



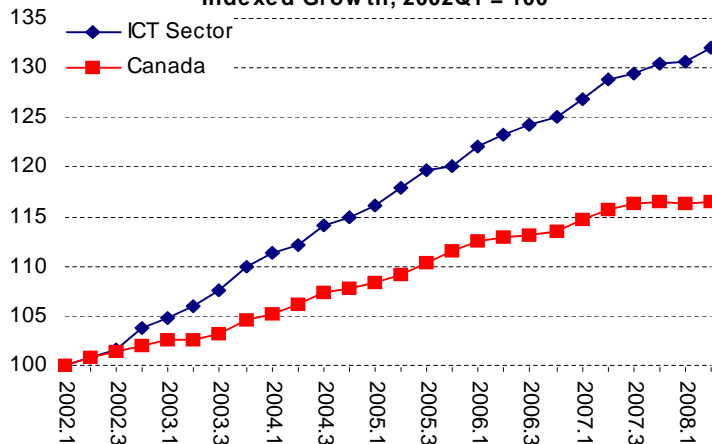
# Quarterly Monitor of the Canadian ICT Sector

## Gross Domestic Product

### ICT output growth continues...

In the second quarter of 2008, Canada's ICT sector output growth (1.0%) outpaced that of all Canadian industries (0.2%). The short-term indicates that, since the third quarter of 2007, Canada's ICT sector output has continually increased, while that of all Canadian industries has remained relatively constant. Over a longer period, since the beginning of 2002, the relationship between Canada's ICT sector output and the Canadian economy mirrors this past quarter's performance. That is, Canada's ICT sector output increased by 32% compared to 17% for the Canadian economy.

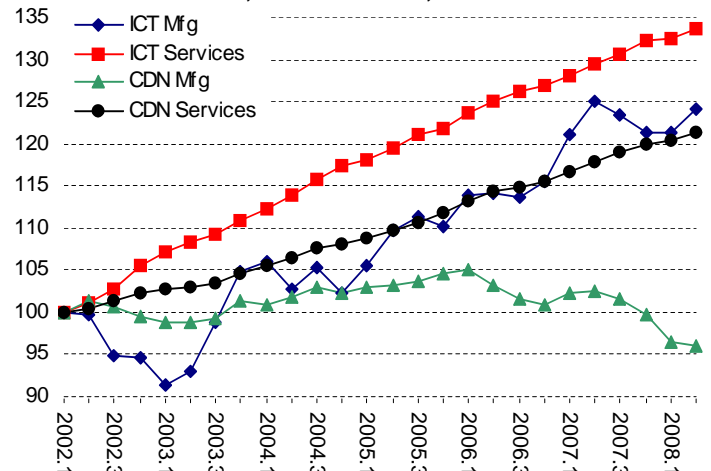
Real GDP: ICT Sector and Canadian Economy,  
Indexed Growth, 2002Q1 = 100



For a second consecutive quarter, ICT manufacturing GDP increased, up by 2.1% in the second quarter of 2008. Conversely, Canadian manufacturing GDP has continuously declined the past four quarters, down by 0.6% this period. It is evident, from the subsequent graph, that these two categories have displayed converse trends, not only recently, but also since the beginning of 2005. In fact, GDP in the ICT manufacturing sub-sector grew 17%, whereas Canadian manufacturing GDP declined by 6.7% within this period. ICT manufacturing GDP peaked in the second quarter of 2007, a measure that was nearly reached this past quarter.

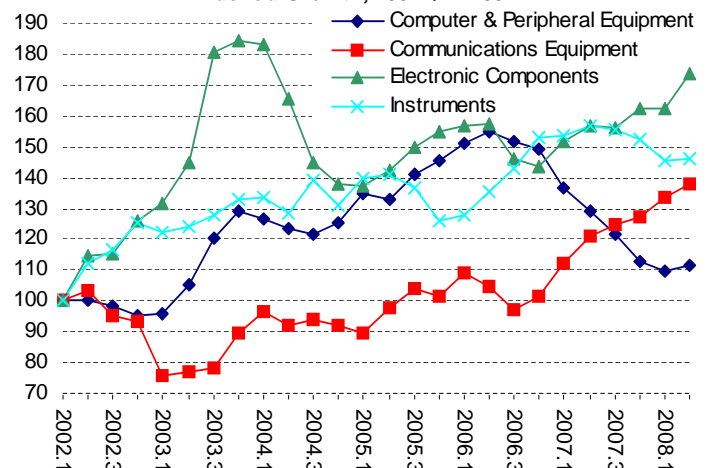
GDP for both ICT services (0.9%) and overall Canadian services (0.7%) sectors continued to increase in the second quarter of 2008. Moreover, both these categories have grown uninterruptedly since the beginning of 2002, up by 34% and 21%, respectively.

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



All key ICT manufacturing industries contributed positively to the overall increase observed in ICT manufacturing GDP. The electronic components industry grew for a third consecutive quarter, up by 6.6% this period and up by 21% since the last quarter of 2006. GDP in the communications equipment industry, which has increased continuously since the end of 2006, grew by 3.1% over the previous quarter. After nearly two years of consecutive declines, the computer and peripheral equipment industry grew by 1.5% this past period. Finally, the instruments industry increased by 0.4%, in the second quarter of 2008, an improvement compared to the three consecutive declines previously recorded.

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





## Gross Domestic Product

All key ICT services industries grew or remained constant this quarter. Growth was led by the computer systems design industry (0.8%). This industry has reported uninterrupted growth since the beginning of 2002, and is now 44% higher. GDP in the telecommunications services industry increased 0.6% this quarter and has steadily risen since the beginning of 2002, up by 23% since then.

The data processing services industry grew at a moderate rate of 0.3% this past quarter. In fact, moderate growth, compared to the other key industries, has been characteristic of this industry since the beginning of 2002. For a second consecutive quarter, GDP in the software industry has remained relatively constant, but this industry has been trending up since the beginning of 2002.

2nd Quarter

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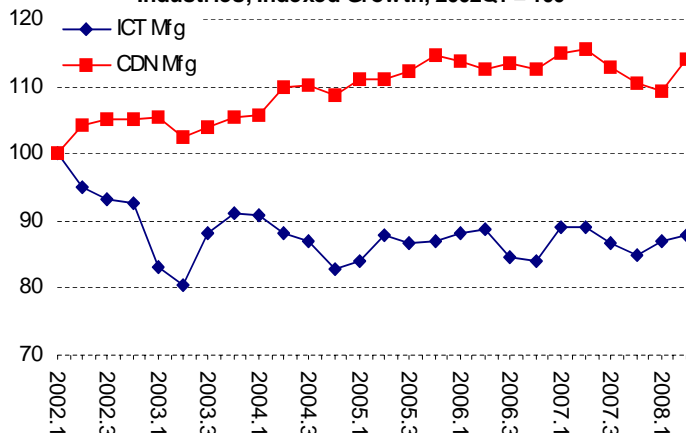
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## Manufacturing Shipments

### ICT manufacturing shipments are up...

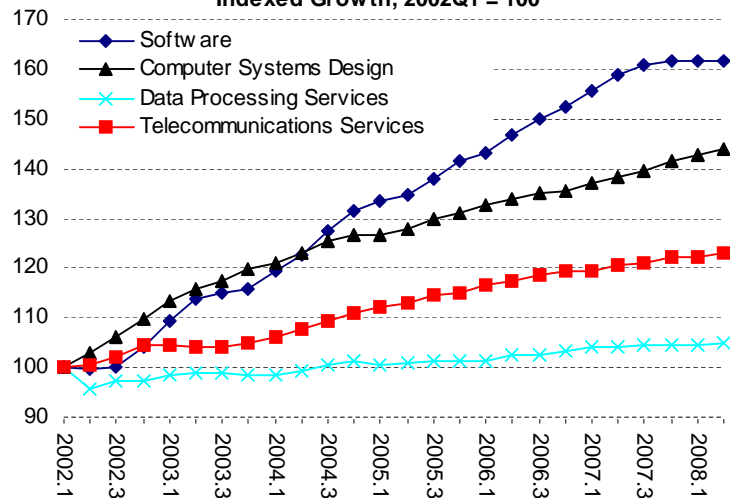
This period marks a second consecutive quarter of growth for shipments of ICT manufacturers, up by 1.2%. After three consecutive quarters of declines, Canadian manufacturing shipments were also up, reporting a strong 4.4% growth in the second quarter of 2008.

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



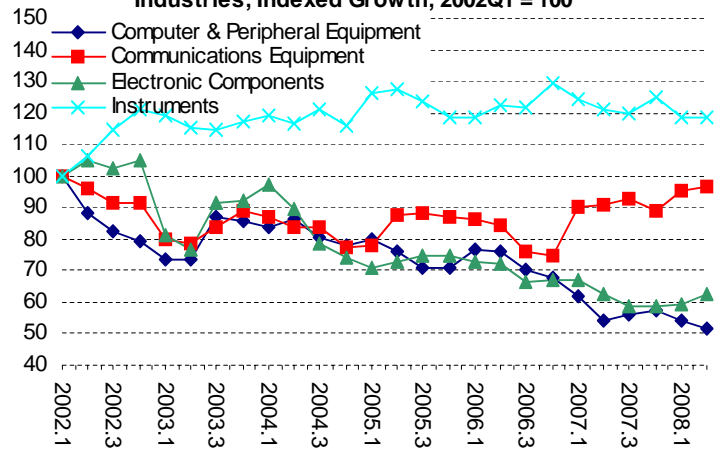
ICT manufacturing shipments have been relatively stable over the last three years. However, they are still 12.1% lower than at the beginning of 2002.

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



### ...with a significant increase in electronic components.

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



The growth in shipments of electronic components (5.3%) and communications equipment (1.2%) offset the declines recorded in the other two ICT manufacturing industries. More specifically, the electronic components industry displayed positive performance in the first half of 2008, after three consecutive quarters of decline in 2007, while shipments of communications equipment have grown nearly 30%, since their lowest recorded level at the end of 2006. On the other hand, for a second consecutive quarter, shipments of computer and peripheral equipment declined, down by 5.2% in the second quarter of 2008. This downward trend has become more predominant over the past two years. Shipments in instruments declined once more, down by 0.3% this period.

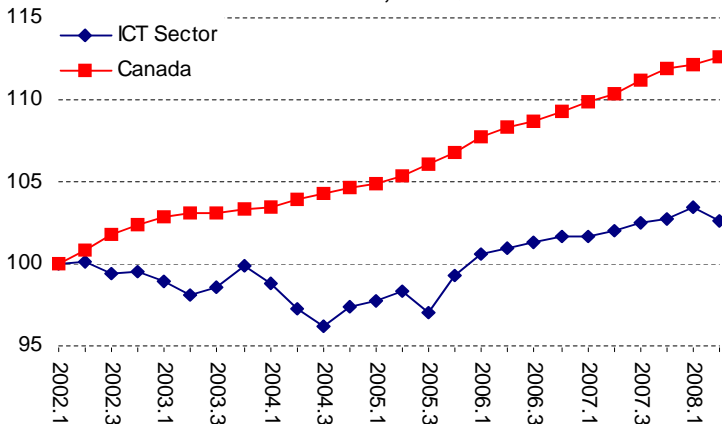


# Employment\*

## ICT employment declined...

The number of employees in the ICT sector fell by 0.8% this past quarter, the first drop recorded since the third quarter of 2005. Nevertheless, this number has grown by 3.4% since the end of 2005. On the other hand, the number of employees in the whole Canadian economy continued to increase, up 0.5% this quarter.

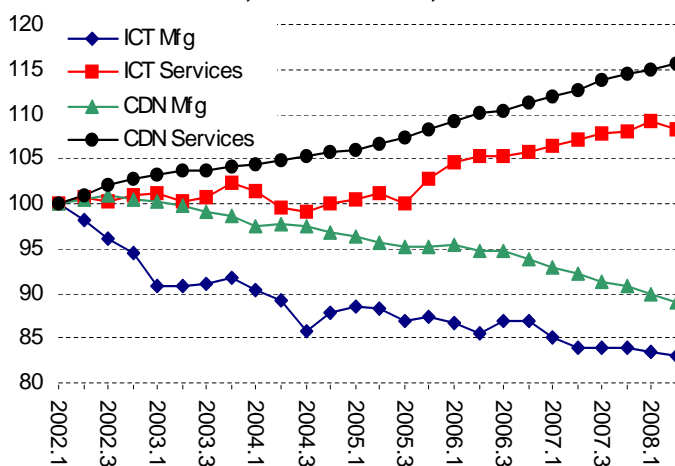
Employment: ICT Sector and Canadian Economy,  
Indexed Growth, 2002Q1 = 100



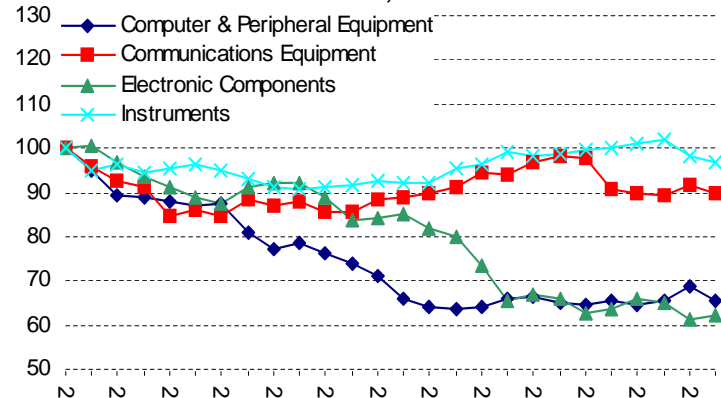
This period, the number of employees in Canadian manufacturing (-1.2%) declined twice as fast as those in ICT manufacturing (-0.6%). In fact, the number of employees in ICT manufacturing has declined by 15% since the beginning of 2002, at an average rate of 0.7% per quarter. Although Canadian manufacturing employment has also been trending down since the first quarter of 2002, it has fallen at a slower rate of 0.5% per quarter.

While the number of employees in ICT services fell by 0.8% in the second quarter of 2008, it rose by 0.6% in the Canadian services sector. This was the first drop recorded in ICT services since the third quarter of 2005. Due to its heavily concentrated share of employees in services (usually more than 80%), graphs for the ICT sector and ICT services tend to follow each other closely.

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

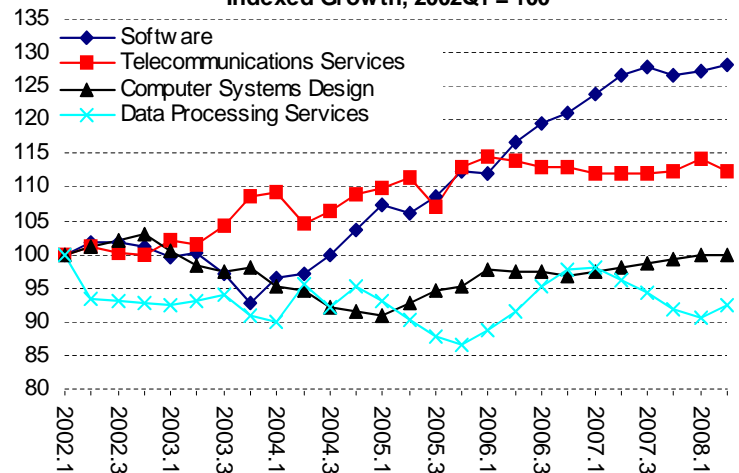


Employment: Selected ICT Manufacturing Industries,  
Indexed Growth, 2002Q1 = 100



Employment in three of the four key manufacturing industries fell this period. Although the computer and peripheral equipment industry experienced the largest drop (-5.2%) in the second quarter of 2008, its employment level was still higher than the low observed at the end of 2005. Employment in the communications equipment industry experienced a temporary increase last quarter, but returned to its decreasing trend this period and fell by 1.8%. For a second consecutive quarter, employment in the instruments industry declined, down by 1.2% in the second quarter of 2008. Regardless, employment in this industry has grown 6.0% since the third quarter of 2004. Following two consecutive quarters of decline, the electronic components industry grew by 1.5% this period.

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



Even though the data processing services (2.4%) and software (0.8%) industries grew this period, the drop in employment recorded by the telecommunications services industry (-1.7%) was significant enough to cause ICT services to decline. While employment in the software industry continues to increase, growth in the data processing services industry is just beginning (following one year of decline). Employment in the computer systems design industry fell slightly (0.1%) this period, after reporting five consecutive quarters of growth. Since the telecommunications services and computer systems design industries are the largest employers in ICT services, their drops this quarter heavily influenced the drop in this sub-sector.

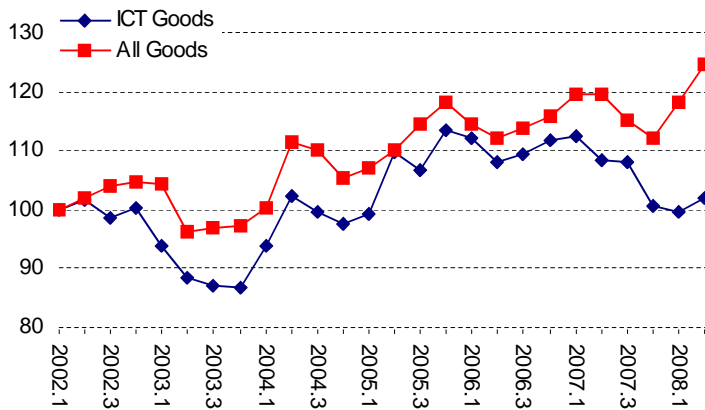


# Exports of Goods

## Exports of ICT goods grew...

ICT exports (2.2%) and exports of all Canadian goods (5.5%) grew in the second quarter of 2008. This period showed signs of improvement for ICT exports considering they were declining the previous four quarters. Exports of Canadian goods had solid growth in the first half of 2008, following weak performance in 2007.

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



## ...led by strong growth in electronic components.

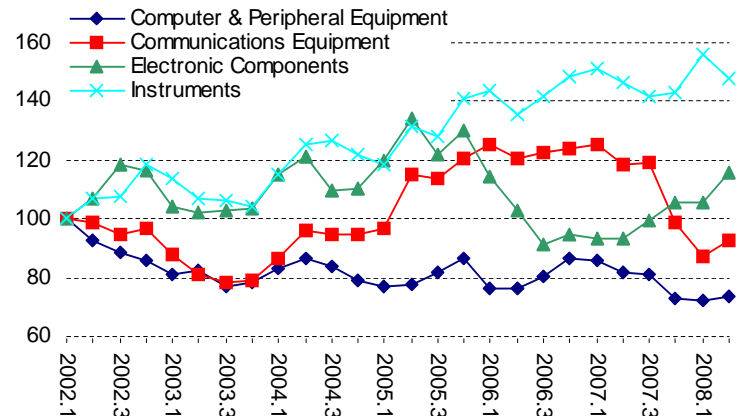
This period, exports of electronic components displayed strong growth (10.0%) compared to its relative stability recorded at the beginning of 2008. These exports have also increased by 27% since their lowest levels recorded in the third quarter of 2006.

Following two consecutive quarters of considerable declines, exports of communications equipment exhibited solid growth (6.3%) and made the largest contribution, in nominal terms, to the increase of ICT exports this quarter. This growth was due to the surge in wireless exports (28%). Comparatively, exports of wired products declined for a fourth consecutive quarter, down by 9.1% in the second quarter of 2008.

In the second quarter of 2008, exports of computer and peripheral equipment increased by 1.8%. Despite this recent increase, exports of this good have fallen 14% (or an average of 3.0% per quarter) since the beginning of 2007.

In the second quarter of 2008, instruments exports declined 5.2%. Nevertheless, exports of this product group have been trending up since the beginning of 2002, and are now 48% higher.

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

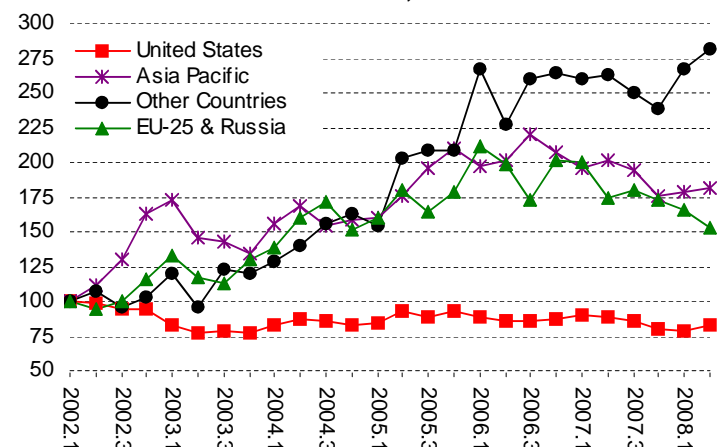


## Exports to the US increased...

Following four consecutive quarters of decline, ICT exports to the US grew by 5.9% this period. In addition, the US share in Canadian ICT exports also increased to 66%, after experiencing several quarters of relative stability. In the first quarter of 2002, this share was 82%, but it has been trending down since. Even so, the US is still Canada's main trading partner due to its proximity and economic integration.

This past quarter, ICT exports to "Other Countries" and to Asia Pacific economies grew by 5.8% and 1.5%, respectively. This marks the second consecutive quarter of growth for each of these regions. On the other hand, ICT exports to the EU-25 & Russia have been falling for the last three quarters and are now down by 7.9%. As a matter of fact, since the second quarter of 2006, ICT exports to both the Asia Pacific economies and the EU-25 & Russia have been trending down, while those to "Other Countries" have been rising. Consequently, the shares of exports to "Other Countries" rose slightly to 9.5%, those to the Asia Pacific economies remained relatively constant at 12.2%, and those to the EU-25 & Russia fell to 13.0% this past quarter.

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: 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&Russia: 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, Malta, and Russia.

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.