



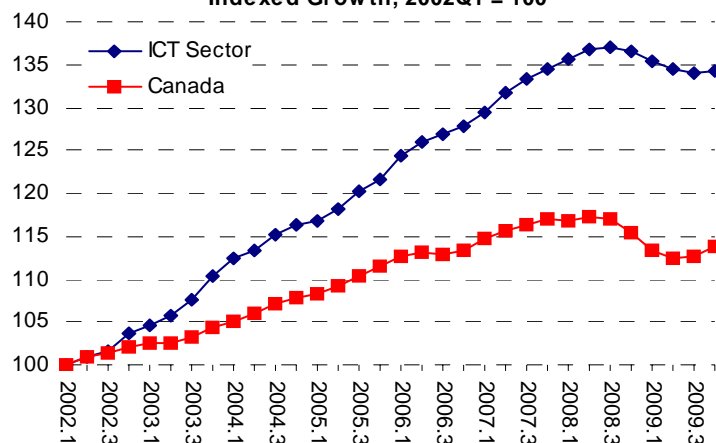
# Quarterly Monitor of the Canadian ICT Sector

## Gross Domestic Product

### ICT output increased...

Real ICT sector output increased in the final quarter of 2009 (0.2%) after declining for four quarters in a row. The scale of quarterly declines in real ICT sector output had been decreasing from the beginning of 2009 towards the end, turning around this quarter to positive growth. Real output for all Canadian industries increased for the second consecutive quarter by 1.1%. While total Canadian output declined from the third quarter of 2008 through the second quarter of 2009, the scale of the decline diminished this year, and began to turn around in the third quarter. Both the ICT sector and the overall Canadian economy have trended downward in the first two quarters of 2009, they both bounced back towards the second half of 2009.

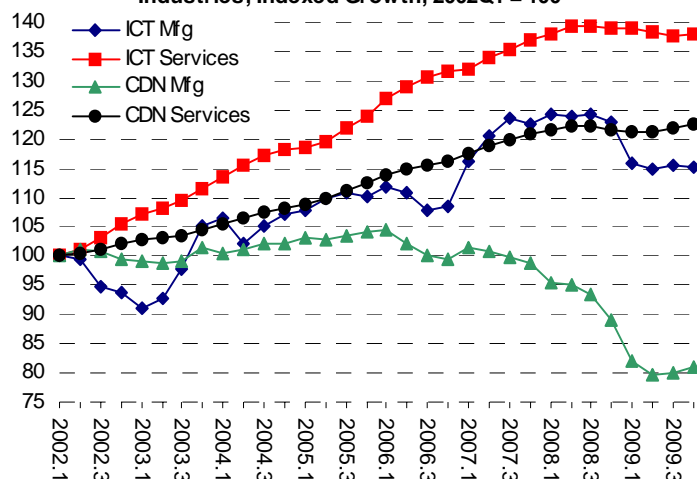
Real GDP: ICT Sector and Canadian Economy,  
Indexed Growth, 2002Q1 = 100



ICT manufacturing GDP fell slightly this quarter (-0.2%) after going up in the previous quarter. While ICT manufacturing GDP experienced a sharp drop at the beginning of 2009, it has remained relatively stable in the last three quarters. Total Canadian manufacturing GDP continued to increase for the second consecutive quarter, up 1.4%. Real GDP in Canadian manufacturing had been falling since the beginning of 2007 and experienced some sharp drops in 2008. However, it now appears to have started on a path towards steady, slow growth.

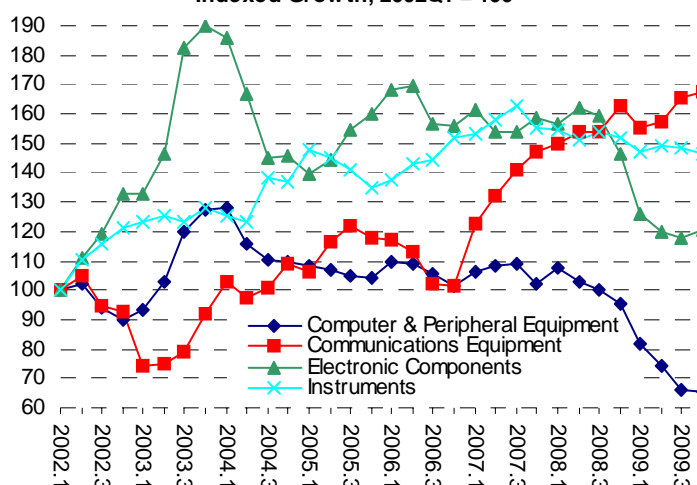
ICT services output went up by 0.2% this quarter after falling for four quarters in a row. Total Canadian services output increased again by 0.8%, the third consecutive quarter of growth. While ICT services output trended downwards from the first quarter of 2008 up until the previous quarter, the declines were modest. Total Canadian services output experienced slight drops at the end of 2008 and beginning of 2009, but has rebounded, returning to its growth trend.

Real GDP: ICT & CDN Manufacturing & Services  
Industries, Indexed Growth, 2002Q1 = 100



In the final quarter of 2009, real GDP increased in two of the four key ICT manufacturing industries. The communications equipment industry continues to increase, up 1.2% this quarter. Aside from the drop at the beginning of the year, quarter-to-quarter output in the communications equipment industry had been positive since the end of 2006. The electronic components industry increased 2.3% after five quarters of declines. Electronic components industry output had fallen sharply since the second quarter of 2008, but appears to have turned around in the last period. The instruments, and computer and peripheral equipment industries fell by 1.5% and 0.7%, respectively. Although the computer and peripheral equipment industry output experienced negative growth, the scale of the decline was significantly less than the quarter-to-quarter declines throughout the rest of 2009. Despite this quarter's decline, instruments industry output was relatively stable throughout this year.

Real GDP: Selected ICT Manufacturing Industries,  
Indexed Growth, 2002Q1 = 100



\* See ICT services definition on page six. This total includes the ICT wholesaling industries.

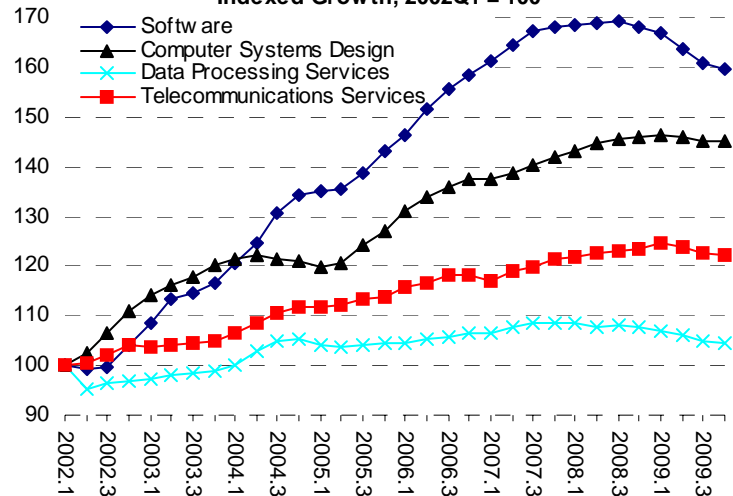


## Gross Domestic Product

The increase in ICT services output this quarter was mainly attributed to the wholesaling industry output, which was up 6.5% this quarter. Excluding wholesale, ICT services output dropped from the previous quarter by 0.2%, marking the third consecutive decline in the absence of wholesale.

Output fell in three of the four key ICT services industries for the final quarter of 2009. The software publishers, telecommunications, and data processing services industries fell by 0.7%, 0.4%, and 0.3%, respectively. While these three key industries exhibited negative growth this quarter, their decreases were noticeably smaller in magnitude than the previous quarter, an indication that the downward trend may be narrowing. Output in the computer systems design industry rose slightly by 0.04%. Since the beginning of 2009, software industry output has been declining the fastest (-4.4%), followed by the data processing services (-2.4%) and telecommunications (-2.1%) industries. Output in the computer systems design industry has remained relatively stable throughout 2009.

Real GDP: Selected ICT Services Industries,  
Indexed Growth, 2002Q1 = 100

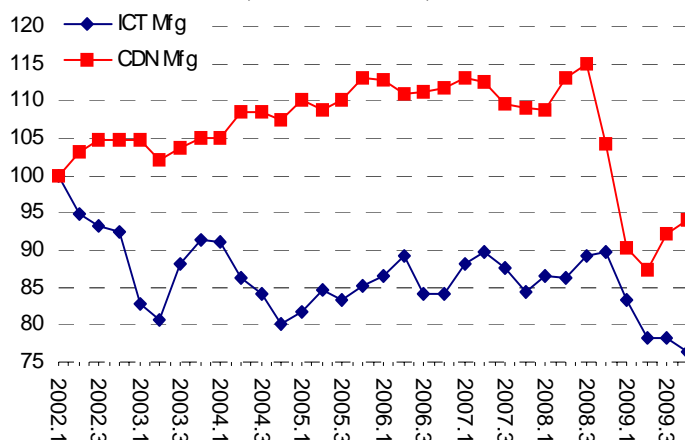


## Manufacturing Shipments

### ICT manufacturing shipments are down this quarter...

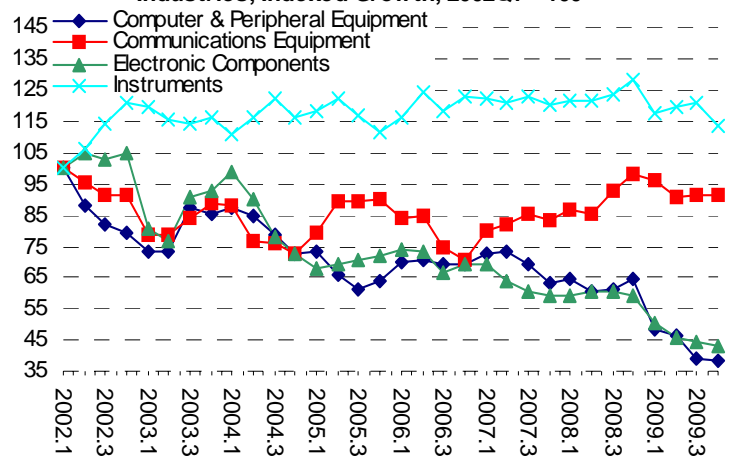
This quarter marks the fourth consecutive quarter decrease for ICT manufacturing shipments, down 2.3%. ICT manufacturing shipments continue to drop to levels previously unseen over the period of this analysis. Meanwhile, Canadian manufacturing shipments continue to bounce back after having fallen sharply for three consecutive quarters between the third quarter of 2008 and the second quarter of 2009. Shipments by Canadian manufacturers increased in the previous quarter and continue to increase this quarter, up 2.2%. However, Canadian manufacturing shipments remain significantly lower than previously seen over the entire analyzed period.

Manufacturing Shipments: ICT and Canadian Manufacturing  
Industries, Indexed Growth, 2002Q1 = 100



### ...due to decreases in all key industries.

Manufacturing Shipments: Selected ICT Manufacturing  
Industries, Indexed Growth, 2002Q1 = 100



All four key ICT manufacturing industries' shipments fell this quarter. Shipments of the instruments industry showed the largest decline, dropping 6.4% after increasing for the previous two quarters. Communications equipment industry shipments fell slightly (-0.4%) after remaining relatively stable for the past three quarters. Shipments in the electronic components industry, and computer and peripheral equipment industry decreased this quarter by 2.9% and 1.7%, respectively, both dropping for a fourth consecutive quarter. Since the end of 2006, shipments of computer and peripheral equipments and electronic components industries have followed each other closely in trend, both heading downwards.



Industry  
Canada

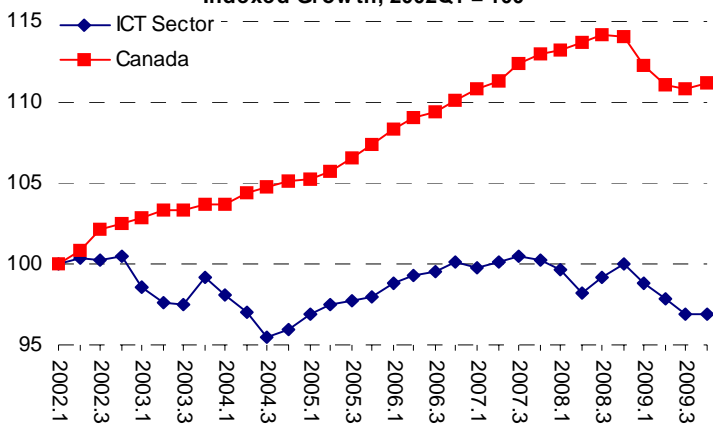
Industrie  
Canada

# Employment\*

## ICT employment declined...

The number of employees in the ICT sector decreased for the fourth consecutive quarter this year, down 0.1%. Although growth was negative, the downward trend in ICT sector employment appeared to be tapering off this quarter. The number of employees in the Canadian economy turned around (0.4%) after dropping for the previous four quarters.

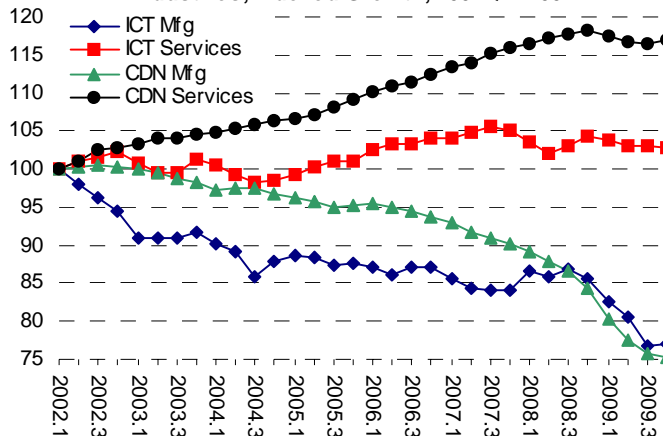
Employment: ICT Sector and Canadian Economy, Indexed Growth, 2002Q1 = 100



The number of employees in ICT manufacturing industries was up 0.5% this quarter after dropping steadily for four quarters. On the other hand, the number of employees for all Canadian manufacturing industries continued to fall (-0.7%), though the rate of decline was a lot slower than in previous quarters. Employment in all Canadian manufacturing industries has been persistently trending downwards over the entire analyzed period, but began to drop sharply at the end of 2008. While employment in ICT manufacturing industries has, for the most part, remained fairly stable between the beginning of 2005 and the second quarter of 2008, it began to follow the trend of total Canadian manufacturing industries employment in the third quarter of 2008.

Employment in the ICT services industries fell slightly this quarter, down 0.2%. Meanwhile, employment in the Canadian services sector went up 0.3% after three consecutive quarterly declines. While employment in the ICT services industries has been trending downwards since the end of 2008, the decline has been modest in comparison to the manufacturing industries.

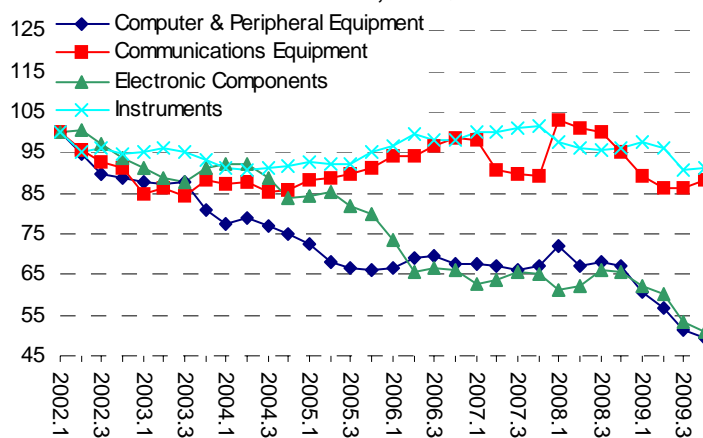
Employment: ICT & CDN Manufacturing & Services Industries, Indexed Growth, 2002Q1 = 100



\* see note 1 on page 6

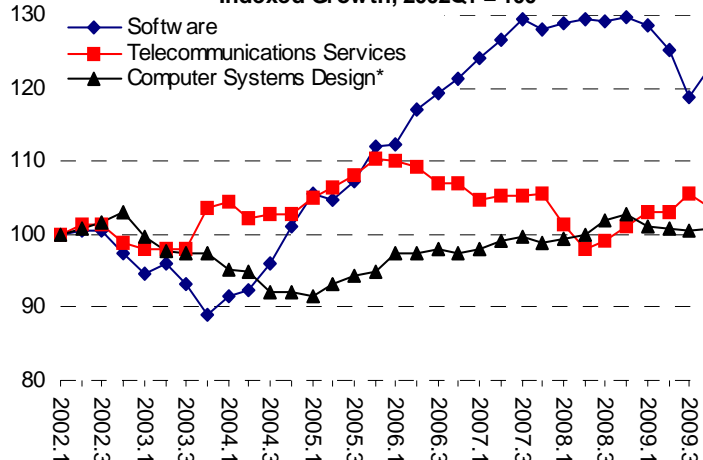
Information and Communications Technologies Branch, March 2010

Employment: Selected ICT Manufacturing Industries, Indexed Growth, 2002Q1 = 100



The number of employees in two of the four key ICT manufacturing industries decreased this quarter. Employment in the electronic component industry fell 4.3%, while employment in the computer and peripheral equipment manufacturing industry fell 3.3%. Employment in the communications equipment industry and the instruments industry, however, increased by 2.4% and 0.5%, respectively. The number employed in the communications equipment industry had been falling since the beginning of 2008, with the decline slowing in the previous period and rebounding this period. While employment in the instruments industry displayed an overall downward trend since the last quarter of 2007, it bounced back this quarter, as well. Employment in the computer and peripheral equipment industry, and electronic components industry had been falling sharply since the third quarter of 2008, and continues to trend downwards. These two industries were predominately the key industries holding employment in ICT manufacturing down.

Employment: Selected ICT Services Industries, Indexed Growth, 2002Q1 = 100



On the services side, two out of the three key ICT services industries increased employment this quarter. The number of employees in the software industry went up this quarter by 4.0%, after falling steeply from the previous two quarters. The number employed in the computers systems design industry increased by 0.8% this quarter, and remained moderately stable over the 2009 period. On the other hand, the number employed in the telecommunications services industry fell this quarter (-2.0%) after trending upwards since the second quarter of 2008.

\*Note: Due to reclassification of some of the establishments within the data processing industry to the computer systems design industry, employment in the computer systems design industry has been combined with employment in the data processing industry

4th Quarter

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Mar '10

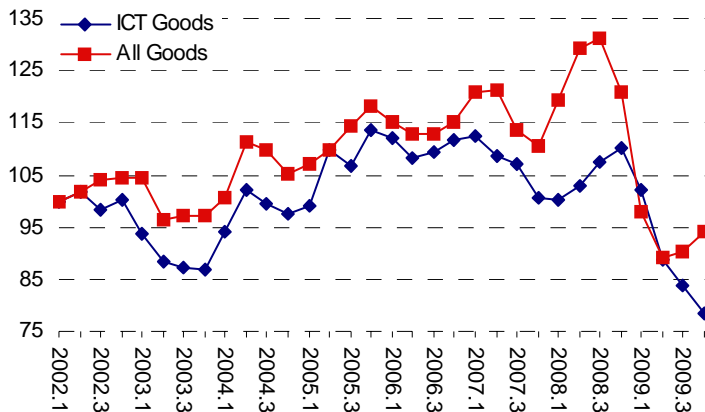


# Exports of Goods

## ICT exports decreased...

ICT goods exports decreased for the fourth consecutive quarter (-6.6%), concluding an entire year of negative growth. Exports of ICT goods have dropped rapidly over the 2009 period, falling by 29% since the end of 2008. The sharp drop throughout 2009 has brought ICT goods exports to the lowest level of the analyzed period. Meanwhile, total Canadian exports appear to be heading in the opposite direction. Total Canadian exports were up for the second quarter in a row (4.3%) at more than double the growth rate of the previous quarter.

Exports: ICT Goods and All Goods,  
Indexed Growth, 2002Q1 = 100

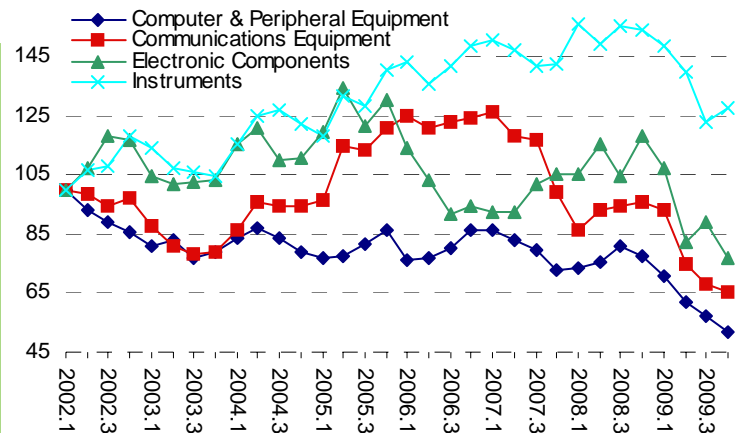


## ...due to fall in exports of three key ICT goods

Three out of the four key ICT product group exports experienced drops this quarter. While exports of instruments had been falling rapidly for four consecutive quarters, they bounced back this quarter by 4.1%. Meanwhile, exports of electronic components dropped 14% after increasing in the previous quarter. Exports of computer equipment (-9.2%) and communications equipment (-4.0%) continue to fall for a fifth and fourth consecutive quarter, respectively.

Exports of computer and peripheral equipment, communications equipment, and electronic components continue to remain at the lowest level seen since 2002. Both computer and peripheral and communications equipment exports have been rapidly falling for the entire 2009 period. Prior to this year, computer equipment exports had been moderately stable, while communications equipment exports began to show a downward trend from early in 2007. Exports of electronic components have been more erratic throughout the analyzed period, but a declining trend became apparent beginning in 2009. The drop in instruments exports between the third quarter of 2008 and the third quarter of 2009 brought down the level of exports drastically (-21.0%), but not enough to lower it below 2002 levels. The level of instruments exports is above levels seen in 2004, but lower than those prior to 2008.

Exports: ICT Goods by Selected Product Group,  
Indexed Growth, 2002Q1 = 100

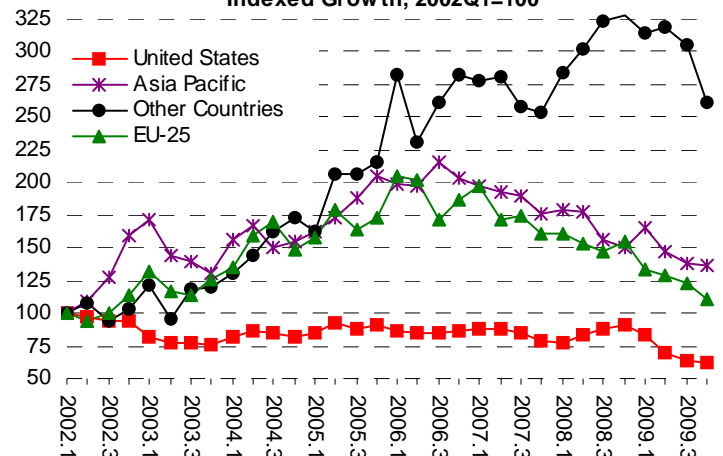


## Exports to the US declined...

ICT exports to the US fell for a fourth consecutive quarter, down 4.3%. While ICT exports to the US continue to remain negative, the scale of the decline has been falling in comparison to the second quarter, and appears to be tapering off. The US share in Canadian ICT exports increased from the previous quarter and now stands at 65%, up 2 percentage points from the previous quarter.

ICT exports to the Asia Pacific economies dropped for a third consecutive quarter (-1.0%). Similar to the US, the declines have been decreasing in scale in comparison to the second quarter. On the other hand, the magnitude of the decline for ICT exports to the EU-25 has been increasing since the second quarter. ICT exports to the EU-25 were down 10.6% this quarter. Exports to 'Other Countries' also experienced a sharp drop this quarter (-14.5%). The share of exports to the Asia Pacific increased from the previous quarter and now stands at 12.1%. Meanwhile, shares of exports to the EU-25 and 'Other Countries' fell, and now stands at 12.2% and 11.6%, respectively.

Exports: ICT Goods by Major Market,  
Indexed Growth, 2002Q1=100







## Notes, Definitions and Sources

### Real GDP Versus Manufacturing Shipments

It is important to note that GDP and shipments differ in two ways. First, GDP measures the total contribution of an industry to the economy in terms of value-added while shipments are a simple measure of revenues. Most of the time, changes in shipments are good indicators of changes in GDP but structural changes to an industry (for example, an increase in outsourcing) can lead to different trends in GDP and shipments indices. Second, GDP is measured in constant dollars while shipments are measured in current dollars. This means that when prices increase, GDP fluctuates less than shipments but when prices decline, GDP fluctuates more than shipments. In the ICT context, this difference is very important in measuring output of the computer equipment industry since a hedonic price index is used. A hedonic price index is a statistical tool used to standardize per unit prices for goods whose quality and characteristics change rapidly such as a computer. The hedonic price index adjusts the price of a computer based on the improvements in speed, design, etc. Using this hedonic price deflator, a very rapid decline in production prices is observed resulting in a much stronger growth in the GDP index compared to the shipments index for the computer equipment industry.

### Information and Communications Technologies Sector\*

#### ICT Manufacturing:

- Computer and Peripheral Equipment Mfg
- Communications Equipment Mfg
  - wired communications equipment mfg
  - wireless communications equipment mfg
- Audio and Video Equipment Mfg
- Electronic Component Mfg
- Instruments Mfg
- Communication Wire and Cable Mfg
- Commercial and Service Machinery Mfg

#### ICT Services:

- Software
- Computer Systems Design
- Data Processing Services
- Telecommunications Services
- Cable and Other Program Distribution
- ICT Wholesaling

\* Based on the North American Industry Classification System

#### Sources:

GDP (2002 constant dollars): GDP by Industry, Industry Measures and Analysis Division, Statistics Canada.

Manufacturing Shipments: Monthly Survey of Manufacturing, Manufacturing, Construction and Energy Division, Statistics Canada.

Employment: Survey on Employment, Payrolls and Hours (SEPH), Labour Statistics Division, Statistics Canada.

Exports: Trade Data Online, International Trade Division, Statistics Canada.

#### Notes:

1. Employment trends based on the Survey on Employment, Payrolls and Hours (SEPH) used in this publication might be slightly different from the trends based on annual industry specific surveys reported in the ICT Statistical Overview. Although data from SEPH might not be as reliable as data from industry specific surveys, they are more timely and provide an indication of the current employment situation.
2. Data used in this report are adjusted for seasonal variation.

### Export Markets:

United States: United States.

EU-25: United Kingdom, Germany, France, Belgium, Netherlands, Italy, Spain, Sweden, Austria, Finland, Ireland, Denmark, Poland, Portugal, Czech Republic, Greece, Luxembourg, Hungary, Slovenia, Latvia, Lithuania, Estonia, Slovakia, Cyprus and Malta.

Asia Pacific (based on Department of Foreign Affairs and International Trade definition): Afghanistan, Australia, Bangladesh, Bhutan, Brunei Darussalam, Burma (Myanmar), Cambodia (Kampuchea), China, Cook Islands, Fiji, French Polynesia, Guam (U.S.), Hong-Kong, India, Indonesia (includes East Timor), Japan, Kiribati (includes Tuvalu), South Korea, Kyrgyzstan, Laos, Macau (Macao), Malaysia, Maldives, Micronesia, Mongolia, Nauru, Nepal, New Caledonia, New Zealand, Niue, Pakistan, Papua New Guinea, Philippines, Singapore, Solomon Islands, Sri Lanka, Taiwan (Taipei), Tajikistan, Thailand, Tonga, Turkmenistan, Uzbekistan, Vanuatu (New Hebrides), Vietnam.