



Innovation, Science and
Economic Development Canada

Innovation, Sciences et
Développement économique Canada

2015

Canadian ICT Sector Profile

Information and Communications Technologies Branch

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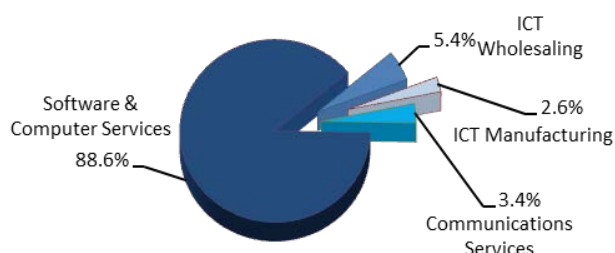
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Aussi offert en français sous le titre *Profil du secteur canadien des TIC - 2015*

Industry Structure

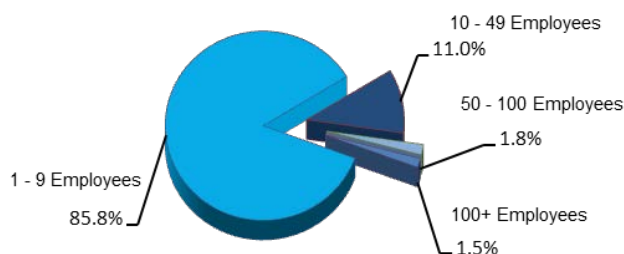
There are over 37,400 companies in the Canadian Information and Communications Technologies (ICT) sector. The large majority (over 33,000) fall within the software and computer services industries.

Companies by ICT Sub-sector, 2015



The ICT sector consists mainly of small companies, with over 32,000 of them employing fewer than 10 people. The number of large companies employing over 500 individuals is relatively small, accounting for approximately 115 firms, including subsidiaries of foreign multinational corporations.

Companies by Employee Size for Total ICT Sector, 2015



Manufacturing stands out as the sub-sector with larger companies. In 2015, 15.6% of ICT manufacturing companies had more than 50 employees, while across the whole ICT sector this share was only 3.3%.

ICT Sector Industries

ICT Manufacturing

- Computer and Peripheral Equipment
- Communications Equipment
- Electronic Components
- Audio and Video Equipment
- Magnetic and Optical Media

ICT Wholesaling

Software and Computer Services

- Software publishers
- Computer systems design
- Data processing
- Electronic and precision equipment repair and maintenance

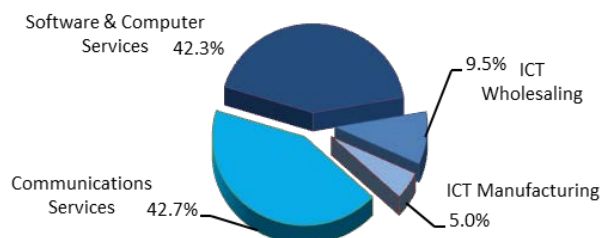
Communications Services

- Wireless Telecommunications Carriers
- Wired Telecommunications Carriers
- Cable and Other Program Distribution

GDP Contribution

The ICT sector makes a substantial contribution to Canada's GDP. In 2015, the sector's GDP was \$71.3 billion*, and accounted for 4.4% of national GDP.

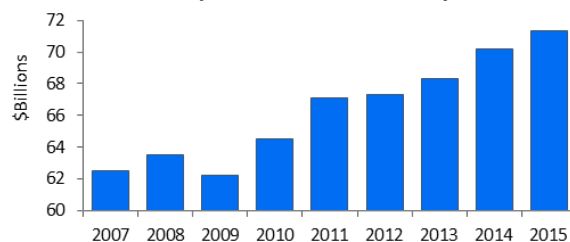
**GDP by ICT Sub-sector, 2015
(Total: \$71.3 Billion)**



ICT sector growth was slightly ahead of the overall economy in 2015. The sector increased by 1.7%, greater than the total Canadian economy (+1.0%). Since 2007, the ICT sector has posted stronger growth than the total economy. On average, annual growth in this sector has been 1.7%, compared to 1.4% for the overall economy. The ICT sector has accounted for 5.2% of Canadian GDP growth since 2007.

The software and computer services industries experienced the fastest growth in GDP in 2015, up 5.0%. The ICT wholesaling declined 2.7%, while the communications services sub-sectors remained flat. Meanwhile, the manufacturing industries GDP grew, up 2.2%.

**ICT Sector GDP, 2007-2015
(2007 Constant Dollars)**

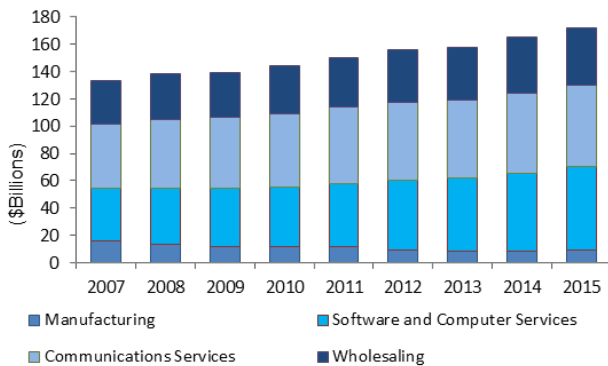


*In 2007 constant dollars

Revenues

Revenues in the ICT sector increased by 4.1% in 2015, led by the software and computer services sub-sector (+7.2%) and the manufacturing industries (+7.1%). The wholesaling, and communications services sub-sectors posted growth rates of 4.2% and 0.6%, respectively. The increase in ICT manufacturing revenue was the first one in five years.

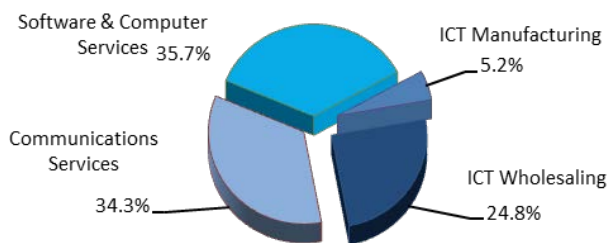
ICT Sub-sector Revenues, 2007-2015



From 2007 to 2015, ICT sector revenues grew from \$133.4 billion to \$172.2 billion, a 29.1% increase. During this period, the ICT manufacturing industries declined by 44.4%. On the other hand, all of the services sub-sectors posted gains: the software and computer services, wholesaling, and the communications services sub-sectors increased by 61.3%, 33.4%, and 25.2% respectively.

Over the same period, manufacturing industries' revenue dropped from 12.0% to 5.2% of total ICT sector revenue.

**Revenues by ICT Sub-sector, 2015
(Total: \$172.2 Billion)**



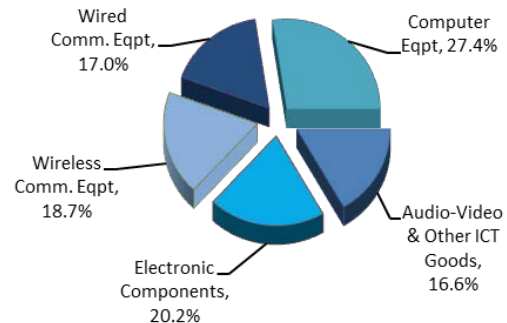
Exports

The Canadian ICT manufacturing sub-sector relies heavily on the export market. About 87% of ICT products manufactured in Canada were exported in 2015.

Canadian exports of ICT goods increased by 10.1% in 2015 to \$11.6 billion. Increases in exports of computer and peripheral equipment (+\$329M), as well as audio and video equipment (+\$303M) contributed the most to this growth.

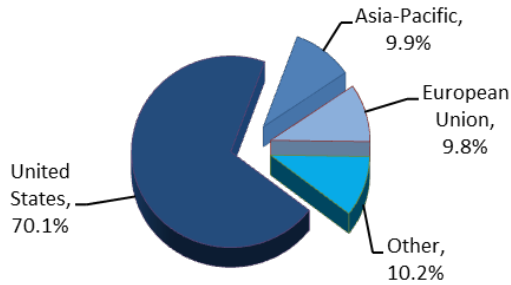
However, between 2007 and 2015, exports of ICT goods dropped by 30.8%. Since 2007, exports of wired communications equipment (-59.6%) fell the most while exports of audio and video equipment (+61.2%) were the only to increase. Over this period, the share of wired communications equipment in total ICT goods exports dropped by 19 percentage points to 17%.

**Exports of ICT Goods by Product Group,
2015 (Total: \$11.6 Billion)**



Exports of ICT goods to the United States increased by 13.3% in 2015, making up over two-thirds (\$7.5 billion) of all ICT goods exported from Canada. However, exports to the US are still \$3.5 billion lower than in 2007. Exports to the Asia-Pacific region decreased by 5.3% in 2015, while exports to the European Union increased by 5.3%. Exports to all other countries accounted for \$1.1 billion of Canadian ICT goods exports in 2015, up 4% from 2014.

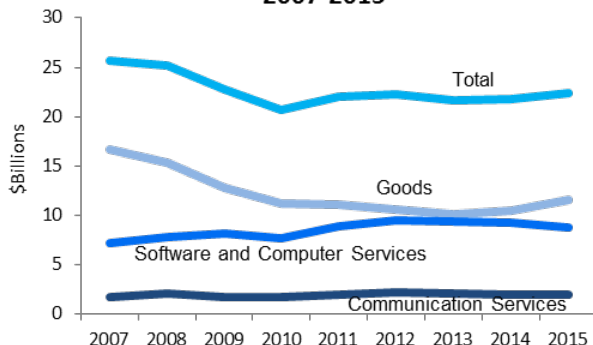
Exports of ICT Goods by Region, 2015
Share of Total ICT Goods Exports



The ICT services industries are more domestically oriented. In 2015, exports of communications services grew by 3.9%, totaling \$2.0 billion, while software and computer services dropped 5.5% to \$8.8 billion. Exports accounted for 14.3% of software and computer services revenues, and less than 3.4% of communications services revenues.

Although ICT services exports declined in 2015, the long-term trend shows that exports of ICT services are catching up with exports of ICT goods. From 2007 to 2015, exports of software and computer services grew by 22.6%, while exports of communications services increased by 13.7%. However, the increase in exports of ICT services was not large enough to offset the decline in exports of ICT goods. Total exports of ICT goods and services decreased 12.8% over the period.

Exports of ICT Goods and Services 2007-2015



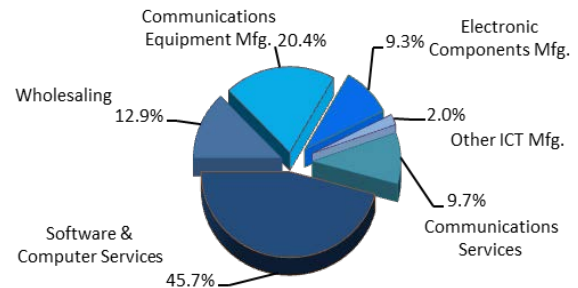
Research & Development

ICT industries are the largest performers of private sector R&D in Canada. In 2015, the ICT sector held a 29.8% share of all private sector R&D expenditures in Canada.

ICT sector R&D expenditures totaled \$4.6 billion in 2015, falling 6.7% from the previous year, largely due to a drop in the manufacturing industries (-21.3%).

From 2007 to 2015, R&D spending in the ICT sector fell by 15.1%. While spending increased in wholesaling (+178%), and software and computer services (+3.3%), it decreased in the communication services (-36.7%), and manufacturing (-40.8%) industries.

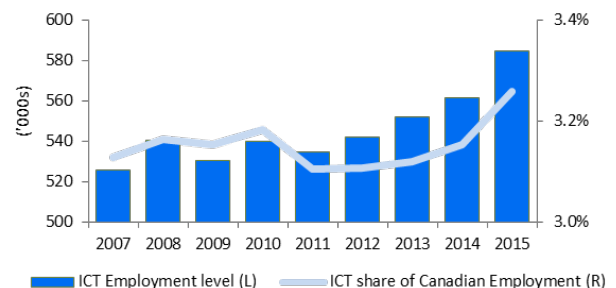
R&D Expenditures by ICT Industry, 2015
(Total: \$4.6 Billion)



Employment

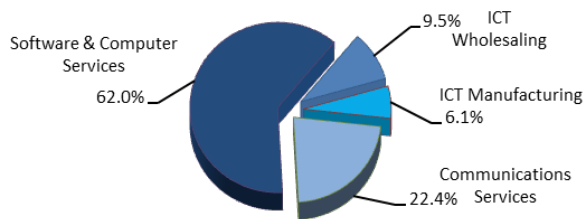
The ICT sector accounts for 3.3% of national employment. Employment in the ICT sector increased 4.2% in 2015, amounting to 584,850 jobs. This growth was much faster than that of the overall economy (+0.8%).

ICT Sector Employment, 2007-2015



In 2015, employment increased in all ICT sub-sectors except for manufacturing, which declined by 6.5%. Meanwhile, employment in the software and computer services, communication services, and ICT wholesaling sub-sectors increased by 5.4%, 4.3%, and 3.8%, respectively.

**Employment by ICT Sub-sector, 2015
(Total: 584,850 Workers)**



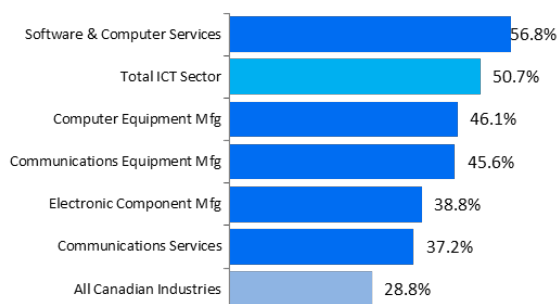
Reflecting a shift in the ICT sector from manufacturing to services, the share of manufacturing industries in total ICT sector employment declined by 5 percentage points from 2007 to 2015, while the share of software and computer services industries increased by 8.3 percentage points over the same period.

Education

The ICT sector is characterized by a knowledge-intensive workforce, with over half of its workers holding a university degree, compared to 28.8% within all Canadian industries.

The software and computer services sub-sector employs the largest proportion of university educated workers within the ICT sector (56.8%).

Percentage of Workers with a University Degree by Major ICT Industry, 2015



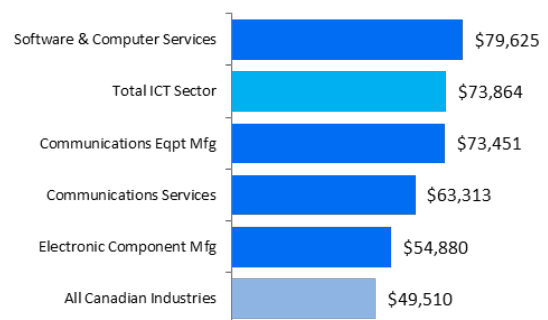
Employee Earnings

Employees in the ICT sector earn on average over \$73,800 a year. In 2015, these workers earned 49% more than the economy-wide average, with the highest earners coming from the software and computer services industries.

Despite being the lowest paid workers in the ICT sector, employees in the electronic component industry still earned 11% more than the national average in 2015.

From 2007 to 2015, the average salary in the ICT sector grew at a similar pace to the overall economy, up 21% and 20.9% respectively.

Average Annual Earnings by Major ICT Industry, 2015



DATA SOURCES

- i. **Companies:**
 - o ISED calculations using data from Statistics Canada's Business Registry.
- ii. **Revenues:**
 - o Manufacturing: Statistics Canada CANSIM table 301-0008;
 - o Software and Computer Services: Statistics Canada CANSIM table 354-0009 and custom tabulations;
 - o Communications Services: Statistics Canada CANSIM table 356-0004;
 - o Wholesale: Statistics Canada CANSIM table 081-0017; and
 - o ISED estimates for the most recent year presented (for all ICT industries).
- iii. **GDP:**
 - o Statistics Canada custom tables.
- iv. **Employment:**
 - o Statistics Canada, Survey of Employment, Payroll, and Hours (SEPH) for the number of employees and Labour Force Survey (LFS) for the number of self-employed (custom tables).
- v. **Research & Development:**
 - o Statistics Canada, custom tables.
- vi. **Education:**
 - o Statistics Canada, Labour Force Survey custom tables.
- vii. **Employee Earnings:**
 - o ISED calculations using Statistics Canada CANSIM tables 281-0024 and 281-0027.
- viii. **Exports:**
 - o Goods: ISED calculations using Trade Data Online data;
 - o Services: Statistics Canada, CANSIM table 376-0033.