997 | 17,474 | 185 | 47 | 418 | 300 | 3,883 | 8,050 | 453 | 502 | 1,715 | 1,866 |
| 1998 | 21,080 | 221 | 45 | 409 | 358 | 4,822 | 8,920 | 523 | 501 | 2,829 | 2,358 |
| 1999 | 26,110 | 277 | 61 | 545 | 488 | 5,934 | 11,095 | 819 | 820 | 2,923 | 3,021 |
| 2000 | 29,809 | 229 | 83 | 626 | 482 | 6,506 | 13,830 | 831 | 652 | 3,471 | 2,986 |
| 2001 | 30,750 | 256 | 81 | 622 | 507 | 6,402 | 14,561 | 843 | 723 | 3,579 | 3,052 |
| 2002 | 30,114 | 270 | 92 | 633 | 505 | 6,430 | 13,826 | 941 | 729 | 3,345 | 3,204 |
| 2003 | 33,544 | 349 | 83 | 724 | 519 | 7,363 | 15,097 | 972 | 757 | 4,126 | 3,406 |
| 2004 | 38,358 | 410 | 98 | 754 | 637 | 8,439 | 17,276 | 1,111 | 847 | 4,716 | 3,911 |
| 2005 | 42,388 | 464 | 121 | 861 | 767 | 9,432 | 18,888 | 1,189 | 982 | 5,329 | 4,177 |
| 2006 | 48,003 | 511 | 154 | 988 | 757 | 10,050 | 21,383 | 1,346 | 1,430 | 6,086 | 5,120 |
| 2007 | 56,561 | 600 | 203 | 1,216 | 887 | 11,412 | 25,516 | 1,603 | 1,531 | 7,293 | 6,059 |

Compound Annual Growth Rates, per cent

| | | | | | | | | | | | |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1981-2007 | 14.71 | 11.83 | 15.25 | 12.50 | 12.32 | 14.90 | 15.79 | 13.81 | 12.64 | 13.78 | 13.90 |
| 1981-2000 | 16.66 | 10.78 | 15.85 | 13.45 | 13.52 | 17.40 | 18.33 | 15.30 | 12.51 | 14.75 | 15.13 |
| 2000-2007 | 9.58 | 14.74 | 13.64 | 9.95 | 9.10 | 8.36 | 9.14 | 9.85 | 12.97 | 11.19 | 10.64 |

Source: Unpublished data, Investment and Capital Stock Division (ICSD), Statistics Canada

Table 1a: Total Economy Investment in Telecommunication Equipment, by province, millions of 2002 chained dollars, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 2,712 | 52 | 10 | 100 | 59 | 545 | 898 | 102 | 105 | 458 | 351 |
| 1982 | 2,471 | 43 | 8 | 80 | 58 | 510 | 808 | 102 | 93 | 372 | 367 |
| 1983 | 2,106 | 44 | 8 | 71 | 51 | 409 | 770 | 87 | 90 | 229 | 323 |
| 1984 | 2,320 | 50 | 9 | 103 | 58 | 465 | 867 | 102 | 80 | 228 | 336 |
| 1985 | 2,266 | 49 | 12 | 88 | 54 | 452 | 860 | 143 | 89 | 206 | 294 |
| 1986 | 2,472 | 67 | 15 | 110 | 62 | 500 | 948 | 129 | 100 | 197 | 323 |
| 1987 | 3,027 | 63 | 14 | 98 | 63 | 600 | 1,376 | 112 | 122 | 274 | 280 |
| 1988 | 3,578 | 64 | 15 | 119 | 76 | 726 | 1,588 | 127 | 127 | 344 | 358 |
| 1989 | 4,125 | 109 | 19 | 183 | 87 | 854 | 1,755 | 173 | 145 | 330 | 432 |
| 1990 | 4,451 | 95 | 19 | 172 | 95 | 785 | 2,020 | 148 | 126 | 515 | 447 |
| 1991 | 4,536 | 87 | 15 | 136 | 95 | 811 | 2,183 | 163 | 109 | 394 | 488 |
| 1992 | 4,907 | 89 | 16 | 123 | 118 | 1,037 | 2,380 | 102 | 118 | 416 | 478 |
| 1993 | 4,640 | 91 | 19 | 151 | 116 | 942 | 2,059 | 152 | 99 | 399 | 597 |
| 1994 | 4,448 | 77 | 27 | 165 | 114 | 903 | 1,888 | 100 | 115 | 435 | 589 |
| 1995 | 4,646 | 58 | 18 | 112 | 103 | 1,027 | 1,891 | 124 | 154 | 429 | 703 |
| 1996 | 4,690 | 53 | 15 | 94 | 170 | 1,058 | 2,001 | 149 | 150 | 412 | 562 |
| 1997 | 6,100 | 77 | 22 | 148 | 159 | 1,485 | 2,458 | 72 | 203 | 777 | 651 |
| 1998 | 5,510 | 63 | 5 | 103 | 96 | 1,691 | 2,393 | 45 | 165 | 432 | 452 |
| 1999 | 6,963 | 93 | 12 | 145 | 152 | 1,608 | 3,280 | 179 | 224 | 579 | 629 |
| 2000 | 8,523 | 120 | 23 | 291 | 198 | 1,842 | 3,760 | 221 | 222 | 929 | 848 |
| 2001 | 8,276 | 103 | 20 | 236 | 157 | 1,515 | 3,881 | 245 | 160 | 1,130 | 759 |
| 2002 | 7,463 | 113 | 26 | 238 | 197 | 1,462 | 2,844 | 329 | 191 | 1,065 | 917 |
| 2003 | 7,500 | 115 | 16 | 212 | 173 | 1,622 | 3,125 | 250 | 144 | 965 | 822 |
| 2004 | 8,087 | 131 | 19 | 196 | 195 | 1,672 | 3,282 | 325 | 220 | 927 | 1,061 |
| 2005 | 8,269 | 123 | 18 | 178 | 233 | 1,569 | 3,573 | 326 | 258 | 1,075 | 851 |
| 2006 | 8,974 | 128 | 21 | 241 | 190 | 1,663 | 3,738 | 309 | 358 | 1,150 | 1,115 |
| 2007 | 10,588 | 159 | 31 | 342 | 245 | 1,954 | 4,466 | 364 | 330 | 1,329 | 1,276 |

Compound Annual Growth Rates, per cent

| | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|------|
| 1981-2007 | 5.38 | 4.40 | 4.61 | 4.86 | 5.60 | 5.03 | 6.36 | 5.03 | 4.50 | 4.18 | 5.09 |
| 1981-2000 | 6.21 | 4.51 | 4.73 | 5.81 | 6.53 | 6.62 | 7.83 | 4.17 | 4.02 | 3.79 | 4.75 |
| 2000-2007 | 3.15 | 4.12 | 4.30 | 2.32 | 3.12 | 0.84 | 2.49 | 7.40 | 5.82 | 5.25 | 6.01 |

Source: Unpublished data, Investment and Capital Stock Division (ICSD), Statistics Canada

Table 1b: Total Economy Investment in Software, by province, millions of 2002 chained dollars, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 765 | 11 | 2 | 25 | 14 | 142 | 306 | 24 | 32 | 115 | 87 |
| 1982 | 913 | 13 | 3 | 31 | 20 | 168 | 382 | 29 | 28 | 132 | 97 |
| 1983 | 1,080 | 17 | 3 | 31 | 21 | 229 | 461 | 37 | 39 | 132 | 101 |
| 1984 | 1,327 | 19 | 4 | 39 | 25 | 293 | 575 | 47 | 47 | 144 | 124 |
| 1985 | 1,533 | 29 | 4 | 36 | 29 | 331 | 690 | 54 | 49 | 141 | 160 |
| 1986 | 1,956 | 41 | 6 | 50 | 31 | 431 | 908 | 72 | 64 | 170 | 169 |
| 1987 | 2,303 | 36 | 7 | 55 | 46 | 503 | 1,067 | 74 | 74 | 203 | 226 |
| 1988 | 2,925 | 37 | 8 | 69 | 56 | 653 | 1,379 | 91 | 76 | 265 | 275 |
| 1989 | 3,507 | 47 | 10 | 96 | 62 | 784 | 1,672 | 97 | 80 | 297 | 343 |
| 1990 | 4,155 | 42 | 11 | 103 | 70 | 904 | 2,018 | 111 | 95 | 355 | 426 |
| 1991 | 4,462 | 39 | 13 | 100 | 66 | 938 | 2,218 | 123 | 102 | 373 | 472 |
| 1992 | 4,983 | 38 | 12 | 95 | 82 | 1,088 | 2,458 | 124 | 114 | 461 | 494 |
| 1993 | 6,084 | 49 | 14 | 157 | 126 | 1,320 | 2,943 | 155 | 134 | 558 | 604 |
| 1994 | 7,089 | 57 | 17 | 156 | 106 | 1,540 | 3,392 | 183 | 141 | 697 | 775 |
| 1995 | 7,263 | 72 | 17 | 142 | 115 | 1,559 | 3,500 | 195 | 176 | 675 | 777 |
| 1996 | 8,214 | 65 | 19 | 169 | 120 | 1,817 | 4,046 | 201 | 184 | 709 | 850 |
| 1997 | 9,462 | 74 | 23 | 213 | 121 | 2,026 | 4,514 | 287 | 276 | 846 | 1,047 |
| 1998 | 10,904 | 89 | 21 | 178 | 162 | 2,062 | 5,363 | 198 | 189 | 1,456 | 1,161 |
| 1999 | 12,081 | 158 | 17 | 239 | 239 | 2,946 | 4,689 | 441 | 396 | 1,359 | 1,558 |
| 2000 | 12,146 | 62 | 30 | 193 | 188 | 2,571 | 5,583 | 333 | 266 | 1,750 | 1,158 |
| 2001 | 13,242 | 88 | 37 | 249 | 228 | 2,823 | 6,045 | 304 | 345 | 1,574 | 1,518 |
| 2002 | 12,881 | 81 | 35 | 230 | 205 | 2,771 | 6,193 | 312 | 251 | 1,462 | 1,308 |
| 2003 | 14,816 | 99 | 40 | 260 | 212 | 3,478 | 6,666 | 394 | 344 | 1,849 | 1,421 |
| 2004 | 15,626 | 130 | 43 | 269 | 241 | 3,738 | 7,201 | 391 | 333 | 1,753 | 1,470 |
| 2005 | 16,565 | 153 | 56 | 294 | 281 | 4,070 | 7,347 | 438 | 357 | 1,957 | 1,548 |
| 2006 | 18,600 | 183 | 79 | 340 | 309 | 4,252 | 8,126 | 512 | 553 | 2,299 | 1,877 |
| 2007 | 20,598 | 206 | 97 | 373 | 329 | 4,506 | 9,118 | 569 | 583 | 2,608 | 2,123 |

Compound Annual Growth Rates, per cent

| | | | | | | | | | | | |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1981-2007 | 13.50 | 11.98 | 15.68 | 11.01 | 12.85 | 14.22 | 13.95 | 12.90 | 11.81 | 12.76 | 13.09 |
| 1981-2000 | 15.66 | 9.64 | 14.83 | 11.44 | 14.57 | 16.47 | 16.51 | 14.78 | 11.79 | 15.42 | 14.62 |
| 2000-2007 | 7.84 | 18.59 | 18.01 | 9.85 | 8.34 | 8.35 | 7.26 | 7.95 | 11.86 | 5.86 | 9.05 |

Source: Unpublished data, Investment and Capital Stock Division (ICSD), Statistics Canada

Table 1c: Total Economy Investment in Computers and Related Equipment, by province, millions of 2002 chained dollars, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 87 | 1 | 0 | 2 | 2 | 17 | 35 | 3 | 3 | 13 | 10 |
| 1982 | 83 | 1 | 0 | 2 | 2 | 16 | 36 | 2 | 2 | 11 | 10 |
| 1983 | 138 | 2 | 0 | 3 | 2 | 29 | 63 | 5 | 4 | 16 | 13 |
| 1984 | 179 | 3 | 0 | 5 | 3 | 39 | 80 | 6 | 6 | 19 | 17 |
| 1985 | 229 | 2 | 0 | 5 | 3 | 53 | 115 | 7 | 6 | 17 | 21 |
| 1986 | 295 | 5 | 1 | 8 | 5 | 67 | 136 | 10 | 8 | 27 | 26 |
| 1987 | 479 | 5 | 1 | 11 | 7 | 118 | 222 | 14 | 14 | 43 | 42 |
| 1988 | 475 | 5 | 1 | 10 | 7 | 118 | 224 | 14 | 10 | 41 | 43 |
| 1989 | 651 | 6 | 1 | 14 | 7 | 146 | 332 | 15 | 12 | 55 | 61 |
| 1990 | 677 | 6 | 1 | 14 | 10 | 145 | 340 | 20 | 15 | 60 | 66 |
| 1991 | 864 | 5 | 2 | 15 | 13 | 196 | 424 | 23 | 18 | 78 | 89 |
| 1992 | 1,171 | 11 | 3 | 22 | 22 | 239 | 593 | 32 | 25 | 110 | 113 |
| 1993 | 1,213 | 12 | 6 | 23 | 21 | 251 | 587 | 33 | 28 | 118 | 133 |
| 1994 | 1,551 | 11 | 4 | 45 | 18 | 286 | 729 | 33 | 39 | 211 | 175 |
| 1995 | 2,022 | 17 | 6 | 48 | 25 | 390 | 1,028 | 49 | 58 | 195 | 201 |
| 1996 | 2,676 | 29 | 9 | 56 | 29 | 554 | 1,346 | 69 | 67 | 230 | 284 |
| 1997 | 3,393 | 37 | 11 | 83 | 44 | 723 | 1,634 | 127 | 82 | 289 | 360 |
| 1998 | 5,269 | 58 | 18 | 118 | 91 | 1,209 | 1,791 | 232 | 145 | 867 | 720 |
| 1999 | 7,319 | 36 | 29 | 151 | 99 | 1,527 | 3,261 | 217 | 212 | 903 | 849 |
| 2000 | 9,165 | 50 | 29 | 144 | 99 | 2,108 | 4,501 | 277 | 173 | 795 | 959 |
| 2001 | 9,271 | 66 | 25 | 139 | 121 | 2,071 | 4,660 | 292 | 222 | 875 | 781 |
| 2002 | 9,770 | 77 | 31 | 165 | 104 | 2,197 | 4,788 | 299 | 286 | 818 | 978 |
| 2003 | 11,216 | 135 | 27 | 253 | 135 | 2,252 | 5,308 | 327 | 267 | 1,314 | 1,164 |
| 2004 | 14,849 | 148 | 37 | 291 | 204 | 3,063 | 6,871 | 399 | 295 | 2,099 | 1,400 |
| 2005 | 18,093 | 188 | 47 | 402 | 262 | 3,908 | 8,219 | 426 | 378 | 2,374 | 1,845 |
| 2006 | 21,197 | 195 | 52 | 410 | 260 | 4,300 | 9,957 | 533 | 526 | 2,711 | 2,202 |
| 2007 | 27,081 | 232 | 76 | 515 | 330 | 5,319 | 12,801 | 708 | 648 | 3,555 | 2,824 |

Compound Annual Growth Rates, per cent

| | | | | | | | | | | | |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1981-2007 | 24.72 | 22.82 | 26.12 | 23.88 | 21.87 | 24.68 | 25.46 | 23.91 | 22.55 | 24.06 | 24.40 |
| 1981-2000 | 27.80 | 22.16 | 30.66 | 25.34 | 23.05 | 28.80 | 29.09 | 27.62 | 23.23 | 24.14 | 27.37 |
| 2000-2007 | 16.74 | 24.61 | 14.57 | 20.01 | 18.70 | 14.14 | 16.10 | 14.38 | 20.74 | 23.86 | 16.69 |

Source: Unpublished data, Investment and Capital Stock Division (ICSD), Statistics Canada

Table 2: Total Economy Investment in ICT, by province, thousands of current dollars, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 5,699 | 83 | 15 | 168 | 121 | 1,136 | 2,134 | 189 | 221 | 930 | 669 |
| 1982 | 5,796 | 81 | 15 | 172 | 133 | 1,137 | 2,247 | 197 | 187 | 864 | 724 |
| 1983 | 6,202 | 101 | 17 | 168 | 123 | 1,294 | 2,591 | 220 | 225 | 738 | 687 |
| 1984 | 7,147 | 112 | 21 | 229 | 146 | 1,553 | 2,989 | 263 | 247 | 775 | 770 |
| 1985 | 7,613 | 111 | 22 | 200 | 137 | 1,682 | 3,414 | 312 | 235 | 661 | 800 |
| 1986 | 8,594 | 174 | 31 | 267 | 167 | 1,905 | 3,753 | 337 | 283 | 770 | 852 |
| 1987 | 10,759 | 164 | 32 | 283 | 191 | 2,444 | 4,932 | 346 | 352 | 965 | 998 |
| 1988 | 11,539 | 154 | 31 | 303 | 210 | 2,629 | 5,324 | 370 | 319 | 1,049 | 1,089 |
| 1989 | 13,006 | 203 | 38 | 402 | 215 | 2,869 | 6,126 | 398 | 330 | 1,076 | 1,277 |
| 1990 | 13,641 | 179 | 38 | 381 | 243 | 2,793 | 6,546 | 401 | 334 | 1,303 | 1,366 |
| 1991 | 13,507 | 151 | 35 | 316 | 224 | 2,796 | 6,617 | 403 | 307 | 1,163 | 1,424 |
| 1992 | 14,823 | 168 | 39 | 310 | 290 | 3,158 | 7,323 | 359 | 337 | 1,339 | 1,446 |
| 1993 | 15,686 | 185 | 53 | 406 | 329 | 3,319 | 7,400 | 435 | 350 | 1,431 | 1,732 |
| 1994 | 17,190 | 170 | 56 | 481 | 282 | 3,522 | 7,941 | 400 | 397 | 1,885 | 1,990 |
| 1995 | 17,941 | 180 | 51 | 398 | 289 | 3,755 | 8,504 | 461 | 499 | 1,677 | 2,050 |
| 1996 | 19,255 | 187 | 55 | 398 | 352 | 4,199 | 9,266 | 509 | 490 | 1,658 | 2,074 |
| 1997 | 22,568 | 219 | 66 | 528 | 364 | 5,042 | 10,311 | 618 | 644 | 2,282 | 2,405 |
| 1998 | 25,656 | 265 | 60 | 498 | 423 | 5,859 | 10,959 | 661 | 613 | 3,290 | 2,906 |
| 1999 | 29,116 | 310 | 71 | 603 | 530 | 6,615 | 12,557 | 923 | 915 | 3,068 | 3,380 |
| 2000 | 31,866 | 250 | 91 | 666 | 509 | 6,953 | 14,962 | 899 | 701 | 3,512 | 3,203 |
| 2001 | 32,086 | 275 | 87 | 654 | 529 | 6,656 | 15,337 | 888 | 761 | 3,572 | 3,203 |
| 2002 | 30,114 | 270 | 92 | 633 | 505 | 6,430 | 13,826 | 941 | 729 | 3,345 | 3,204 |
| 2003 | 30,455 | 327 | 77 | 660 | 480 | 6,677 | 13,774 | 889 | 687 | 3,620 | 3,129 |
| 2004 | 31,642 | 344 | 82 | 617 | 538 | 6,985 | 14,310 | 921 | 697 | 3,751 | 3,263 |
| 2005 | 32,343 | 360 | 94 | 649 | 603 | 7,250 | 14,457 | 914 | 749 | 3,905 | 3,222 |
| 2006 | 34,045 | 367 | 110 | 687 | 558 | 7,164 | 15,208 | 964 | 1,013 | 4,178 | 3,659 |
| 2007 | 35,652 | 384 | 129 | 749 | 590 | 7,265 | 16,071 | 1,025 | 967 | 4,451 | 3,853 |

Compound Annual Growth Rates, per cent

| | | | | | | | | | | | |
|-----------|------|------|-------|------|------|-------|-------|------|------|------|------|
| 1981-2007 | 7.31 | 6.07 | 8.70 | 5.93 | 6.28 | 7.40 | 8.07 | 6.71 | 5.84 | 6.21 | 6.97 |
| 1981-2000 | 9.48 | 5.97 | 10.07 | 7.53 | 7.85 | 10.00 | 10.79 | 8.55 | 6.26 | 7.25 | 8.59 |
| 2000-2007 | 1.62 | 6.34 | 5.07 | 1.70 | 2.13 | 0.63 | 1.03 | 1.88 | 4.71 | 3.44 | 2.68 |

Source: Unpublished data, Investment and Capital Stock Division (ICSD), Statistics Canada

Table 2a: Provincial Shares of Total Economy ICT Investment (current dollars), in per cent, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 100.0 | 1.5 | 0.3 | 2.9 | 2.1 | 19.9 | 37.5 | 3.3 | 3.9 | 16.3 | 11.7 |
| 1982 | 100.0 | 1.4 | 0.3 | 3.0 | 2.3 | 19.6 | 38.8 | 3.4 | 3.2 | 14.9 | 12.5 |
| 1983 | 100.0 | 1.6 | 0.3 | 2.7 | 2.0 | 20.9 | 41.8 | 3.5 | 3.6 | 11.9 | 11.1 |
| 1984 | 100.0 | 1.6 | 0.3 | 3.2 | 2.0 | 21.7 | 41.8 | 3.7 | 3.5 | 10.8 | 10.8 |
| 1985 | 100.0 | 1.5 | 0.3 | 2.6 | 1.8 | 22.1 | 44.8 | 4.1 | 3.1 | 8.7 | 10.5 |
| 1986 | 100.0 | 2.0 | 0.4 | 3.1 | 1.9 | 22.2 | 43.7 | 3.9 | 3.3 | 9.0 | 9.9 |
| 1987 | 100.0 | 1.5 | 0.3 | 2.6 | 1.8 | 22.7 | 45.8 | 3.2 | 3.3 | 9.0 | 9.3 |
| 1988 | 100.0 | 1.3 | 0.3 | 2.6 | 1.8 | 22.8 | 46.1 | 3.2 | 2.8 | 9.1 | 9.4 |
| 1989 | 100.0 | 1.6 | 0.3 | 3.1 | 1.7 | 22.1 | 47.1 | 3.1 | 2.5 | 8.3 | 9.8 |
| 1990 | 100.0 | 1.3 | 0.3 | 2.8 | 1.8 | 20.5 | 48.0 | 2.9 | 2.4 | 9.6 | 10.0 |
| 1991 | 100.0 | 1.1 | 0.3 | 2.3 | 1.7 | 20.7 | 49.0 | 3.0 | 2.3 | 8.6 | 10.5 |
| 1992 | 100.0 | 1.1 | 0.3 | 2.1 | 2.0 | 21.3 | 49.4 | 2.4 | 2.3 | 9.0 | 9.8 |
| 1993 | 100.0 | 1.2 | 0.3 | 2.6 | 2.1 | 21.2 | 47.2 | 2.8 | 2.2 | 9.1 | 11.0 |
| 1994 | 100.0 | 1.0 | 0.3 | 2.8 | 1.6 | 20.5 | 46.2 | 2.3 | 2.3 | 11.0 | 11.6 |
| 1995 | 100.0 | 1.0 | 0.3 | 2.2 | 1.6 | 20.9 | 47.4 | 2.6 | 2.8 | 9.3 | 11.4 |
| 1996 | 100.0 | 1.0 | 0.3 | 2.1 | 1.8 | 21.8 | 48.1 | 2.6 | 2.5 | 8.6 | 10.8 |
| 1997 | 100.0 | 1.0 | 0.3 | 2.3 | 1.6 | 22.3 | 45.7 | 2.7 | 2.9 | 10.1 | 10.7 |
| 1998 | 100.0 | 1.0 | 0.2 | 1.9 | 1.6 | 22.8 | 42.7 | 2.6 | 2.4 | 12.8 | 11.3 |
| 1999 | 100.0 | 1.1 | 0.2 | 2.1 | 1.8 | 22.7 | 43.1 | 3.2 | 3.1 | 10.5 | 11.6 |
| 2000 | 100.0 | 0.8 | 0.3 | 2.1 | 1.6 | 21.8 | 47.0 | 2.8 | 2.2 | 11.0 | 10.1 |
| 2001 | 100.0 | 0.9 | 0.3 | 2.0 | 1.6 | 20.7 | 47.8 | 2.8 | 2.4 | 11.1 | 10.0 |
| 2002 | 100.0 | 0.9 | 0.3 | 2.1 | 1.7 | 21.4 | 45.9 | 3.1 | 2.4 | 11.1 | 10.6 |
| 2003 | 100.0 | 1.1 | 0.3 | 2.2 | 1.6 | 21.9 | 45.2 | 2.9 | 2.3 | 11.9 | 10.3 |
| 2004 | 100.0 | 1.1 | 0.3 | 2.0 | 1.7 | 22.1 | 45.2 | 2.9 | 2.2 | 11.9 | 10.3 |
| 2005 | 100.0 | 1.1 | 0.3 | 2.0 | 1.9 | 22.4 | 44.7 | 2.8 | 2.3 | 12.1 | 10.0 |
| 2006 | 100.0 | 1.1 | 0.3 | 2.0 | 1.6 | 21.0 | 44.7 | 2.8 | 3.0 | 12.3 | 10.7 |
| 2007 | 100.0 | 1.1 | 0.4 | 2.1 | 1.7 | 20.4 | 45.1 | 2.9 | 2.7 | 12.5 | 10.8 |

Compound Annual Growth Rates, per cent

| | | | | | | | | | | | |
|-----------|---|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1981-2007 | - | -1.15 | 1.30 | -1.29 | -0.95 | 0.08 | 0.72 | -0.56 | -1.37 | -1.02 | -0.32 |
| 1981-2000 | - | -3.21 | 0.53 | -1.79 | -1.49 | 0.48 | 1.20 | -0.85 | -2.94 | -2.04 | -0.81 |
| 2000-2007 | - | 4.65 | 3.40 | 0.08 | 0.51 | -0.97 | -0.58 | 0.26 | 3.04 | 1.80 | 1.04 |

Source: Table 2

Table 3a: ICT Investment as a Share of Total Investment (2002 chained dollars) by Province, in per cent, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 1.7 | 2.0 | 2.3 | 2.5 | 2.3 | 2.0 | 2.3 | 2.0 | 1.2 | 1.1 | 1.7 |
| 1982 | 1.9 | 1.6 | 2.3 | 2.1 | 2.3 | 2.2 | 2.6 | 2.5 | 1.3 | 1.1 | 2.2 |
| 1983 | 2.5 | 2.1 | 2.9 | 2.1 | 3.1 | 2.9 | 3.4 | 3.0 | 1.7 | 1.3 | 2.5 |
| 1984 | 2.9 | 2.2 | 3.5 | 3.2 | 3.5 | 3.3 | 3.9 | 3.1 | 1.9 | 1.6 | 3.0 |
| 1985 | 3.1 | 2.5 | 3.6 | 3.2 | 3.3 | 3.5 | 4.3 | 3.5 | 1.9 | 1.4 | 3.0 |
| 1986 | 3.7 | 4.0 | 5.1 | 4.5 | 4.5 | 4.2 | 4.5 | 3.7 | 2.6 | 1.9 | 3.9 |
| 1987 | 4.7 | 4.4 | 5.1 | 5.3 | 5.0 | 5.2 | 5.7 | 4.2 | 3.2 | 2.6 | 4.4 |
| 1988 | 4.7 | 4.2 | 4.3 | 5.0 | 5.0 | 5.3 | 5.7 | 4.4 | 2.9 | 2.6 | 4.3 |
| 1989 | 5.4 | 5.9 | 5.4 | 6.4 | 4.7 | 5.8 | 6.8 | 5.1 | 3.5 | 3.1 | 4.7 |
| 1990 | 6.0 | 5.8 | 6.2 | 6.8 | 5.7 | 5.9 | 7.9 | 5.2 | 3.5 | 3.8 | 5.2 |
| 1991 | 6.8 | 5.0 | 4.9 | 6.5 | 6.0 | 7.0 | 9.0 | 6.2 | 3.4 | 4.0 | 5.9 |
| 1992 | 8.6 | 5.4 | 6.8 | 7.9 | 8.8 | 8.9 | 11.5 | 6.0 | 4.6 | 5.1 | 7.0 |
| 1993 | 9.3 | 5.0 | 9.5 | 10.5 | 11.2 | 9.6 | 12.7 | 7.5 | 5.0 | 5.0 | 8.5 |
| 1994 | 9.7 | 4.1 | 8.0 | 12.4 | 10.1 | 10.2 | 13.1 | 7.3 | 5.3 | 5.9 | 8.6 |
| 1995 | 10.6 | 4.4 | 6.9 | 11.6 | 9.4 | 11.8 | 14.2 | 8.3 | 6.9 | 5.6 | 9.7 |
| 1996 | 12.1 | 6.6 | 7.6 | 12.6 | 11.3 | 14.0 | 15.8 | 9.4 | 6.6 | 6.0 | 11.0 |
| 1997 | 12.8 | 7.4 | 13.5 | 12.8 | 13.5 | 16.1 | 16.7 | 10.0 | 6.7 | 6.4 | 11.7 |
| 1998 | 14.8 | 8.9 | 11.9 | 11.2 | 13.5 | 18.3 | 17.9 | 11.5 | 7.8 | 9.4 | 15.7 |
| 1999 | 17.0 | 8.3 | 13.9 | 12.0 | 13.9 | 20.5 | 20.1 | 16.8 | 12.5 | 10.1 | 18.6 |
| 2000 | 18.6 | 7.8 | 18.7 | 16.5 | 14.1 | 21.7 | 24.6 | 17.5 | 10.0 | 10.1 | 17.8 |
| 2001 | 18.8 | 9.2 | 17.4 | 15.8 | 19.0 | 22.1 | 26.0 | 17.4 | 11.4 | 9.5 | 17.3 |
| 2002 | 18.9 | 9.9 | 18.8 | 14.8 | 19.4 | 22.0 | 24.9 | 19.4 | 12.4 | 9.5 | 19.0 |
| 2003 | 19.7 | 12.0 | 16.4 | 17.3 | 17.6 | 23.7 | 25.6 | 18.7 | 11.8 | 10.6 | 18.9 |
| 2004 | 20.8 | 12.5 | 19.4 | 18.6 | 19.8 | 24.4 | 28.1 | 20.2 | 13.2 | 10.8 | 19.8 |
| 2005 | 20.9 | 13.1 | 22.4 | 20.0 | 21.6 | 27.3 | 28.7 | 21.8 | 13.0 | 10.0 | 19.0 |
| 2006 | 21.8 | 14.5 | 25.4 | 21.3 | 19.9 | 27.5 | 29.8 | 21.4 | 17.5 | 10.5 | 21.2 |
| 2007 | 24.6 | 19.3 | 31.4 | 25.8 | 20.0 | 28.2 | 32.9 | 22.9 | 19.0 | 12.6 | 24.6 |

Source: CSLS calculations from unpublished data, Investment and Capital Stock Division (ICSD), Statistics Canada

Table 3b: ICT Investment as a Share of GDP (2002 chained dollars) by Province, in per cent, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 0.2 | 0.4 | 0.2 | 0.4 | 0.4 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 |
| 1982 | 0.2 | 0.3 | 0.2 | 0.3 | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 |
| 1983 | 0.3 | 0.4 | 0.3 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| 1984 | 0.3 | 0.5 | 0.3 | 0.5 | 0.4 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 |
| 1985 | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 |
| 1986 | 0.4 | 0.8 | 0.5 | 0.6 | 0.5 | 0.4 | 0.5 | 0.4 | 0.4 | 0.3 | 0.4 |
| 1987 | 0.6 | 0.8 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.5 | 0.6 | 0.5 | 0.5 |
| 1988 | 0.6 | 0.7 | 0.5 | 0.7 | 0.7 | 0.6 | 0.7 | 0.5 | 0.6 | 0.5 | 0.5 |
| 1989 | 0.8 | 1.0 | 0.7 | 1.0 | 0.7 | 0.7 | 0.8 | 0.6 | 0.6 | 0.5 | 0.6 |
| 1990 | 0.8 | 0.9 | 0.7 | 1.0 | 0.9 | 0.8 | 1.0 | 0.6 | 0.6 | 0.7 | 0.7 |
| 1991 | 0.9 | 0.8 | 0.7 | 0.9 | 0.9 | 0.9 | 1.1 | 0.7 | 0.6 | 0.7 | 0.8 |
| 1992 | 1.1 | 0.9 | 0.8 | 0.9 | 1.2 | 1.1 | 1.4 | 0.7 | 0.8 | 0.8 | 0.8 |
| 1993 | 1.2 | 1.0 | 1.1 | 1.2 | 1.4 | 1.1 | 1.4 | 0.9 | 0.7 | 0.8 | 1.0 |
| 1994 | 1.3 | 1.0 | 1.1 | 1.5 | 1.2 | 1.2 | 1.5 | 0.8 | 0.8 | 1.1 | 1.1 |
| 1995 | 1.4 | 1.0 | 1.0 | 1.3 | 1.3 | 1.3 | 1.6 | 1.0 | 1.1 | 1.0 | 1.2 |
| 1996 | 1.6 | 1.2 | 1.1 | 1.4 | 1.6 | 1.6 | 1.9 | 1.1 | 1.2 | 1.0 | 1.3 |
| 1997 | 1.8 | 1.5 | 1.5 | 1.9 | 1.7 | 1.9 | 2.1 | 1.4 | 1.5 | 1.3 | 1.5 |
| 1998 | 2.1 | 1.7 | 1.3 | 1.8 | 2.0 | 2.3 | 2.2 | 1.6 | 1.5 | 2.1 | 1.9 |
| 1999 | 2.5 | 2.1 | 1.7 | 2.2 | 2.5 | 2.7 | 2.6 | 2.4 | 2.4 | 2.1 | 2.4 |
| 2000 | 2.7 | 1.6 | 2.3 | 2.5 | 2.4 | 2.8 | 3.0 | 2.3 | 1.9 | 2.4 | 2.3 |
| 2001 | 2.7 | 1.8 | 2.3 | 2.4 | 2.5 | 2.7 | 3.1 | 2.3 | 2.1 | 2.4 | 2.3 |
| 2002 | 2.6 | 1.6 | 2.5 | 2.3 | 2.4 | 2.7 | 2.9 | 2.6 | 2.1 | 2.2 | 2.3 |
| 2003 | 2.9 | 2.0 | 2.2 | 2.6 | 2.4 | 3.0 | 3.1 | 2.6 | 2.1 | 2.7 | 2.4 |
| 2004 | 3.2 | 2.4 | 2.5 | 2.7 | 2.9 | 3.4 | 3.5 | 2.9 | 2.3 | 2.9 | 2.7 |
| 2005 | 3.4 | 2.7 | 3.1 | 3.0 | 3.5 | 3.7 | 3.7 | 3.0 | 2.5 | 3.1 | 2.7 |
| 2006 | 3.7 | 2.9 | 3.8 | 3.5 | 3.3 | 3.9 | 4.1 | 3.3 | 3.7 | 3.3 | 3.2 |
| 2007 | 4.3 | 3.1 | 4.9 | 4.2 | 3.8 | 4.3 | 4.8 | 3.9 | 3.9 | 3.8 | 3.7 |

Source: CSLS calculations from unpublished data, Investment and Capital Stock Division (ICSD), Statistics Canada

Table 3c: Total Investment as a Share of GDP (2002 chained dollars) by Province, in per cent, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 14.1 | 17.3 | 10.5 | 14.2 | 15.6 | 9.8 | 9.8 | 11.5 | 23.7 | 28.5 | 14.0 |
| 1982 | 13.1 | 20.6 | 9.9 | 15.7 | 16.0 | 9.1 | 9.2 | 9.4 | 19.0 | 26.3 | 12.1 |
| 1983 | 12.0 | 21.1 | 9.1 | 17.2 | 11.6 | 8.8 | 8.8 | 9.6 | 19.2 | 21.0 | 11.4 |
| 1984 | 11.7 | 21.9 | 9.4 | 14.8 | 12.5 | 9.3 | 8.9 | 10.7 | 18.9 | 18.5 | 11.1 |
| 1985 | 12.0 | 20.2 | 9.9 | 13.2 | 13.0 | 10.0 | 9.6 | 11.3 | 19.4 | 18.6 | 11.2 |
| 1986 | 12.0 | 20.8 | 10.1 | 12.8 | 11.5 | 10.1 | 10.6 | 12.2 | 16.7 | 17.1 | 9.8 |
| 1987 | 12.5 | 17.6 | 10.6 | 11.7 | 11.8 | 11.1 | 11.2 | 11.4 | 18.2 | 17.4 | 10.4 |
| 1988 | 13.4 | 16.8 | 12.5 | 13.7 | 13.6 | 11.7 | 12.1 | 12.4 | 19.6 | 18.8 | 11.5 |
| 1989 | 13.9 | 16.3 | 12.7 | 15.1 | 15.9 | 13.0 | 12.5 | 12.4 | 17.5 | 17.3 | 13.1 |
| 1990 | 13.8 | 15.2 | 11.5 | 14.2 | 15.6 | 12.9 | 12.3 | 12.3 | 17.7 | 17.7 | 13.1 |
| 1991 | 13.8 | 16.3 | 14.4 | 13.7 | 15.3 | 12.7 | 12.8 | 12.0 | 18.1 | 16.7 | 13.5 |
| 1992 | 12.8 | 17.5 | 12.0 | 11.5 | 13.9 | 12.0 | 11.7 | 11.7 | 16.4 | 15.8 | 12.1 |
| 1993 | 12.4 | 20.7 | 11.8 | 11.4 | 12.4 | 11.7 | 10.8 | 11.5 | 15.1 | 16.6 | 11.5 |
| 1994 | 12.9 | 23.2 | 14.2 | 11.8 | 11.9 | 11.6 | 11.0 | 10.9 | 16.0 | 18.0 | 13.3 |
| 1995 | 12.9 | 23.6 | 14.8 | 11.1 | 13.5 | 11.2 | 11.3 | 11.8 | 16.3 | 17.6 | 12.7 |
| 1996 | 12.9 | 18.4 | 15.1 | 11.0 | 14.1 | 11.3 | 11.9 | 12.0 | 17.6 | 17.2 | 11.8 |
| 1997 | 14.4 | 20.8 | 10.9 | 14.6 | 12.5 | 11.8 | 12.7 | 14.0 | 23.2 | 20.8 | 13.1 |
| 1998 | 14.4 | 19.6 | 11.2 | 15.7 | 14.4 | 12.6 | 12.5 | 13.5 | 19.0 | 22.3 | 12.3 |
| 1999 | 14.7 | 25.2 | 12.6 | 18.5 | 18.0 | 13.0 | 12.8 | 14.3 | 19.3 | 21.2 | 12.8 |
| 2000 | 14.6 | 20.9 | 12.5 | 15.0 | 17.2 | 12.9 | 12.3 | 13.3 | 18.6 | 23.8 | 12.6 |
| 2001 | 14.6 | 19.5 | 13.2 | 15.2 | 13.2 | 12.3 | 12.1 | 13.5 | 18.4 | 25.5 | 13.2 |
| 2002 | 13.8 | 16.6 | 13.2 | 15.8 | 12.3 | 12.1 | 11.6 | 13.3 | 17.1 | 23.4 | 12.2 |
| 2003 | 14.5 | 16.6 | 13.5 | 15.2 | 13.6 | 12.7 | 12.2 | 14.0 | 17.8 | 25.1 | 12.7 |
| 2004 | 15.2 | 19.1 | 13.0 | 14.5 | 14.6 | 13.8 | 12.4 | 14.4 | 17.2 | 26.7 | 13.5 |
| 2005 | 16.3 | 20.7 | 13.7 | 15.2 | 16.0 | 13.5 | 12.9 | 14.0 | 19.5 | 31.1 | 14.4 |
| 2006 | 17.2 | 19.9 | 15.0 | 16.2 | 16.7 | 14.1 | 13.8 | 15.6 | 21.2 | 31.6 | 15.2 |
| 2007 | 17.5 | 16.1 | 15.7 | 16.2 | 19.1 | 15.2 | 14.6 | 16.8 | 20.4 | 30.5 | 15.1 |

Source: CSLS calculations from unpublished data, Investment and Capital Stock Division (ICSD), Statistics Canada

Table 4: ICT Investment Implicit Chained Prices Deflators, by province, 2002=100, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------------|-------------|------------------|--------|---------|----------|--------------|---------|---------------------|
| 1980 | 384.5 | 268.1 | 303.8 | 311.9 | 301.4 | 396.5 | 408.9 | 366.0 | 341.6 | 392.1 | 348.4 |
| 1981 | 357.4 | 253.0 | 289.9 | 294.6 | 279.6 | 368.2 | 377.9 | 341.1 | 318.8 | 365.7 | 325.5 |
| 1982 | 369.5 | 264.1 | 304.1 | 307.7 | 288.9 | 381.2 | 388.5 | 354.8 | 330.7 | 379.0 | 337.9 |
| 1983 | 323.9 | 237.1 | 276.6 | 278.3 | 256.3 | 334.6 | 334.9 | 317.0 | 296.2 | 333.5 | 303.3 |
| 1984 | 306.4 | 227.2 | 267.0 | 267.8 | 245.1 | 315.8 | 314.7 | 301.9 | 281.5 | 315.0 | 291.1 |
| 1985 | 284.7 | 217.7 | 254.6 | 254.5 | 231.7 | 292.2 | 290.0 | 285.2 | 264.4 | 294.2 | 274.3 |
| 1986 | 262.8 | 206.6 | 242.7 | 239.8 | 217.2 | 268.3 | 265.6 | 269.0 | 248.1 | 272.1 | 256.4 |
| 1987 | 242.4 | 202.6 | 234.6 | 227.7 | 205.8 | 245.3 | 245.0 | 252.6 | 231.8 | 241.6 | 241.0 |
| 1988 | 229.8 | 193.9 | 225.4 | 216.9 | 196.2 | 231.2 | 232.6 | 240.5 | 222.1 | 228.9 | 228.3 |
| 1989 | 208.8 | 180.1 | 207.8 | 199.5 | 181.0 | 209.1 | 210.9 | 220.3 | 204.8 | 208.0 | 207.8 |
| 1990 | 198.7 | 174.4 | 200.0 | 192.1 | 173.5 | 198.3 | 200.5 | 210.7 | 196.3 | 198.1 | 197.7 |
| 1991 | 176.8 | 159.6 | 183.8 | 174.2 | 155.8 | 175.6 | 178.1 | 188.1 | 175.7 | 176.3 | 176.4 |
| 1992 | 165.3 | 154.1 | 173.7 | 164.5 | 146.8 | 163.8 | 166.4 | 175.8 | 164.8 | 164.6 | 165.0 |
| 1993 | 162.5 | 152.6 | 170.7 | 162.2 | 144.6 | 160.9 | 163.6 | 172.7 | 162.1 | 161.8 | 162.4 |
| 1994 | 156.2 | 147.4 | 166.9 | 156.2 | 139.7 | 154.8 | 157.1 | 166.2 | 155.8 | 154.9 | 156.0 |
| 1995 | 146.2 | 139.0 | 160.8 | 145.6 | 131.6 | 144.9 | 147.1 | 156.0 | 144.9 | 144.3 | 146.2 |
| 1996 | 134.9 | 129.0 | 148.5 | 134.1 | 125.7 | 134.4 | 134.9 | 144.8 | 133.9 | 133.1 | 136.0 |
| 1997 | 129.2 | 118.7 | 139.9 | 126.4 | 121.2 | 129.8 | 128.1 | 136.4 | 128.3 | 133.1 | 128.9 |
| 1998 | 121.7 | 120.4 | 134.2 | 121.8 | 117.9 | 121.5 | 122.9 | 126.3 | 122.3 | 116.3 | 123.3 |
| 1999 | 111.5 | 111.8 | 117.2 | 110.7 | 108.7 | 111.5 | 113.2 | 112.7 | 111.6 | 105.0 | 111.9 |
| 2000 | 106.9 | 108.9 | 109.7 | 106.3 | 105.6 | 106.9 | 108.2 | 108.3 | 107.5 | 101.2 | 107.3 |
| 2001 | 104.3 | 107.5 | 106.3 | 105.0 | 104.4 | 104.0 | 105.3 | 105.4 | 105.2 | 99.8 | 105.0 |
| 2002 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 2003 | 90.8 | 93.5 | 92.2 | 91.1 | 92.5 | 90.7 | 91.2 | 91.4 | 90.8 | 87.7 | 91.9 |
| 2004 | 82.5 | 84.1 | 83.6 | 81.9 | 84.5 | 82.8 | 82.8 | 82.9 | 82.4 | 79.5 | 83.4 |
| 2005 | 76.3 | 77.6 | 77.2 | 75.3 | 78.7 | 76.9 | 76.5 | 76.9 | 76.3 | 73.3 | 77.1 |
| 2006 | 70.9 | 71.8 | 71.1 | 69.6 | 73.6 | 71.3 | 71.1 | 71.6 | 70.8 | 68.6 | 71.5 |
| 2007 | 63.0 | 64.0 | 63.3 | 61.6 | 66.6 | 63.7 | 63.0 | 63.9 | 63.2 | 61.0 | 63.6 |

Compound Annual Growth Rates, per cent

| | | | | | | | | | | | |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1981-2007 | -6.46 | -5.15 | -5.68 | -5.84 | -5.37 | -6.53 | -6.66 | -6.24 | -6.04 | -6.65 | -6.09 |
| 1981-2000 | -6.16 | -4.34 | -4.99 | -5.22 | -4.99 | -6.30 | -6.37 | -5.86 | -5.56 | -6.54 | -5.67 |
| 2000-2007 | -7.27 | -7.32 | -7.54 | -7.50 | -6.39 | -7.13 | -7.44 | -7.25 | -7.32 | -6.97 | -7.20 |

Source: Table 1 and Table 2

Table 5: Real ICT per Worker by Province, \$2002 chained dollars, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 141 | 176 | 108 | 173 | 168 | 111 | 132 | 118 | 161 | 215 | 156 |
| 1982 | 143 | 170 | 103 | 174 | 186 | 113 | 138 | 120 | 132 | 196 | 171 |
| 1983 | 174 | 235 | 129 | 186 | 190 | 144 | 182 | 148 | 174 | 195 | 182 |
| 1984 | 206 | 276 | 158 | 251 | 233 | 178 | 215 | 182 | 198 | 216 | 212 |
| 1985 | 230 | 280 | 170 | 229 | 226 | 203 | 258 | 225 | 197 | 191 | 229 |
| 1986 | 273 | 451 | 244 | 318 | 284 | 242 | 299 | 251 | 248 | 239 | 250 |
| 1987 | 360 | 425 | 254 | 347 | 331 | 330 | 411 | 271 | 328 | 336 | 301 |
| 1988 | 395 | 398 | 255 | 373 | 368 | 369 | 450 | 304 | 310 | 375 | 333 |
| 1989 | 479 | 548 | 332 | 528 | 400 | 439 | 559 | 352 | 353 | 414 | 408 |
| 1990 | 525 | 497 | 345 | 515 | 466 | 448 | 629 | 371 | 375 | 515 | 443 |
| 1991 | 594 | 464 | 357 | 476 | 488 | 516 | 740 | 422 | 386 | 513 | 512 |
| 1992 | 704 | 558 | 421 | 511 | 666 | 634 | 892 | 409 | 456 | 635 | 542 |
| 1993 | 754 | 627 | 571 | 683 | 759 | 681 | 916 | 500 | 481 | 686 | 639 |
| 1994 | 843 | 596 | 599 | 826 | 676 | 735 | 1,008 | 474 | 560 | 919 | 731 |
| 1995 | 923 | 668 | 557 | 727 | 714 | 827 | 1,133 | 571 | 753 | 851 | 785 |
| 1996 | 1,064 | 773 | 623 | 788 | 915 | 998 | 1,329 | 679 | 801 | 886 | 840 |
| 1997 | 1,275 | 981 | 808 | 1,094 | 971 | 1,224 | 1,521 | 863 | 1,077 | 1,182 | 1,003 |
| 1998 | 1,501 | 1,146 | 754 | 1,034 | 1,137 | 1,480 | 1,636 | 979 | 1,065 | 1,874 | 1,269 |
| 1999 | 1,812 | 1,380 | 1,013 | 1,348 | 1,498 | 1,783 | 1,968 | 1,512 | 1,739 | 1,893 | 1,595 |
| 2000 | 2,019 | 1,158 | 1,325 | 1,521 | 1,455 | 1,912 | 2,377 | 1,504 | 1,376 | 2,191 | 1,546 |
| 2001 | 2,057 | 1,255 | 1,280 | 1,499 | 1,535 | 1,861 | 2,457 | 1,520 | 1,572 | 2,195 | 1,588 |
| 2002 | 1,967 | 1,304 | 1,422 | 1,497 | 1,472 | 1,801 | 2,292 | 1,658 | 1,556 | 2,002 | 1,630 |
| 2003 | 2,140 | 1,644 | 1,259 | 1,679 | 1,512 | 2,029 | 2,430 | 1,705 | 1,591 | 2,404 | 1,691 |
| 2004 | 2,405 | 1,911 | 1,464 | 1,704 | 1,818 | 2,293 | 2,735 | 1,926 | 1,765 | 2,683 | 1,896 |
| 2005 | 2,621 | 2,167 | 1,776 | 1,944 | 2,188 | 2,537 | 2,952 | 2,049 | 2,031 | 2,987 | 1,961 |
| 2006 | 2,912 | 2,368 | 2,250 | 2,235 | 2,131 | 2,669 | 3,293 | 2,294 | 2,910 | 3,253 | 2,332 |
| 2007 | 3,353 | 2,765 | 2,935 | 2,716 | 2,445 | 2,963 | 3,870 | 2,688 | 3,050 | 3,722 | 2,674 |

Compound Annual Growth Rates, per cent

| | | | | | | | | | | | |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1981-2007 | 12.96 | 11.17 | 13.55 | 11.16 | 10.85 | 13.48 | 13.89 | 12.76 | 11.98 | 11.59 | 11.56 |
| 1981-2000 | 15.04 | 10.42 | 14.11 | 12.11 | 12.03 | 16.19 | 16.45 | 14.31 | 11.96 | 13.00 | 12.84 |
| 2000-2007 | 7.52 | 13.24 | 12.03 | 8.63 | 7.69 | 6.46 | 7.21 | 8.65 | 12.04 | 7.86 | 8.14 |

Source: Table 1 and Labour Force Survey

Table 5a: Real ICT per Worker (chained \$2002) as a Proportion of the National Average, in per cent, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 100.0 | 124.9 | 76.5 | 122.9 | 119.1 | 78.4 | 93.3 | 84.0 | 114.1 | 152.4 | 110.4 |
| 1982 | 100.0 | 118.3 | 71.6 | 121.1 | 129.6 | 78.8 | 96.1 | 84.0 | 91.8 | 136.6 | 119.2 |
| 1983 | 100.0 | 135.2 | 74.0 | 106.9 | 109.5 | 82.9 | 104.8 | 85.3 | 100.3 | 112.4 | 104.7 |
| 1984 | 100.0 | 133.7 | 76.5 | 121.9 | 113.1 | 86.2 | 104.3 | 88.1 | 96.0 | 104.8 | 102.9 |
| 1985 | 100.0 | 121.9 | 73.9 | 99.7 | 98.1 | 88.2 | 112.0 | 98.0 | 85.7 | 83.2 | 99.5 |
| 1986 | 100.0 | 165.5 | 89.6 | 116.7 | 104.2 | 88.8 | 109.5 | 92.2 | 90.9 | 87.7 | 91.8 |
| 1987 | 100.0 | 118.1 | 70.4 | 96.3 | 92.0 | 91.6 | 114.2 | 75.3 | 91.2 | 93.4 | 83.5 |
| 1988 | 100.0 | 100.8 | 64.6 | 94.5 | 93.1 | 93.4 | 114.0 | 76.9 | 78.5 | 94.9 | 84.2 |
| 1989 | 100.0 | 114.3 | 69.3 | 110.2 | 83.4 | 91.5 | 116.6 | 73.5 | 73.7 | 86.3 | 85.0 |
| 1990 | 100.0 | 94.6 | 65.7 | 98.2 | 88.9 | 85.5 | 119.8 | 70.7 | 71.4 | 98.2 | 84.4 |
| 1991 | 100.0 | 78.1 | 60.1 | 80.2 | 82.1 | 86.9 | 124.6 | 71.1 | 64.9 | 86.4 | 86.1 |
| 1992 | 100.0 | 79.2 | 59.8 | 72.5 | 94.5 | 90.1 | 126.7 | 58.0 | 64.8 | 90.2 | 77.0 |
| 1993 | 100.0 | 83.1 | 75.6 | 90.5 | 100.6 | 90.2 | 121.4 | 66.2 | 63.8 | 91.0 | 84.7 |
| 1994 | 100.0 | 70.7 | 71.1 | 98.0 | 80.3 | 87.2 | 119.6 | 56.3 | 66.5 | 109.0 | 86.8 |
| 1995 | 100.0 | 72.3 | 60.3 | 78.7 | 77.3 | 89.6 | 122.7 | 61.9 | 81.5 | 92.2 | 85.0 |
| 1996 | 100.0 | 72.7 | 58.6 | 74.1 | 86.1 | 93.8 | 124.9 | 63.8 | 75.3 | 83.3 | 78.9 |
| 1997 | 100.0 | 77.0 | 63.4 | 85.8 | 76.2 | 96.0 | 119.3 | 67.7 | 84.5 | 92.7 | 78.7 |
| 1998 | 100.0 | 76.4 | 50.2 | 68.9 | 75.7 | 98.6 | 109.0 | 65.2 | 70.9 | 124.8 | 84.6 |
| 1999 | 100.0 | 76.2 | 55.9 | 74.4 | 82.7 | 98.4 | 108.6 | 83.4 | 96.0 | 104.5 | 88.0 |
| 2000 | 100.0 | 57.4 | 65.6 | 75.4 | 72.1 | 94.7 | 117.8 | 74.5 | 68.2 | 108.5 | 76.6 |
| 2001 | 100.0 | 61.0 | 62.2 | 72.9 | 74.6 | 90.5 | 119.4 | 73.9 | 76.4 | 106.7 | 77.2 |
| 2002 | 100.0 | 66.3 | 72.3 | 76.1 | 74.9 | 91.6 | 116.5 | 84.3 | 79.1 | 101.8 | 82.9 |
| 2003 | 100.0 | 76.8 | 58.8 | 78.5 | 70.7 | 94.8 | 113.5 | 79.7 | 74.3 | 112.3 | 79.0 |
| 2004 | 100.0 | 79.4 | 60.8 | 70.9 | 75.6 | 95.3 | 113.7 | 80.1 | 73.4 | 111.6 | 78.8 |
| 2005 | 100.0 | 82.7 | 67.8 | 74.2 | 83.4 | 96.8 | 112.6 | 78.2 | 77.5 | 113.9 | 74.8 |
| 2006 | 100.0 | 81.3 | 77.3 | 76.8 | 73.2 | 91.7 | 113.1 | 78.8 | 99.9 | 111.7 | 80.1 |
| 2007 | 100.0 | 82.5 | 87.5 | 81.0 | 72.9 | 88.4 | 115.4 | 80.2 | 91.0 | 111.0 | 79.7 |

Source: Table 5

Table 6a: Contribution of Real ICT as a Share of Real Total Investment (chained \$2002) to the Real Provincial ICT per Worker Gap Relative to the National Average, in percentage points, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|----------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | - | 16.8 | 23.7 | 40.3 | 30.1 | 13.4 | 26.6 | 10.7 | -35.8 | -59.0 | -0.5 |
| 1982 | - | -20.8 | 14.5 | 13.1 | 23.6 | 12.4 | 29.1 | 23.7 | -36.7 | -65.2 | 17.3 |
| 1983 | - | -21.1 | 15.0 | -18.9 | 24.1 | 13.8 | 33.5 | 17.2 | -38.8 | -64.7 | 0.9 |
| 1984 | - | -30.6 | 15.3 | 9.7 | 20.6 | 11.5 | 28.5 | 6.0 | -40.9 | -60.2 | 1.8 |
| 1985 | - | -24.3 | 13.4 | 1.7 | 5.4 | 11.9 | 33.8 | 11.6 | -47.7 | -74.9 | -2.1 |
| 1986 | - | 8.5 | 28.9 | 20.6 | 19.2 | 11.5 | 18.8 | -0.9 | -34.0 | -62.4 | 4.9 |
| 1987 | - | -7.1 | 7.2 | 13.3 | 7.3 | 9.7 | 21.6 | -8.0 | -36.5 | -56.1 | -5.9 |
| 1988 | - | -9.4 | -6.6 | 7.8 | 6.8 | 12.6 | 21.9 | -4.6 | -42.6 | -58.2 | -7.8 |
| 1989 | - | 9.6 | -0.7 | 18.0 | -13.0 | 5.7 | 24.3 | -6.3 | -36.9 | -52.2 | -13.6 |
| 1990 | - | -4.1 | 1.6 | 11.4 | -5.3 | -1.8 | 29.2 | -11.9 | -47.2 | -46.9 | -13.5 |
| 1991 | - | -28.2 | -25.4 | -4.3 | -12.1 | 2.1 | 31.1 | -7.7 | -55.8 | -50.4 | -13.9 |
| 1992 | - | -41.5 | -17.7 | -6.9 | 2.9 | 3.9 | 32.9 | -27.4 | -50.2 | -48.7 | -18.2 |
| 1993 | - | -56.4 | 1.4 | 11.5 | 17.9 | 2.8 | 34.1 | -17.9 | -51.0 | -60.3 | -8.2 |
| 1994 | - | -73.0 | -16.4 | 23.8 | 3.2 | 4.7 | 32.9 | -21.7 | -49.8 | -51.7 | -11.9 |
| 1995 | - | -74.4 | -33.2 | 7.7 | -10.9 | 10.5 | 32.5 | -19.5 | -38.3 | -61.2 | -8.5 |
| 1996 | - | -51.2 | -36.1 | 3.4 | -6.0 | 14.3 | 30.4 | -20.0 | -52.1 | -63.5 | -8.2 |
| 1997 | - | -48.1 | 4.4 | 0.1 | 4.9 | 22.8 | 28.9 | -20.2 | -60.0 | -66.0 | -7.6 |
| 1998 | - | -44.2 | -15.3 | -22.9 | -7.7 | 21.4 | 20.2 | -20.2 | -54.2 | -50.3 | 5.4 |
| 1999 | - | -62.9 | -15.3 | -29.6 | -18.3 | 18.7 | 17.8 | -1.1 | -29.8 | -53.2 | 8.7 |
| 2000 | - | -66.3 | 0.5 | -10.0 | -23.6 | 15.1 | 30.7 | -5.1 | -51.0 | -63.9 | -3.6 |
| 2001 | - | -56.5 | -6.2 | -15.4 | 0.8 | 15.3 | 35.1 | -7.1 | -44.2 | -70.5 | -7.5 |
| 2002 | - | -53.0 | -0.4 | -21.6 | 2.1 | 14.6 | 29.8 | 2.2 | -37.3 | -69.4 | 0.3 |
| 2003 | - | -43.1 | -14.2 | -11.4 | -9.5 | 18.0 | 28.0 | -4.3 | -43.9 | -65.6 | -3.5 |
| 2004 | - | -45.6 | -5.5 | -9.5 | -4.4 | 15.4 | 32.1 | -2.7 | -39.1 | -69.3 | -4.5 |
| 2005 | - | -42.5 | 5.9 | -3.6 | 5.7 | 26.6 | 33.8 | 3.7 | -41.6 | -78.8 | -8.1 |
| 2006 | - | -37.1 | 13.4 | -2.0 | -7.8 | 22.3 | 33.3 | -1.8 | -21.7 | -77.2 | -2.3 |
| 2007 | - | -21.9 | 22.9 | 4.6 | -17.8 | 13.1 | 31.4 | -6.5 | -24.5 | -70.1 | 0.0 |
| Average | | | | | | | | | | | |
| 1990-2000 | - | -50.0 | -13.8 | -1.4 | -5.0 | 10.4 | 29.2 | -15.7 | -49.0 | -56.0 | -7.2 |
| 2001-2007 | - | -42.8 | 2.3 | -8.4 | -4.4 | 17.9 | 31.9 | -2.3 | -36.0 | -71.6 | -3.7 |

Source: Appendix Table 14b, 14c and 16a

Table 6b: Contribution of Real Total Investment as a Share of Real GDP (chained \$2002) to the Real Provincial ICT per Worker Gap Relative to the National Average, in percentage points, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | - | 22.6 | -25.7 | 0.6 | 10.7 | -32.4 | -35.6 | -18.8 | 55.6 | 87.6 | -0.8 |
| 1982 | - | 49.3 | -23.4 | 19.8 | 22.7 | -32.3 | -34.4 | -30.7 | 35.6 | 81.7 | -8.6 |
| 1983 | - | 66.0 | -23.4 | 37.5 | -3.1 | -28.0 | -31.4 | -20.2 | 47.1 | 59.5 | -5.4 |
| 1984 | - | 73.2 | -19.0 | 26.6 | 7.0 | -20.7 | -27.6 | -8.1 | 47.3 | 47.4 | -5.6 |
| 1985 | - | 57.3 | -16.5 | 8.9 | 7.5 | -17.8 | -24.0 | -6.6 | 44.0 | 39.8 | -7.6 |
| 1986 | - | 72.2 | -15.6 | 7.4 | -3.9 | -16.2 | -12.8 | 1.7 | 32.0 | 33.6 | -18.9 |
| 1987 | - | 37.7 | -13.7 | -6.2 | -5.1 | -11.3 | -11.0 | -8.0 | 36.0 | 32.1 | -16.9 |
| 1988 | - | 22.4 | -6.0 | 2.0 | 1.4 | -13.0 | -11.2 | -7.3 | 33.7 | 32.7 | -14.2 |
| 1989 | - | 17.1 | -7.7 | 8.8 | 12.0 | -6.8 | -11.8 | -10.2 | 19.8 | 20.2 | -5.5 |
| 1990 | - | 9.7 | -14.9 | 3.3 | 11.5 | -6.0 | -12.3 | -9.9 | 21.1 | 25.0 | -4.9 |
| 1991 | - | 14.6 | 3.2 | -1.2 | 9.0 | -8.0 | -9.2 | -12.3 | 21.8 | 17.6 | -2.3 |
| 1992 | - | 27.7 | -5.1 | -9.2 | 8.2 | -6.5 | -9.8 | -6.8 | 19.8 | 19.9 | -5.4 |
| 1993 | - | 47.0 | -4.3 | -8.2 | -0.2 | -5.6 | -15.1 | -5.8 | 16.1 | 28.0 | -7.1 |
| 1994 | - | 49.3 | 8.2 | -8.6 | -7.5 | -10.2 | -17.4 | -13.0 | 17.3 | 34.5 | 2.6 |
| 1995 | - | 51.6 | 10.7 | -13.4 | 3.9 | -13.0 | -14.8 | -7.2 | 21.5 | 30.2 | -1.6 |
| 1996 | - | 30.3 | 12.1 | -14.0 | 8.0 | -12.9 | -9.6 | -6.3 | 26.9 | 26.1 | -8.3 |
| 1997 | - | 32.8 | -21.8 | 1.5 | -11.9 | -18.8 | -13.6 | -2.1 | 44.1 | 35.7 | -8.0 |
| 1998 | - | 26.9 | -18.2 | 7.1 | 0.1 | -13.7 | -15.2 | -5.5 | 23.4 | 48.8 | -14.8 |
| 1999 | - | 47.0 | -12.0 | 19.6 | 18.4 | -12.2 | -14.3 | -2.9 | 26.6 | 37.5 | -13.0 |
| 2000 | - | 27.6 | -12.9 | 2.3 | 14.0 | -11.9 | -18.2 | -8.0 | 20.3 | 51.1 | -12.6 |
| 2001 | - | 23.0 | -7.7 | 3.5 | -8.8 | -16.3 | -20.3 | -6.7 | 20.6 | 57.9 | -8.6 |
| 2002 | - | 14.9 | -3.8 | 11.9 | -9.9 | -12.8 | -18.7 | -3.6 | 18.8 | 53.1 | -11.1 |
| 2003 | - | 12.0 | -5.9 | 4.3 | -5.7 | -12.8 | -18.6 | -3.3 | 17.7 | 57.9 | -11.7 |
| 2004 | - | 20.5 | -12.7 | -3.8 | -3.8 | -9.5 | -22.1 | -4.6 | 10.4 | 59.4 | -10.8 |
| 2005 | - | 21.7 | -14.3 | -6.0 | -1.6 | -18.5 | -24.8 | -13.5 | 16.1 | 69.0 | -11.0 |
| 2006 | - | 13.5 | -11.8 | -5.1 | -2.6 | -19.2 | -23.7 | -8.4 | 21.1 | 64.5 | -10.8 |
| 2007 | - | -7.6 | -10.1 | -6.9 | 7.8 | -13.2 | -19.8 | -3.4 | 14.6 | 58.5 | -13.1 |

Average

| | | | | | | | | | | | |
|-----------|---|------|------|------|------|-------|-------|------|------|------|-------|
| 1990-2000 | - | 33.1 | -5.0 | -1.9 | 4.9 | -10.8 | -13.6 | -7.3 | 23.5 | 32.2 | -6.9 |
| 2001-2007 | - | 14.0 | -9.5 | -0.3 | -3.5 | -14.6 | -21.1 | -6.2 | 17.0 | 60.0 | -11.0 |

Source: Appendix Table 14b, 14c and 16b

Table 6c: Contribution of Real GDP per Worker (chained \$2002) by Province to the Real Provincial ICT per Worker Gap Relative to the National Average, in percentage points, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Québec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | - | -14.5 | -21.4 | -18.1 | -21.7 | -2.6 | 2.2 | -7.9 | -5.7 | 23.8 | 11.7 |
| 1982 | - | -10.2 | -19.4 | -11.8 | -16.7 | -1.2 | 1.4 | -9.0 | -7.1 | 20.1 | 10.6 |
| 1983 | - | -9.6 | -17.6 | -11.8 | -11.5 | -2.9 | 2.7 | -11.7 | -8.1 | 17.6 | 9.2 |
| 1984 | - | -8.9 | -19.9 | -14.4 | -14.5 | -4.6 | 3.5 | -9.7 | -10.4 | 17.7 | 6.7 |
| 1985 | - | -11.1 | -23.0 | -10.9 | -14.8 | -5.9 | 2.2 | -7.0 | -10.6 | 18.3 | 9.2 |
| 1986 | - | -15.2 | -23.7 | -11.3 | -11.2 | -6.5 | 3.5 | -8.7 | -7.0 | 16.5 | 5.7 |
| 1987 | - | -12.5 | -23.1 | -10.8 | -10.2 | -6.8 | 3.7 | -8.8 | -8.3 | 17.4 | 6.3 |
| 1988 | - | -12.2 | -22.9 | -15.3 | -15.1 | -6.2 | 3.3 | -11.2 | -12.6 | 20.4 | 6.1 |
| 1989 | - | -12.4 | -22.3 | -16.7 | -15.6 | -7.4 | 4.1 | -10.0 | -9.3 | 18.3 | 4.2 |
| 1990 | - | -10.9 | -21.0 | -16.5 | -17.3 | -6.7 | 2.9 | -7.6 | -2.6 | 20.2 | 2.8 |
| 1991 | - | -8.3 | -17.6 | -14.3 | -14.7 | -7.3 | 2.7 | -9.0 | -1.1 | 19.1 | 2.3 |
| 1992 | - | -7.0 | -17.4 | -11.3 | -16.6 | -7.3 | 3.6 | -7.8 | -4.8 | 19.0 | 0.6 |
| 1993 | - | -7.5 | -21.4 | -12.8 | -17.1 | -7.0 | 2.4 | -10.1 | -1.2 | 23.3 | 0.1 |
| 1994 | - | -5.5 | -20.7 | -17.2 | -15.4 | -7.2 | 4.1 | -9.1 | -1.0 | 26.2 | -3.9 |
| 1995 | - | -4.9 | -17.1 | -15.6 | -15.8 | -7.9 | 5.0 | -11.4 | -1.7 | 23.2 | -4.8 |
| 1996 | - | -6.4 | -17.4 | -15.4 | -15.9 | -7.6 | 4.1 | -9.8 | 0.5 | 20.7 | -4.6 |
| 1997 | - | -7.7 | -19.3 | -15.8 | -16.8 | -7.9 | 4.0 | -10.0 | 0.3 | 23.0 | -5.7 |
| 1998 | - | -6.3 | -16.2 | -15.3 | -16.7 | -9.1 | 4.0 | -9.1 | 1.7 | 26.3 | -6.1 |
| 1999 | - | -8.0 | -16.8 | -15.6 | -17.4 | -8.1 | 5.1 | -12.6 | -0.9 | 20.2 | -7.7 |
| 2000 | - | -4.0 | -22.0 | -17.0 | -18.3 | -8.5 | 5.3 | -12.3 | -1.1 | 21.3 | -7.2 |
| 2001 | - | -5.6 | -23.9 | -15.3 | -17.4 | -8.5 | 4.6 | -12.4 | 0.0 | 19.3 | -6.7 |
| 2002 | - | 4.4 | -23.5 | -14.2 | -17.3 | -10.3 | 5.5 | -14.3 | -2.4 | 18.1 | -6.2 |
| 2003 | - | 8.0 | -21.0 | -14.4 | -14.1 | -10.4 | 4.2 | -12.8 | 0.6 | 20.0 | -5.8 |
| 2004 | - | 4.5 | -21.0 | -15.8 | -16.2 | -10.6 | 3.6 | -12.6 | 2.1 | 21.5 | -5.9 |
| 2005 | - | 3.4 | -23.9 | -16.2 | -18.2 | -11.3 | 3.6 | -12.1 | 3.0 | 23.8 | -6.1 |
| 2006 | - | 4.9 | -24.3 | -16.1 | -16.4 | -11.4 | 3.4 | -11.1 | 0.5 | 24.5 | -6.8 |
| 2007 | - | 12.0 | -25.3 | -16.6 | -17.0 | -11.5 | 3.8 | -10.0 | 0.8 | 22.6 | -7.2 |

Average

| | | | | | | | | | | | |
|-----------|---|------|-------|-------|-------|-------|-----|-------|------|------|------|
| 1990-2000 | - | -7.0 | -18.8 | -15.2 | -16.6 | -7.7 | 3.9 | -9.9 | -1.1 | 22.1 | -3.1 |
| 2001-2007 | - | 4.5 | -23.3 | -15.5 | -16.7 | -10.6 | 4.1 | -12.2 | 0.7 | 21.4 | -6.4 |

Source: Appendix Table 14b, 14c and 16c

Table 7: Real Telecommunications Equipment per Worker by Province, \$2002 chained dollars, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 240 | 279 | 202 | 303 | 230 | 195 | 209 | 217 | 244 | 388 | 266 |
| 1982 | 226 | 236 | 164 | 249 | 233 | 193 | 192 | 221 | 216 | 320 | 293 |
| 1983 | 191 | 246 | 174 | 219 | 203 | 153 | 181 | 186 | 207 | 202 | 260 |
| 1984 | 205 | 281 | 179 | 302 | 229 | 168 | 197 | 212 | 181 | 200 | 270 |
| 1985 | 195 | 267 | 228 | 257 | 207 | 159 | 188 | 295 | 198 | 176 | 231 |
| 1986 | 206 | 359 | 294 | 314 | 230 | 171 | 201 | 258 | 217 | 167 | 243 |
| 1987 | 245 | 331 | 263 | 273 | 226 | 199 | 281 | 221 | 263 | 231 | 203 |
| 1988 | 282 | 320 | 273 | 319 | 260 | 236 | 312 | 252 | 275 | 281 | 250 |
| 1989 | 317 | 528 | 338 | 479 | 293 | 273 | 338 | 337 | 318 | 264 | 287 |
| 1990 | 340 | 461 | 347 | 445 | 315 | 250 | 389 | 289 | 279 | 403 | 287 |
| 1991 | 353 | 427 | 288 | 357 | 320 | 263 | 435 | 322 | 240 | 307 | 310 |
| 1992 | 385 | 455 | 298 | 332 | 396 | 341 | 483 | 203 | 262 | 325 | 296 |
| 1993 | 363 | 471 | 355 | 413 | 386 | 311 | 417 | 302 | 220 | 309 | 358 |
| 1994 | 341 | 397 | 484 | 442 | 381 | 292 | 377 | 197 | 253 | 329 | 338 |
| 1995 | 349 | 296 | 306 | 298 | 336 | 328 | 371 | 239 | 336 | 314 | 394 |
| 1996 | 349 | 285 | 257 | 249 | 556 | 338 | 387 | 288 | 328 | 293 | 310 |
| 1997 | 445 | 409 | 369 | 388 | 516 | 468 | 465 | 137 | 435 | 535 | 350 |
| 1998 | 392 | 327 | 91 | 261 | 306 | 519 | 439 | 85 | 350 | 286 | 243 |
| 1999 | 483 | 462 | 198 | 358 | 466 | 483 | 582 | 331 | 476 | 375 | 332 |
| 2000 | 577 | 605 | 366 | 708 | 597 | 541 | 646 | 400 | 469 | 586 | 439 |
| 2001 | 554 | 505 | 307 | 568 | 477 | 440 | 655 | 442 | 347 | 693 | 395 |
| 2002 | 487 | 543 | 401 | 562 | 573 | 410 | 472 | 581 | 409 | 637 | 467 |
| 2003 | 479 | 541 | 243 | 492 | 504 | 447 | 503 | 438 | 303 | 562 | 408 |
| 2004 | 507 | 609 | 277 | 443 | 558 | 454 | 520 | 564 | 459 | 527 | 514 |
| 2005 | 511 | 577 | 262 | 401 | 663 | 422 | 559 | 562 | 533 | 602 | 400 |
| 2006 | 544 | 594 | 313 | 546 | 535 | 442 | 576 | 527 | 729 | 615 | 508 |
| 2007 | 628 | 732 | 445 | 763 | 675 | 507 | 677 | 610 | 657 | 678 | 563 |

Compound Annual Growth Rates, per cent

| | | | | | | | | | | | |
|-----------|------|------|------|------|------|-------|------|------|------|------|------|
| 1981-2007 | 3.77 | 3.78 | 3.07 | 3.61 | 4.22 | 3.74 | 4.62 | 4.07 | 3.89 | 2.18 | 2.92 |
| 1981-2000 | 4.73 | 4.16 | 3.16 | 4.56 | 5.13 | 5.52 | 6.12 | 3.28 | 3.51 | 2.20 | 2.67 |
| 2000-2007 | 1.21 | 2.76 | 2.82 | 1.09 | 1.79 | -0.93 | 0.67 | 6.23 | 4.94 | 2.10 | 3.62 |

Source: Table 1a and Labour Force Survey

Table 7a: Real Telecommunications Equipment per Worker (chained \$2002) as a Proportion of the National Average, in per cent, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 100.0 | 116.1 | 84.4 | 126.4 | 96.1 | 81.4 | 87.2 | 90.3 | 101.6 | 161.5 | 110.9 |
| 1982 | 100.0 | 104.5 | 72.8 | 110.4 | 103.4 | 85.6 | 85.2 | 98.1 | 95.8 | 141.6 | 129.6 |
| 1983 | 100.0 | 128.7 | 91.0 | 114.8 | 106.4 | 79.8 | 94.8 | 97.2 | 108.2 | 105.7 | 135.9 |
| 1984 | 100.0 | 137.1 | 87.1 | 147.1 | 111.5 | 82.0 | 95.8 | 103.4 | 88.2 | 97.4 | 131.5 |
| 1985 | 100.0 | 136.9 | 117.2 | 131.7 | 106.4 | 81.6 | 96.6 | 151.5 | 101.8 | 90.2 | 118.3 |
| 1986 | 100.0 | 173.9 | 142.4 | 152.4 | 111.5 | 82.8 | 97.2 | 125.1 | 105.4 | 80.8 | 117.9 |
| 1987 | 100.0 | 135.1 | 107.2 | 111.3 | 92.2 | 80.9 | 114.5 | 90.1 | 107.3 | 94.1 | 82.9 |
| 1988 | 100.0 | 113.8 | 97.0 | 113.3 | 92.4 | 83.7 | 111.0 | 89.4 | 97.7 | 99.9 | 88.6 |
| 1989 | 100.0 | 166.5 | 106.3 | 150.9 | 92.4 | 86.0 | 106.4 | 106.2 | 100.2 | 83.1 | 90.3 |
| 1990 | 100.0 | 135.4 | 102.0 | 130.9 | 92.6 | 73.5 | 114.4 | 84.9 | 81.9 | 118.5 | 84.2 |
| 1991 | 100.0 | 121.1 | 81.5 | 101.2 | 90.8 | 74.6 | 123.4 | 91.3 | 68.1 | 87.0 | 87.8 |
| 1992 | 100.0 | 118.1 | 77.2 | 86.2 | 102.7 | 88.6 | 125.2 | 52.8 | 68.1 | 84.4 | 76.7 |
| 1993 | 100.0 | 129.8 | 97.9 | 113.8 | 106.4 | 85.7 | 115.0 | 83.3 | 60.6 | 85.3 | 98.6 |
| 1994 | 100.0 | 116.6 | 142.2 | 129.8 | 111.8 | 85.7 | 110.6 | 57.7 | 74.3 | 96.5 | 99.2 |
| 1995 | 100.0 | 84.8 | 87.6 | 85.3 | 96.2 | 93.8 | 106.1 | 68.5 | 96.3 | 90.0 | 112.7 |
| 1996 | 100.0 | 81.6 | 73.6 | 71.4 | 159.1 | 96.7 | 110.8 | 82.3 | 93.9 | 83.9 | 88.6 |
| 1997 | 100.0 | 92.0 | 83.0 | 87.2 | 115.9 | 105.2 | 104.4 | 30.8 | 97.7 | 120.2 | 78.6 |
| 1998 | 100.0 | 83.4 | 23.2 | 66.7 | 77.9 | 132.3 | 111.9 | 21.7 | 89.3 | 72.9 | 62.0 |
| 1999 | 100.0 | 95.7 | 40.9 | 74.1 | 96.5 | 100.0 | 120.4 | 68.6 | 98.4 | 77.6 | 68.7 |
| 2000 | 100.0 | 104.8 | 63.4 | 122.6 | 103.4 | 93.8 | 112.0 | 69.3 | 81.2 | 101.6 | 76.1 |
| 2001 | 100.0 | 91.1 | 55.4 | 102.6 | 86.1 | 79.5 | 118.3 | 79.8 | 62.7 | 125.1 | 71.4 |
| 2002 | 100.0 | 111.4 | 82.2 | 115.2 | 117.5 | 84.0 | 96.7 | 119.1 | 83.8 | 130.8 | 95.8 |
| 2003 | 100.0 | 113.1 | 50.7 | 102.8 | 105.2 | 93.4 | 105.1 | 91.6 | 63.3 | 117.5 | 85.2 |
| 2004 | 100.0 | 120.1 | 54.6 | 87.3 | 110.0 | 89.6 | 102.5 | 111.2 | 90.5 | 104.0 | 101.4 |
| 2005 | 100.0 | 112.8 | 51.2 | 78.4 | 129.7 | 82.5 | 109.2 | 109.9 | 104.2 | 117.8 | 78.1 |
| 2006 | 100.0 | 109.1 | 57.5 | 100.3 | 98.3 | 81.1 | 105.7 | 96.8 | 133.8 | 112.9 | 93.3 |
| 2007 | 100.0 | 116.5 | 70.8 | 121.6 | 107.6 | 80.8 | 107.9 | 97.2 | 104.7 | 108.0 | 89.7 |

Source: Table 7

Table 8: Real Software per Worker by Province, \$2002 chained dollars, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 68 | 58 | 47 | 75 | 55 | 51 | 71 | 52 | 74 | 97 | 66 |
| 1982 | 83 | 70 | 62 | 97 | 80 | 64 | 91 | 62 | 65 | 114 | 77 |
| 1983 | 98 | 92 | 65 | 94 | 85 | 85 | 109 | 78 | 89 | 116 | 81 |
| 1984 | 117 | 108 | 85 | 115 | 97 | 106 | 130 | 97 | 106 | 126 | 100 |
| 1985 | 132 | 161 | 87 | 104 | 111 | 117 | 151 | 110 | 108 | 120 | 126 |
| 1986 | 163 | 221 | 108 | 143 | 115 | 147 | 192 | 144 | 140 | 143 | 127 |
| 1987 | 187 | 191 | 134 | 152 | 164 | 166 | 218 | 146 | 159 | 171 | 164 |
| 1988 | 230 | 185 | 149 | 185 | 193 | 212 | 271 | 180 | 165 | 217 | 192 |
| 1989 | 270 | 227 | 189 | 250 | 210 | 250 | 322 | 189 | 176 | 237 | 227 |
| 1990 | 317 | 203 | 196 | 267 | 234 | 288 | 389 | 217 | 210 | 278 | 273 |
| 1991 | 347 | 190 | 252 | 262 | 223 | 304 | 442 | 244 | 225 | 290 | 299 |
| 1992 | 391 | 194 | 230 | 258 | 277 | 358 | 498 | 248 | 255 | 360 | 306 |
| 1993 | 476 | 254 | 258 | 428 | 422 | 435 | 596 | 307 | 299 | 433 | 362 |
| 1994 | 543 | 296 | 299 | 419 | 354 | 498 | 677 | 360 | 310 | 527 | 444 |
| 1995 | 546 | 372 | 291 | 379 | 373 | 497 | 686 | 377 | 385 | 494 | 435 |
| 1996 | 612 | 345 | 314 | 448 | 394 | 581 | 783 | 389 | 403 | 504 | 468 |
| 1997 | 690 | 395 | 384 | 558 | 393 | 639 | 853 | 545 | 592 | 583 | 563 |
| 1998 | 776 | 461 | 354 | 450 | 513 | 633 | 983 | 370 | 401 | 964 | 625 |
| 1999 | 839 | 786 | 280 | 592 | 734 | 885 | 832 | 814 | 840 | 880 | 822 |
| 2000 | 823 | 316 | 484 | 470 | 567 | 756 | 960 | 603 | 562 | 1,105 | 599 |
| 2001 | 886 | 430 | 587 | 599 | 690 | 821 | 1,020 | 549 | 749 | 965 | 790 |
| 2002 | 841 | 390 | 535 | 544 | 596 | 776 | 1,027 | 550 | 537 | 875 | 666 |
| 2003 | 945 | 468 | 612 | 602 | 617 | 958 | 1,073 | 691 | 723 | 1,077 | 705 |
| 2004 | 980 | 607 | 647 | 607 | 689 | 1,016 | 1,140 | 679 | 695 | 998 | 712 |
| 2005 | 1,024 | 713 | 826 | 663 | 802 | 1,095 | 1,148 | 755 | 739 | 1,096 | 726 |
| 2006 | 1,128 | 849 | 1,155 | 770 | 869 | 1,129 | 1,252 | 873 | 1,124 | 1,229 | 855 |
| 2007 | 1,221 | 949 | 1,396 | 834 | 907 | 1,170 | 1,383 | 953 | 1,161 | 1,331 | 937 |

Compound Annual Growth Rates, per cent

| | | | | | | | | | | | |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1981-2007 | 11.77 | 11.32 | 13.97 | 9.69 | 11.38 | 12.82 | 12.08 | 11.86 | 11.15 | 10.59 | 10.76 |
| 1981-2000 | 14.05 | 9.28 | 13.11 | 10.13 | 13.06 | 15.26 | 14.67 | 13.79 | 11.23 | 13.65 | 12.34 |
| 2000-2007 | 5.81 | 17.04 | 16.34 | 8.53 | 6.94 | 6.44 | 5.36 | 6.77 | 10.94 | 2.69 | 6.58 |

Source: Table 1b and Labour Force Survey

Table 8a: Real Software per Worker (chained \$2002) as a Proportion of the National Average, in per cent, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 100.0 | 86.3 | 68.8 | 111.1 | 81.3 | 75.1 | 105.3 | 76.5 | 109.7 | 143.4 | 97.0 |
| 1982 | 100.0 | 84.3 | 74.2 | 116.8 | 95.8 | 76.2 | 109.2 | 74.3 | 78.2 | 136.1 | 92.9 |
| 1983 | 100.0 | 93.8 | 66.2 | 96.3 | 86.3 | 87.2 | 110.8 | 79.9 | 90.5 | 118.4 | 82.6 |
| 1984 | 100.0 | 92.2 | 72.5 | 98.3 | 82.5 | 90.3 | 111.0 | 82.7 | 90.6 | 107.7 | 85.2 |
| 1985 | 100.0 | 122.4 | 66.0 | 78.6 | 84.4 | 88.4 | 114.6 | 83.6 | 81.9 | 90.9 | 95.5 |
| 1986 | 100.0 | 135.4 | 66.3 | 87.7 | 70.5 | 90.2 | 117.7 | 88.2 | 85.6 | 87.9 | 78.1 |
| 1987 | 100.0 | 102.3 | 71.5 | 81.4 | 87.6 | 89.1 | 116.7 | 78.3 | 85.4 | 91.5 | 88.0 |
| 1988 | 100.0 | 80.4 | 64.9 | 80.5 | 84.1 | 92.0 | 117.9 | 78.3 | 71.7 | 94.2 | 83.2 |
| 1989 | 100.0 | 84.2 | 70.0 | 92.8 | 77.8 | 92.8 | 119.2 | 70.1 | 65.3 | 87.8 | 84.3 |
| 1990 | 100.0 | 63.8 | 61.6 | 84.1 | 73.9 | 90.6 | 122.4 | 68.3 | 66.1 | 87.6 | 86.0 |
| 1991 | 100.0 | 54.8 | 72.7 | 75.4 | 64.2 | 87.6 | 127.4 | 70.2 | 65.0 | 83.6 | 86.1 |
| 1992 | 100.0 | 49.6 | 58.7 | 65.9 | 70.7 | 91.5 | 127.3 | 63.3 | 65.1 | 92.0 | 78.1 |
| 1993 | 100.0 | 53.4 | 54.2 | 89.9 | 88.7 | 91.6 | 125.3 | 64.5 | 62.9 | 91.0 | 76.2 |
| 1994 | 100.0 | 54.5 | 55.0 | 77.3 | 65.1 | 91.7 | 124.6 | 66.3 | 57.1 | 97.0 | 81.8 |
| 1995 | 100.0 | 68.0 | 53.3 | 69.3 | 68.3 | 91.0 | 125.6 | 69.0 | 70.4 | 90.5 | 79.7 |
| 1996 | 100.0 | 56.4 | 51.4 | 73.3 | 64.3 | 94.9 | 127.9 | 63.5 | 65.8 | 82.4 | 76.5 |
| 1997 | 100.0 | 57.3 | 55.7 | 80.9 | 56.9 | 92.5 | 123.6 | 79.0 | 85.8 | 84.4 | 81.5 |
| 1998 | 100.0 | 59.4 | 45.6 | 57.9 | 66.1 | 81.5 | 126.7 | 47.7 | 51.7 | 124.2 | 80.5 |
| 1999 | 100.0 | 93.8 | 33.3 | 70.6 | 87.5 | 105.5 | 99.2 | 97.1 | 100.1 | 105.0 | 98.1 |
| 2000 | 100.0 | 38.4 | 58.8 | 57.2 | 69.0 | 91.8 | 116.7 | 73.3 | 68.3 | 134.3 | 72.9 |
| 2001 | 100.0 | 48.5 | 66.3 | 67.6 | 77.9 | 92.6 | 115.1 | 61.9 | 84.5 | 108.9 | 89.2 |
| 2002 | 100.0 | 46.4 | 63.6 | 64.6 | 70.9 | 92.2 | 122.0 | 65.3 | 63.8 | 104.0 | 79.1 |
| 2003 | 100.0 | 49.5 | 64.8 | 63.7 | 65.2 | 101.4 | 113.5 | 73.0 | 76.5 | 113.9 | 74.6 |
| 2004 | 100.0 | 61.9 | 66.0 | 62.0 | 70.3 | 103.7 | 116.3 | 69.3 | 70.9 | 101.8 | 72.7 |
| 2005 | 100.0 | 69.6 | 80.7 | 64.8 | 78.3 | 106.9 | 112.1 | 73.7 | 72.2 | 107.0 | 70.9 |
| 2006 | 100.0 | 75.2 | 102.3 | 68.3 | 77.1 | 100.1 | 110.9 | 77.4 | 99.7 | 108.9 | 75.8 |
| 2007 | 100.0 | 77.7 | 114.3 | 68.3 | 74.3 | 95.8 | 113.2 | 78.1 | 95.1 | 109.0 | 76.7 |

Source: Table 8

Table 9: Real Computers and related Equipment per Worker by Province, \$2002 chained dollars, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 8 | 6 | 4 | 6 | 7 | 6 | 8 | 6 | 8 | 11 | 7 |
| 1982 | 8 | 6 | 4 | 6 | 8 | 6 | 9 | 5 | 6 | 10 | 8 |
| 1983 | 12 | 12 | 7 | 9 | 9 | 11 | 15 | 10 | 10 | 14 | 10 |
| 1984 | 16 | 14 | 9 | 13 | 13 | 14 | 18 | 13 | 14 | 17 | 13 |
| 1985 | 20 | 11 | 8 | 13 | 12 | 19 | 25 | 15 | 12 | 14 | 16 |
| 1986 | 25 | 27 | 16 | 22 | 20 | 23 | 29 | 19 | 18 | 23 | 20 |
| 1987 | 39 | 29 | 18 | 31 | 24 | 39 | 45 | 28 | 29 | 36 | 31 |
| 1988 | 37 | 25 | 16 | 28 | 23 | 38 | 44 | 28 | 22 | 34 | 30 |
| 1989 | 50 | 27 | 23 | 37 | 24 | 47 | 64 | 30 | 27 | 44 | 40 |
| 1990 | 52 | 28 | 25 | 35 | 34 | 46 | 65 | 38 | 33 | 47 | 43 |
| 1991 | 67 | 27 | 29 | 39 | 42 | 64 | 85 | 45 | 40 | 60 | 57 |
| 1992 | 92 | 55 | 59 | 59 | 74 | 79 | 120 | 64 | 55 | 86 | 70 |
| 1993 | 95 | 61 | 105 | 63 | 71 | 83 | 119 | 65 | 63 | 91 | 80 |
| 1994 | 119 | 54 | 75 | 119 | 60 | 93 | 145 | 64 | 86 | 159 | 100 |
| 1995 | 152 | 88 | 105 | 127 | 81 | 124 | 202 | 95 | 126 | 143 | 113 |
| 1996 | 199 | 154 | 150 | 147 | 95 | 177 | 260 | 134 | 146 | 164 | 156 |
| 1997 | 248 | 196 | 190 | 216 | 143 | 228 | 309 | 241 | 177 | 199 | 193 |
| 1998 | 375 | 303 | 304 | 298 | 288 | 371 | 328 | 435 | 309 | 574 | 387 |
| 1999 | 508 | 180 | 487 | 374 | 305 | 459 | 579 | 401 | 450 | 585 | 448 |
| 2000 | 621 | 252 | 470 | 349 | 300 | 619 | 774 | 501 | 366 | 502 | 496 |
| 2001 | 620 | 322 | 388 | 334 | 365 | 602 | 786 | 527 | 481 | 537 | 406 |
| 2002 | 638 | 370 | 487 | 391 | 303 | 615 | 794 | 528 | 611 | 490 | 498 |
| 2003 | 716 | 637 | 401 | 586 | 392 | 620 | 854 | 573 | 561 | 765 | 578 |
| 2004 | 931 | 689 | 546 | 658 | 583 | 832 | 1,088 | 692 | 616 | 1,194 | 679 |
| 2005 | 1,119 | 877 | 694 | 907 | 747 | 1,051 | 1,285 | 735 | 781 | 1,330 | 866 |
| 2006 | 1,286 | 904 | 752 | 928 | 732 | 1,142 | 1,534 | 908 | 1,070 | 1,449 | 1,003 |
| 2007 | 1,606 | 1,071 | 1,101 | 1,152 | 910 | 1,381 | 1,941 | 1,188 | 1,291 | 1,814 | 1,246 |

Compound Annual Growth Rates, per cent

| | | | | | | | | | | | |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1981-2007 | 22.82 | 22.09 | 24.26 | 22.41 | 20.28 | 23.14 | 23.40 | 22.77 | 21.84 | 21.68 | 21.84 |
| 1981-2000 | 26.02 | 21.76 | 28.71 | 23.86 | 21.44 | 27.46 | 27.04 | 26.52 | 22.62 | 22.24 | 24.84 |
| 2000-2007 | 14.54 | 22.98 | 12.94 | 18.57 | 17.17 | 12.13 | 14.04 | 13.13 | 19.74 | 20.15 | 14.05 |

Source: Table 1c and Labour Force Survey

Table 9a: Real Computers and related Equipment per Worker (chained \$2002) as a Proportion of the National Average, in per cent, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 100.0 | 77.8 | 50.7 | 78.2 | 97.6 | 80.3 | 106.9 | 74.8 | 99.1 | 144.1 | 95.5 |
| 1982 | 100.0 | 78.6 | 49.1 | 85.0 | 104.9 | 77.7 | 112.5 | 70.4 | 72.7 | 128.6 | 102.3 |
| 1983 | 100.0 | 94.1 | 52.6 | 74.2 | 74.6 | 86.2 | 118.3 | 77.6 | 80.9 | 111.9 | 82.5 |
| 1984 | 100.0 | 89.4 | 59.5 | 84.0 | 82.2 | 90.1 | 115.0 | 79.6 | 86.9 | 106.2 | 83.6 |
| 1985 | 100.0 | 53.3 | 42.2 | 68.3 | 59.8 | 95.2 | 128.2 | 73.9 | 62.9 | 72.2 | 82.9 |
| 1986 | 100.0 | 111.0 | 67.0 | 90.0 | 81.9 | 93.6 | 117.1 | 79.2 | 71.9 | 92.4 | 80.4 |
| 1987 | 100.0 | 73.9 | 47.6 | 80.4 | 60.7 | 100.8 | 116.8 | 71.3 | 75.2 | 93.7 | 79.2 |
| 1988 | 100.0 | 66.2 | 41.6 | 73.6 | 62.5 | 102.6 | 118.0 | 75.3 | 60.0 | 90.4 | 79.6 |
| 1989 | 100.0 | 54.6 | 46.7 | 74.5 | 48.1 | 93.2 | 127.4 | 60.3 | 53.5 | 87.4 | 80.3 |
| 1990 | 100.0 | 54.6 | 48.2 | 68.6 | 66.0 | 89.0 | 126.4 | 73.8 | 63.5 | 90.1 | 82.2 |
| 1991 | 100.0 | 39.8 | 42.5 | 58.2 | 63.1 | 94.7 | 125.9 | 67.7 | 59.6 | 90.0 | 84.3 |
| 1992 | 100.0 | 59.5 | 64.3 | 64.1 | 80.5 | 85.4 | 130.6 | 69.8 | 59.9 | 93.8 | 75.9 |
| 1993 | 100.0 | 64.3 | 111.0 | 66.3 | 74.4 | 87.5 | 125.3 | 68.2 | 66.5 | 96.2 | 84.1 |
| 1994 | 100.0 | 45.8 | 63.2 | 100.6 | 50.5 | 77.9 | 122.4 | 54.2 | 72.0 | 134.0 | 84.6 |
| 1995 | 100.0 | 57.9 | 68.9 | 83.5 | 53.5 | 81.9 | 132.6 | 62.3 | 82.8 | 93.9 | 74.1 |
| 1996 | 100.0 | 77.3 | 75.1 | 73.9 | 47.7 | 88.7 | 130.7 | 67.1 | 73.4 | 82.1 | 78.5 |
| 1997 | 100.0 | 79.1 | 76.7 | 87.4 | 57.8 | 92.1 | 124.8 | 97.5 | 71.4 | 80.3 | 78.1 |
| 1998 | 100.0 | 80.9 | 81.0 | 79.5 | 76.9 | 98.9 | 87.6 | 115.9 | 82.3 | 153.1 | 103.3 |
| 1999 | 100.0 | 35.4 | 95.8 | 73.6 | 60.1 | 90.3 | 113.9 | 78.9 | 88.6 | 115.1 | 88.2 |
| 2000 | 100.0 | 40.5 | 75.7 | 56.3 | 48.3 | 99.8 | 124.6 | 80.7 | 58.9 | 80.9 | 80.0 |
| 2001 | 100.0 | 52.0 | 62.5 | 53.9 | 58.9 | 97.0 | 126.8 | 85.0 | 77.6 | 86.5 | 65.5 |
| 2002 | 100.0 | 58.0 | 76.3 | 61.3 | 47.5 | 96.4 | 124.4 | 82.7 | 95.7 | 76.7 | 78.0 |
| 2003 | 100.0 | 89.0 | 56.1 | 81.9 | 54.8 | 86.7 | 119.4 | 80.0 | 78.4 | 106.9 | 80.7 |
| 2004 | 100.0 | 74.0 | 58.6 | 70.7 | 62.7 | 89.4 | 116.8 | 74.3 | 66.1 | 128.3 | 72.9 |
| 2005 | 100.0 | 78.4 | 62.1 | 81.1 | 66.7 | 94.0 | 114.8 | 65.7 | 69.8 | 118.9 | 77.4 |
| 2006 | 100.0 | 70.3 | 58.5 | 72.2 | 57.0 | 88.8 | 119.3 | 70.6 | 83.2 | 112.7 | 78.0 |
| 2007 | 100.0 | 66.7 | 68.6 | 71.7 | 56.7 | 86.0 | 120.9 | 74.0 | 80.4 | 113.0 | 77.6 |

Source: Table 9

Table 10a: Industrial Composition of GDP by Province, Current Dollars, 2004

| | Industry Share of GDP in Aggregate GDP (Current Dollars, 2004) | | | | | | | | | | |
|--|--|--------------------|----------------------------|----------------|------------------|--------|---------|----------|-------------------|---------|---------------------|
| | Canada | Newfound- dland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatche- wan | Alberta | British Columbia |
| Agriculture Forestry Fishing and Hunting | 2.2 | 2.5 | 8.3 | 2.8 | 3.8 | 2.1 | 1.0 | 4.6 | 9.2 | 2.4 | 3.2 |
| Mining and Oil and Gas Extraction | 7.1 | 31.9 | 0.0 | 4.6 | 1.5 | 0.7 | 0.8 | 2.6 | 20.8 | 29.7 | 5.1 |
| Utilities | 2.6 | 3.3 | 1.2 | 2.4 | 3.8 | 3.9 | 2.3 | 3.3 | 2.5 | 1.9 | 2.0 |
| Construction | 5.6 | 4.2 | 5.1 | 5.8 | 5.8 | 5.5 | 5.2 | 4.1 | 4.7 | 7.1 | 5.8 |
| Manufacturing | 15.7 | 5.0 | 11.5 | 11.6 | 15.3 | 19.7 | 19.7 | 13.6 | 7.4 | 7.9 | 11.0 |
| Wholesale Trade | 5.2 | 2.9 | 3.0 | 4.4 | 5.1 | 5.3 | 6.0 | 5.5 | 4.9 | 4.2 | 4.7 |
| Retail Trade | 5.5 | 5.0 | 6.9 | 6.7 | 6.4 | 6.0 | 5.6 | 6.4 | 4.8 | 4.0 | 6.1 |
| Transportation and Warehousing | 4.5 | 2.8 | 2.5 | 3.7 | 5.2 | 4.3 | 3.9 | 6.7 | 5.4 | 4.8 | 5.8 |
| Information and Cultural Industries | 3.6 | 2.9 | 3.2 | 3.3 | 3.1 | 3.7 | 4.0 | 3.3 | 2.4 | 2.5 | 3.8 |
| F.I.R.E. | 18.6 | 11.5 | 17.9 | 19.4 | 16.5 | 16.7 | 21.5 | 18.2 | 14.1 | 13.5 | 21.8 |
| Professional Scientific and Technical Services | 4.5 | 2.3 | 2.3 | 3.1 | 2.7 | 4.3 | 5.5 | 2.6 | 1.8 | 4.3 | 4.3 |
| Administrative and Support | 2.4 | 1.0 | 1.7 | 2.2 | 2.4 | 2.6 | 2.9 | 1.8 | 1.0 | 1.8 | 2.0 |
| Educational Services | 4.7 | 5.6 | 6.9 | 5.7 | 5.6 | 5.2 | 4.6 | 5.4 | 5.0 | 3.6 | 5.0 |
| Health Care and Social Assistance | 6.4 | 7.7 | 9.7 | 8.4 | 7.6 | 7.6 | 6.2 | 8.6 | 6.0 | 4.1 | 6.8 |
| Arts Entertainment and Recreation | 1.0 | 0.3 | 1.0 | 0.7 | 0.7 | 1.1 | 1.0 | 1.0 | 0.8 | 0.6 | 1.2 |
| Accommodation and Food Services | 2.3 | 1.8 | 3.5 | 2.5 | 2.3 | 2.3 | 2.1 | 2.2 | 1.9 | 2.0 | 3.1 |
| Other Services(except Public. Admin.) | 2.5 | 2.0 | 2.7 | 2.4 | 2.6 | 2.6 | 2.5 | 3.0 | 2.4 | 2.1 | 3.0 |
| Public Administration | 5.6 | 7.3 | 12.8 | 10.1 | 9.5 | 6.4 | 5.3 | 7.1 | 5.0 | 3.4 | 5.2 |

Table 10b: Composition and Importance of Investment by Industry in Canada, Current Dollars

| | ICT Industry Investment as a Share of Total Industry Investment (Current Dollars, 2004) | Total Industry Investment as a Share of Industry GDP (Current Dollars, 2004) | Industry ICT Investment as a Share of Industry GDP (Current Dollars, 2004) | Industry Share of Total Investment (Current Dollars, 2007) |
|--|--|---|---|---|
| | A | B | C = A * B | D |
| Agriculture Forestry Fishing and Hunting | 2.73 | 16.63 | 0.45 | 2.60 |
| Mining and Oil and Gas Extraction | 0.81 | 61.51 | 0.50 | 20.69 |
| Utilities | 4.85 | 65.75 | 3.19 | 7.18 |
| Construction | 4.38 | 7.15 | 0.31 | 2.24 |
| Manufacturing | 13.12 | 10.68 | 1.40 | 10.31 |
| Wholesale Trade | 34.65 | 8.39 | 2.91 | 2.43 |
| Retail Trade | 19.17 | 11.93 | 2.29 | 4.60 |
| Transportation and Warehousing | 8.32 | 29.79 | 2.48 | 6.04 |
| Information and Cultural Industries | 68.08 | 23.84 | 16.23 | 5.72 |
| F.I.R.E. | 23.33 | 11.65 | 2.72 | 14.63 |
| Professional Scientific and Technical Services | 70.67 | 5.78 | 4.09 | 1.83 |
| Administrative and Support | 26.33 | 4.05 | 1.07 | 0.61 |
| Educational Services | 12.68 | 13.46 | 1.71 | 3.51 |
| Health Care and Social Assistance | 8.88 | 9.45 | 0.84 | 3.04 |
| Arts Entertainment and Recreation | 12.11 | 20.14 | 2.44 | 0.91 |
| Accommodation and Food Services | 6.22 | 10.39 | 0.65 | 1.33 |
| Other Services(except Public. Admin.) | 30.25 | 5.06 | 1.53 | 0.93 |
| Public Administration | 13.41 | 43.65 | 5.85 | 11.29 |
| Total Economy | 17.75 | 13.81 | 2.45 | 100 |

Note: Investment estimates exclude residential investment. Only non-residential investment is taken into account.

Table 11: Real GDP per Worker by Province, in 2002 chained dollars, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 57,260 | 50,322 | 44,841 | 48,660 | 46,962 | 55,607 | 58,578 | 52,536 | 54,279 | 69,318 | 64,021 |
| 1982 | 57,459 | 52,312 | 45,730 | 51,607 | 49,638 | 56,669 | 58,270 | 52,099 | 53,379 | 68,179 | 63,287 |
| 1983 | 58,602 | 53,955 | 47,807 | 52,284 | 52,495 | 56,785 | 60,162 | 51,618 | 54,054 | 69,188 | 64,121 |
| 1984 | 60,474 | 56,000 | 48,202 | 53,083 | 52,786 | 57,546 | 62,561 | 54,569 | 54,375 | 71,857 | 64,605 |
| 1985 | 61,591 | 55,707 | 47,183 | 55,209 | 53,049 | 57,816 | 62,894 | 57,368 | 54,941 | 75,266 | 67,551 |
| 1986 | 61,191 | 54,433 | 47,620 | 55,111 | 54,845 | 57,133 | 63,249 | 55,917 | 56,835 | 73,002 | 64,959 |
| 1987 | 62,001 | 55,265 | 47,154 | 55,529 | 55,740 | 57,769 | 64,160 | 56,049 | 56,850 | 74,206 | 66,417 |
| 1988 | 63,157 | 55,944 | 47,619 | 53,987 | 54,010 | 59,242 | 65,115 | 55,633 | 54,801 | 77,864 | 67,492 |
| 1989 | 63,382 | 56,461 | 48,545 | 54,070 | 53,450 | 58,693 | 65,808 | 56,399 | 56,917 | 77,137 | 66,304 |
| 1990 | 63,067 | 56,365 | 48,766 | 53,403 | 52,521 | 58,688 | 64,732 | 57,666 | 61,191 | 77,289 | 65,022 |
| 1991 | 62,847 | 57,230 | 50,187 | 53,600 | 53,425 | 58,139 | 64,381 | 56,500 | 61,985 | 77,210 | 64,401 |
| 1992 | 64,027 | 59,215 | 51,266 | 56,078 | 53,981 | 59,260 | 66,075 | 57,878 | 60,313 | 78,191 | 64,442 |
| 1993 | 65,208 | 60,036 | 51,007 | 56,985 | 54,978 | 60,596 | 66,638 | 57,638 | 64,207 | 83,236 | 65,272 |
| 1994 | 66,949 | 62,724 | 52,460 | 56,286 | 56,386 | 61,967 | 69,512 | 59,427 | 66,110 | 86,026 | 64,218 |
| 1995 | 67,603 | 63,843 | 54,336 | 56,725 | 56,533 | 62,198 | 70,743 | 58,573 | 66,336 | 86,100 | 64,191 |
| 1996 | 68,053 | 63,120 | 54,346 | 56,922 | 57,313 | 62,922 | 70,593 | 60,267 | 68,448 | 85,336 | 64,656 |
| 1997 | 69,456 | 63,617 | 54,643 | 58,576 | 57,302 | 64,061 | 72,048 | 61,535 | 69,683 | 88,203 | 65,131 |
| 1998 | 70,551 | 65,650 | 56,376 | 58,715 | 58,252 | 64,379 | 73,287 | 63,115 | 71,983 | 89,244 | 66,060 |
| 1999 | 72,590 | 66,284 | 58,173 | 60,599 | 59,932 | 66,920 | 76,232 | 63,258 | 71,959 | 88,473 | 66,886 |
| 2000 | 74,539 | 70,773 | 56,938 | 61,337 | 60,136 | 68,290 | 78,258 | 64,653 | 73,537 | 91,468 | 68,647 |
| 2001 | 74,945 | 69,838 | 55,535 | 62,707 | 61,339 | 68,552 | 78,188 | 64,940 | 74,923 | 90,376 | 69,423 |
| 2002 | 75,302 | 79,426 | 57,202 | 64,039 | 61,699 | 67,634 | 79,213 | 64,455 | 73,335 | 90,133 | 70,327 |
| 2003 | 74,947 | 82,049 | 57,156 | 63,692 | 63,436 | 67,356 | 77,954 | 64,982 | 75,448 | 90,499 | 70,202 |
| 2004 | 75,917 | 79,874 | 58,191 | 62,949 | 63,036 | 68,108 | 78,557 | 65,961 | 77,763 | 93,005 | 71,086 |
| 2005 | 77,168 | 80,145 | 57,845 | 63,949 | 63,264 | 68,770 | 79,832 | 67,312 | 79,830 | 96,417 | 71,912 |
| 2006 | 77,783 | 82,146 | 59,023 | 64,728 | 64,274 | 69,022 | 80,344 | 68,693 | 78,179 | 98,023 | 72,118 |
| 2007 | 78,038 | 89,065 | 59,582 | 64,884 | 63,983 | 69,087 | 80,810 | 69,814 | 78,717 | 96,698 | 72,012 |

Compound Annual Growth Rates, per cent

| | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|------|
| 1981-2007 | 1.20 | 2.22 | 1.10 | 1.11 | 1.20 | 0.84 | 1.25 | 1.10 | 1.44 | 1.29 | 0.45 |
| 1981-2000 | 1.40 | 1.81 | 1.26 | 1.23 | 1.31 | 1.09 | 1.54 | 1.10 | 1.61 | 1.47 | 0.37 |
| 2000-2007 | 0.66 | 3.34 | 0.65 | 0.81 | 0.89 | 0.17 | 0.46 | 1.10 | 0.98 | 0.80 | 0.69 |

Source: Appendix Table 8c and 9

Table 11a: Index Real GDP per Worker (in 2002 chained dollars) by Province, Canada = 100, 1981-2007

| | Canada | Newfoundland | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|-------------|--------|--------------|----------------------|-------------|---------------|--------|---------|----------|--------------|---------|------------------|
| 1981 | 100.0 | 87.9 | 78.3 | 85.0 | 82.0 | 97.1 | 102.3 | 91.8 | 94.8 | 121.1 | 111.8 |
| 1982 | 100.0 | 91.0 | 79.6 | 89.8 | 86.4 | 98.6 | 101.4 | 90.7 | 92.9 | 118.7 | 110.1 |
| 1983 | 100.0 | 92.1 | 81.6 | 89.2 | 89.6 | 96.9 | 102.7 | 88.1 | 92.2 | 118.1 | 109.4 |
| 1984 | 100.0 | 92.6 | 79.7 | 87.8 | 87.3 | 95.2 | 103.5 | 90.2 | 89.9 | 118.8 | 106.8 |
| 1985 | 100.0 | 90.4 | 76.6 | 89.6 | 86.1 | 93.9 | 102.1 | 93.1 | 89.2 | 122.2 | 109.7 |
| 1986 | 100.0 | 89.0 | 77.8 | 90.1 | 89.6 | 93.4 | 103.4 | 91.4 | 92.9 | 119.3 | 106.2 |
| 1987 | 100.0 | 89.1 | 76.1 | 89.6 | 89.9 | 93.2 | 103.5 | 90.4 | 91.7 | 119.7 | 107.1 |
| 1988 | 100.0 | 88.6 | 75.4 | 85.5 | 85.5 | 93.8 | 103.1 | 88.1 | 86.8 | 123.3 | 106.9 |
| 1989 | 100.0 | 89.1 | 76.6 | 85.3 | 84.3 | 92.6 | 103.8 | 89.0 | 89.8 | 121.7 | 104.6 |
| 1990 | 100.0 | 89.4 | 77.3 | 84.7 | 83.3 | 93.1 | 102.6 | 91.4 | 97.0 | 122.6 | 103.1 |
| 1991 | 100.0 | 91.1 | 79.9 | 85.3 | 85.0 | 92.5 | 102.4 | 89.9 | 98.6 | 122.9 | 102.5 |
| 1992 | 100.0 | 92.5 | 80.1 | 87.6 | 84.3 | 92.6 | 103.2 | 90.4 | 94.2 | 122.1 | 100.6 |
| 1993 | 100.0 | 92.1 | 78.2 | 87.4 | 84.3 | 92.9 | 102.2 | 88.4 | 98.5 | 127.6 | 100.1 |
| 1994 | 100.0 | 93.7 | 78.4 | 84.1 | 84.2 | 92.6 | 103.8 | 88.8 | 98.7 | 128.5 | 95.9 |
| 1995 | 100.0 | 94.4 | 80.4 | 83.9 | 83.6 | 92.0 | 104.6 | 86.6 | 98.1 | 127.4 | 95.0 |
| 1996 | 100.0 | 92.8 | 79.9 | 83.6 | 84.2 | 92.5 | 103.7 | 88.6 | 100.6 | 125.4 | 95.0 |
| 1997 | 100.0 | 91.6 | 78.7 | 84.3 | 82.5 | 92.2 | 103.7 | 88.6 | 100.3 | 127.0 | 93.8 |
| 1998 | 100.0 | 93.1 | 79.9 | 83.2 | 82.6 | 91.3 | 103.9 | 89.5 | 102.0 | 126.5 | 93.6 |
| 1999 | 100.0 | 91.3 | 80.1 | 83.5 | 82.6 | 92.2 | 105.0 | 87.1 | 99.1 | 121.9 | 92.1 |
| 2000 | 100.0 | 94.9 | 76.4 | 82.3 | 80.7 | 91.6 | 105.0 | 86.7 | 98.7 | 122.7 | 92.1 |
| 2001 | 100.0 | 93.2 | 74.1 | 83.7 | 81.8 | 91.5 | 104.3 | 86.6 | 100.0 | 120.6 | 92.6 |
| 2002 | 100.0 | 105.5 | 76.0 | 85.0 | 81.9 | 89.8 | 105.2 | 85.6 | 97.4 | 119.7 | 93.4 |
| 2003 | 100.0 | 109.5 | 76.3 | 85.0 | 84.6 | 89.9 | 104.0 | 86.7 | 100.7 | 120.8 | 93.7 |
| 2004 | 100.0 | 105.2 | 76.7 | 82.9 | 83.0 | 89.7 | 103.5 | 86.9 | 102.4 | 122.5 | 93.6 |
| 2005 | 100.0 | 103.9 | 75.0 | 82.9 | 82.0 | 89.1 | 103.5 | 87.2 | 103.5 | 124.9 | 93.2 |
| 2006 | 100.0 | 105.6 | 75.9 | 83.2 | 82.6 | 88.7 | 103.3 | 88.3 | 100.5 | 126.0 | 92.7 |
| 2007 | 100.0 | 114.1 | 76.3 | 83.1 | 82.0 | 88.5 | 103.6 | 89.5 | 100.9 | 123.9 | 92.3 |

Compound Annual Growth Rates, per cent

| | | | | | | | | | | | |
|-----------|------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1981-2007 | 0.00 | 1.01 | -0.10 | -0.08 | 0.00 | -0.36 | 0.05 | -0.10 | 0.24 | 0.09 | -0.74 |
| 1981-2000 | 0.00 | 0.41 | -0.13 | -0.17 | -0.09 | -0.31 | 0.14 | -0.30 | 0.21 | 0.07 | -1.02 |
| 2000-2007 | 0.00 | 2.66 | -0.01 | 0.15 | 0.23 | -0.49 | -0.20 | 0.44 | 0.32 | 0.14 | 0.03 |

Source: Table 11