

Information and Communications Technologies (ICT)



# **Quarterly Monitor of the Canadian ICT Sector** First Quarter 2010



Quarterly Monitor of the Canadian ICT Sector (URL: http://www.ic.gc.ca/eic/site/ict-tic.nsf/eng/h\_it06100.html)

**Industry Canada** 

Spectrum, Information Technologies and Telecommunications Information and Communications Technologies Branch

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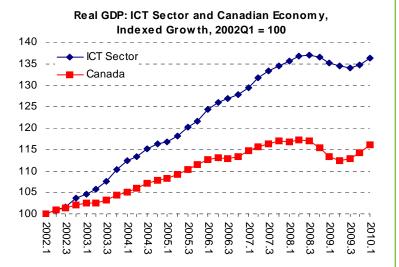
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## **Gross Domestic Product**

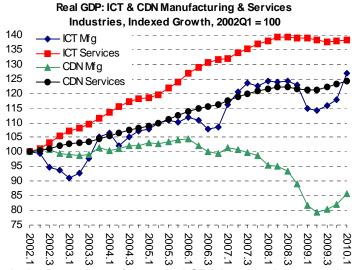
## ICT output increased...

The first quarter of 2010 marked the second consecutive increase in real ICT sector output, up 1.3%, following a 0.5% increase in fourth quarter 2009. Although real ICT sector output decreased from the end of 2008 to the third quarter of 2009, the scale of quarterly declines began decreasing from the beginning of 2009. Real output for all Canadian industries increased for a third consecutive quarter, up 1.5% in the first quarter. Both the ICT sector and the overall Canadian economy GDP have bounced back and appear to be on the path towards recovering from the drop experienced between mid-2008 to mid-2009.

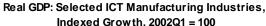


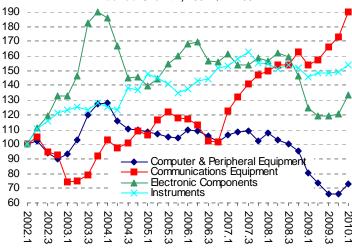
ICT manufacturing GDP increased dramatically this quarter, up 7.5%, compared with a 1.9% increase in the previous quarter. This marks the third consecutive quarterly increase for ICT manufacturing GDP. The steep increase this quarter more than offsets the sharp drop experienced in the first quarter of 2009. Total Canadian manufacturing GDP also continues to trend upwards, increasing for the third consecutive quarter, up 4.3%. While the recent increases recovered ICT manufacturing GDP to pre-2009 levels, total Canadian manufacturing GDP is not nearly recovered from its decreases since 2006.

ICT services output went up 0.2% for a second consecutive quarter. Meanwhile, total Canadian services output increased for the fourth quarter in a row, up 1% this quarter. Total Canadian services GDP has trended up steadily since the second quarter of 2009, recovering from the set backs in 2008, while ICT services GDP has only increased in the last two quarters. On the whole, changes from quarter to quarter in ICT services GDP and total Canadian services GDP are less erratic than those seen in the manufacturing sector and tend to be more moderate.



In the first quarter of 2010, real GDP increased dramatically in all four key ICT manufacturing industries. Computer and peripheral equipment industry output went up 10.8% this quarter, compared with the 0.1% increase in the previous quarter. The electronic components industry also experienced a sharp increase of 10.8%, compared with a 1.2% increase in the previous quarter. The communications equipment industry increased 9.9%, compared to 4.0% in the previous guarter, while the instruments industry output grew by 3.0%, in comparison to the 0.5% increase in the last quarter. Communications equipment is the most rapidly increasing industry in terms of GDP, up by 25% since the beginning of 2009. Aside from a drop at the beginning of the year, its changes in guarter-to-guarter output have been positive since the end of 2006. Both the computer and peripheral equipment and the electronic components industry experienced sharp declines throughout 2008 and the first half of 2009. Both industries only started to turn around in the last quarter.



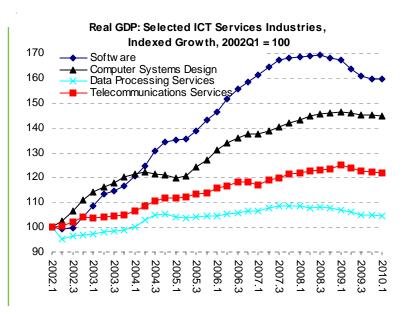


<sup>\*</sup> See ICT services definition on page five. This total includes the ICT wholesaling industries.

## **Gross Domestic Product**

The increase in ICT services output this quarter is mainly attributed to ICT wholesaling industry output, which was up 5.5% this quarter. Excluding wholesale, ICT services output dropped from the previous quarter by 0.2%, marking the fourth consecutive decline in the absence of wholesale.

Output fell in all of the four key ICT services industries for the first quarter of 2010. The data processing services, computer systems design, software publishing, and telecommunications services industries fell by 0.4%, 0.4%, 0.2%, and 0.1%, respectively. For both the software and telecommunications services industries, the scales of decline have decreased since the second quarter of 2009, an indication that the downward trend may be reaching its end. Since the beginning of 2009, software industry output has seen the largest decline (-4.6%), followed by the telecommunications (-2.4%), data processing services (-2.4%) and computer systems design (-1.2%) industries.

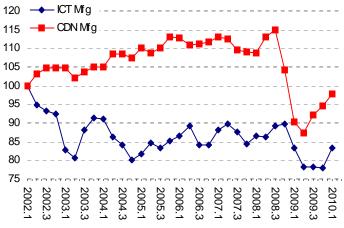


# **Manufacturing Shipments**

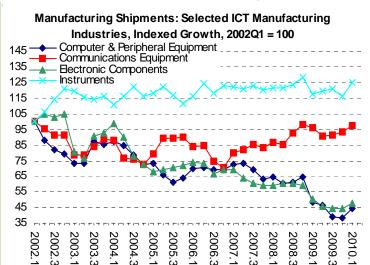
# ICT manufacturing shipments are up this quarter...

ICT manufacturing shipments increased sharply this quarter, up 7.1%. ICT manufacturing shipments dropped in the first and second quarter of 2009, which brought shipments down to their lowest level since 2002. This decline tapered off in the second half of 2009, and bounced back this latest quarter. Meanwhile, Canadian manufacturing shipments continue to increase steadily, up 3.2% this quarter. This marks the third consecutive quarterly increase for Canadian manufacturing shipments. Although Canadian manufacturing shipments are steadily increasing, these recent increases do not offset the major decline experienced between the third quarter of 2008 and the second quarter of 2009 (-24%).

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



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

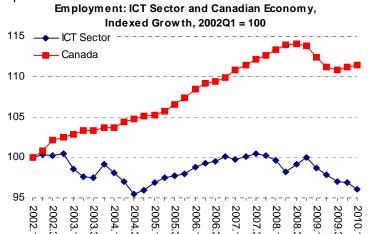


All four key ICT manufacturing industries' shipments increased substantially this quarter in comparison to the previous quarter. Shipments of the computer and peripheral equipment industry showed the largest increase (15%), after declining for four consecutive quarters. Shipments by the electronic components industry grew by 8.2% in this quarter, for a second consecutive quarterly increase. Although its shipments had declined between the end of 2008 and the third quarter of 2009, the declines slowed during this period. Shipments by the instruments and the communications equipment industries increased by 7.8% and 4.7%, respectively. Communications equipment shipments have trended upwards since the beginning of 2009, and have nearly recovered from the drops experienced in the second half of 2008.

## **Employment\***

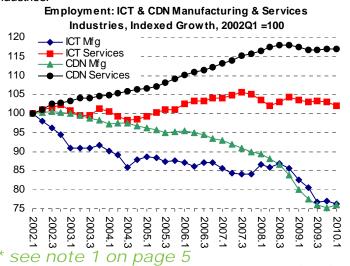
## ICT employment declined...

The number of employees in the ICT sector decreased for the fifth consecutive quarter, down 0.9% in the first quarter of 2010. While the declines tapered off throughout 2009, the size of the decline increased once again this quarter. The number of employees in the Canadian economy, however, increased for the second consecutive quarter (0.3%) after dropping in the previous four quarters.

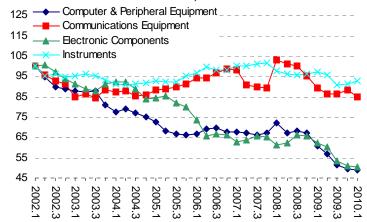


ICT manufacturing industries employment was down 1.1% this quarter after increasing by 0.5% in the previous quarter. On the other hand, the number of employees for all Canadian manufacturing industries went up 0.8% after falling non-stop since the second quarter of 2006. Employment in all Canadian manufacturing industries has persistently trended 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.

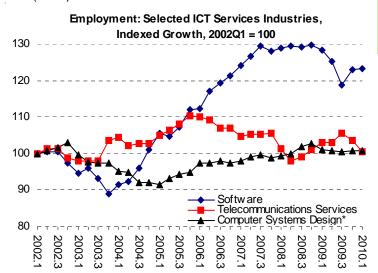
Employment in the ICT services industries fell for the fifth quarter in a row (-0.9%). Meanwhile, employment in the Canadian services sector continued to increase (0.2%), up for a second consecutive quarter, it appears to be stabilizing. While employment in the ICT services industries has trended downwards since the end of 2008, the decline has been modest in comparison to manufacturing industries.



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



The number of employees in three of the four key ICT manufacturing industries decreased this quarter. Employment in the communications equipment industry fell once again by 3.9%, following its turn around in the previous quarter from a downward trend since the beginning of 2008. Employment in the electronic components industry fell for the sixth consecutive quarter (-1.6%). Similarly, the number employed in the computer and peripheral equipment industry fell by 1.5% this quarter, for the sixth quarter in a row of decline. Employment in both the computer and peripheral equipment industry, and electronic components industry follow each other closely in trend. Both have fallen since the third quarter of 2008, and continue their downward trend, though both their scales of decline have decreased over the past three quarters. Meanwhile, employment in the instruments industry increased for the second quarter in a row (1.2%).



On the services side, two out of the three key ICT services industries increased employment this quarter. Employment in the computer systems design industry and software industry both increased for a second quarter in a row, by 0.5% and 0.2%, respectively. Employment trends in the software industry have been somewhat dramatic since the end of 2008, while trends in the computer systems design industry employment were moderately stable over this period. On the other hand, the number employed in the telecommunications services industry fell for a second quarter (-2.0%) after trending upwards between the middle of 2008 and the third quarter of 2009.

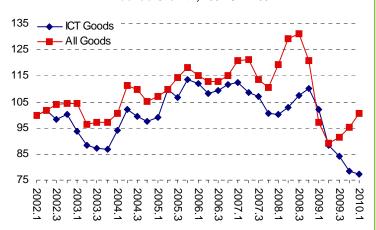
\*Note: Due to reclassification of some of the establishments within the data processing industry to the computer systems design industry, employment in the computer systems design industry has been combined with employment in the data processing industry

1st Quarter

## ICT exports decreased...

ICT goods exports dropped for the fifth consecutive quarter, down 1.4% in the first quarter of 2010. Exports of ICT goods dropped rapidly through 2009, particularly between the end of 2008 and the second quarter of 2009. The sharp drop throughout 2009 has brought ICT goods exports to the lowest level of the analyzed period. ICT goods exports continue to trend downward, though the size of this quarter's decline was not nearly as substantial as that of the past four quarters. Meanwhile, total Canadian exports are exhibiting the opposite trend. Total Canadian exports have increased rapidly since mid-2009, up for the third quarter in a row (5.6%) this quarter.

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

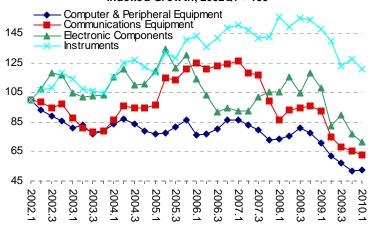


# ...due to fall in exports of three key ICT goods

Three out of the four key ICT product group exports experienced drops this quarter. Although computer and peripheral equipment exports had fallen steadily since the second half of 2008, they rebounded this quarter by 0.4%. On the other hand, exports of electronic components, instruments, and communications equipment continue to trend downwards, and decreased by 7.1%, 5.1%, and 4.0%, respectively.

Exports of computer and peripheral equipment, communications equipment, and electronic components continue to remain at the lowest levels seen since 2002. Both computer and peripheral and communications equipment exports fell rapidly throughout 2009. Prior to 2009, 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. While 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%), it was not enough to lower it below 2002 levels.

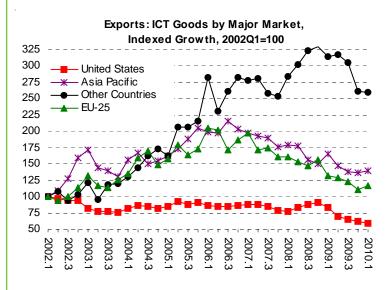
Exports: ICT Goods by Selected Product Group, Indexed Growth, 2002Q1 = 100



## Exports to the US declined...

ICT exports to the US have fallen steadily since the end of 2008, and continue to fall this quarter, down 4.5%. The US share in Canadian ICT exports fell from the previous quarter and now stands at 63%, down 1 percentage point from the previous quarter.

ICT exports to the Asia Pacific economies increased (2.6%) after dropping for three consecutive quarters. The declines had decreased in scale since the second quarter of 2009, and turned around this quarter. ICT exports to the EU-25 also increased this quarter (4.5%) after falling for four consecutive quarters. Exports to 'Other countries' decreased again for the third quarter in a row, though the magnitude of the decline this quarter (-0.8%) was much less than the previous quarter (-14.3%). The share of ICT exports to the EU-25, Asia Pacific, and 'Other countries' all increased from the previous quarter and now stands at 13.1%, 12.7%, and 11.7%, respectively.



## **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
- \* Based on the North American Industry Classification System

### **ICT Services:**

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

#### 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

- Self-employed workers are not included. Employment trends in this publication are based on the Survey on Employment, Payrolls and Hours (SEPH) and might be slightly different from 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 timelier 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, Naura, 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.