



RESEARCH

STRENGTHENING CANADA'S DIGITAL ADVANTAGE

QUARTERLY MONITOR OF CANADA'S DIGITAL ECONOMY

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ICTC's labour market research captures critical economic and labour market indicators to inform competitive business and human resource strategy planning, decision-making and career development in ICT, thereby driving the development of a more prosperous Canadian ICT workforce and industry in a global digital economy.

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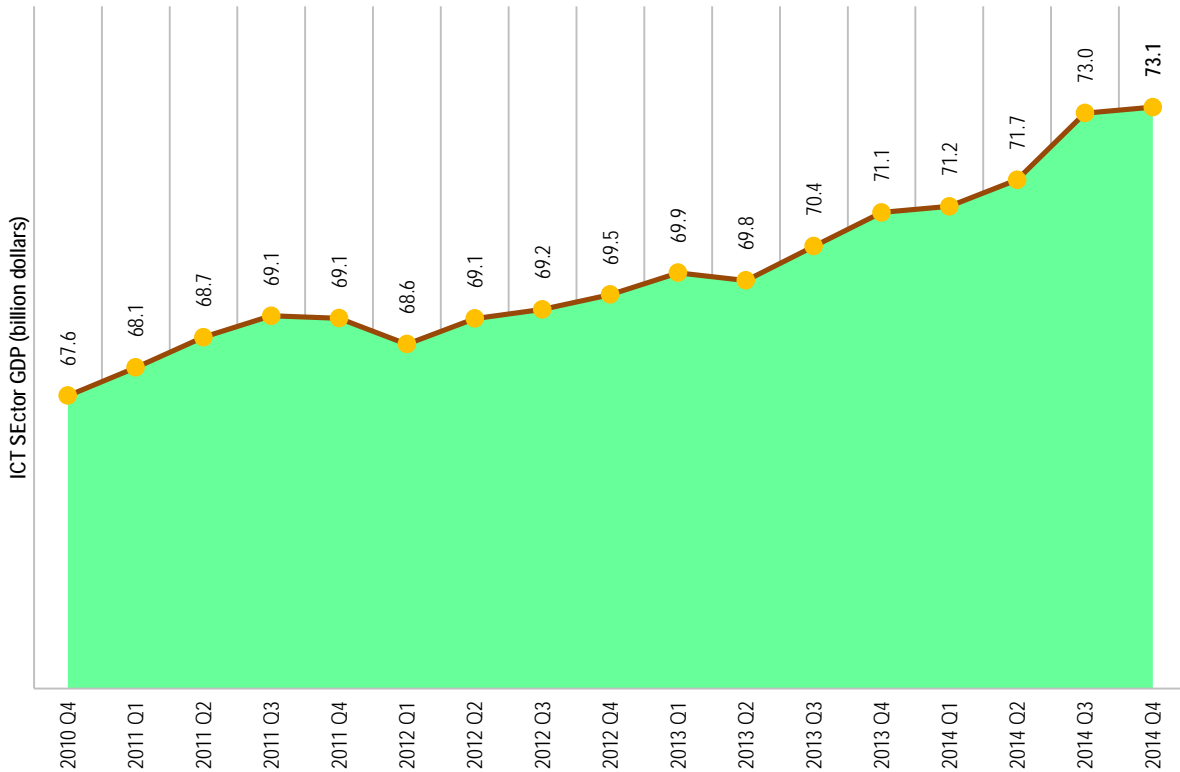


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OUTPUT AND OUTLOOK

GDP Growth

Figure 1. ICT sector GDP (in billion dollars)



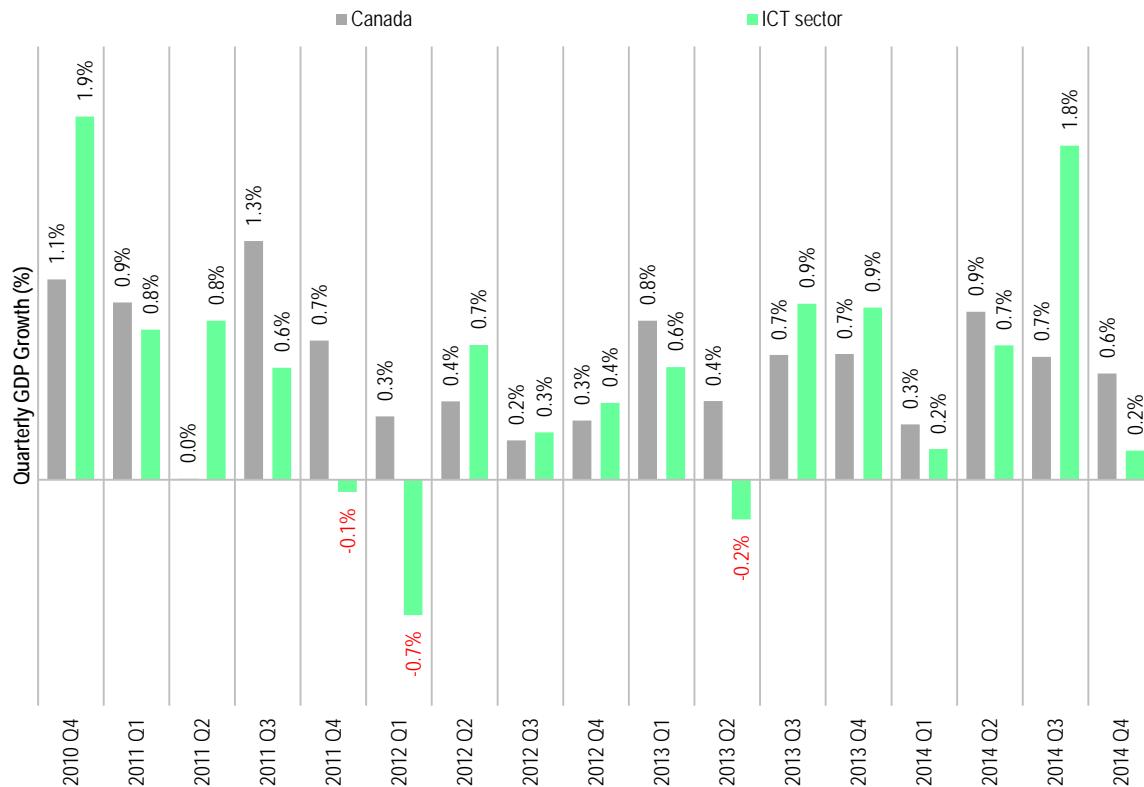
Source: ICTC; Statistics Canada

- Real gross domestic product (GDP) produced by the Canadian ICT sector increased marginally (▲\$112 million) for the fourth consecutive quarter.
- In the fourth quarter of 2014 (2014 Q4), the ICT sector contributed \$73.1 billion to Canadian GDP (figure 1).¹
- The ICT sector accounted for 4.4% of Canada's total output of \$1,653 billion in 2014 Q4.

Takeaway: As digital technologies positively impact business revenues and overall GDP, it is important to develop a culture of digital adoption in Canada, share best practices among SMEs and assist policy development for digital adoption. In order to leverage the potential of digital technologies in every sector of Canada, ICTC has launched a [Digital Adoption Campaign](#).

¹ In 2007 chained dollars. Chained dollars are real dollar amounts adjusted for inflation.

Figure 2. Quarterly GDP growth



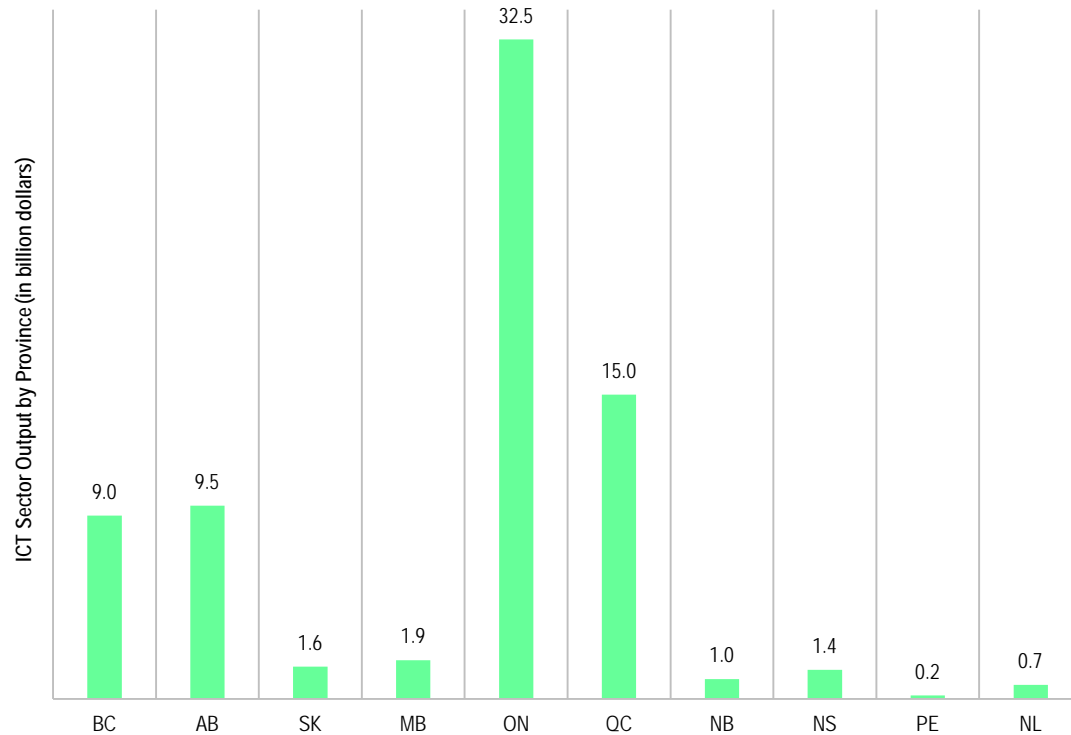
Source: ICTC; Statistics Canada

- ICT sector output of \$73.1 billion in 2014 Q4 was \$2 billion higher than it was in 2013 Q4 – a year-over-year (YOY) output growth of 2.8%.
- This output level represents a 5.1% increase compared to two years ago (2012 Q4).
- There was a 0.6% (▲) quarterly growth in the overall Canadian economy in 2014 Q4.
- Growth in the overall Canadian economy was 2.4% (▲) in the fourth quarter of 2014 compared to the fourth quarter in 2013, and 5.1% (▲) compared to the fourth quarter in 2012.

Takeaway: Digital technologies enable workers with productivity tools, transform workplaces, reduce operational costs and improve revenue generation. The enabling [impact](#) of digital technologies is critical for the overall economy.

Provincial Comparison: ICT Sector Output

Figure 3. ICT sector output by province (in billion dollars)



Source: ICTC; Statistics Canada

- Reflective of its ICT workforce and size of the sector, Ontario is Canada's ICT leader and contributed \$32.5 billion to the total Canadian ICT output in 2014 Q4.
- In the same period, other notable ICT output contributors were Quebec (\$15.0 billion), Alberta (\$9.5 billion), British Columbia (\$9.0 billion), Manitoba (\$1.9 billion), Saskatchewan (\$1.6 billion), and Nova Scotia (\$1.4 billion).

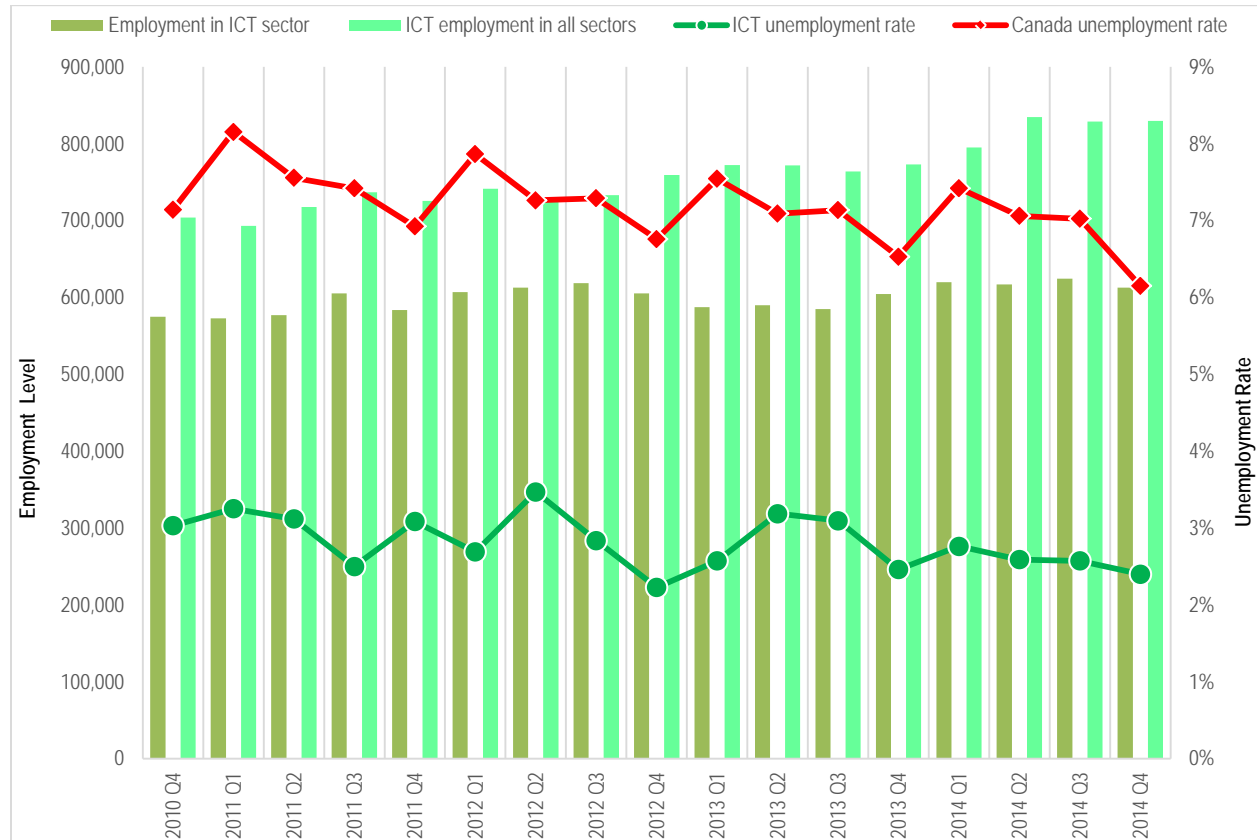
Takeaway: There are critical drivers of productivity every province should consider investing in:

- Strong and robust industry verticals and clusters
- Entrepreneurship culture
- Skilled workforce
- Consistent policy support
- An enabling business environment

LABOUR MARKET TRENDS

Employment

Figure 4. Employment in Canada's digital economy

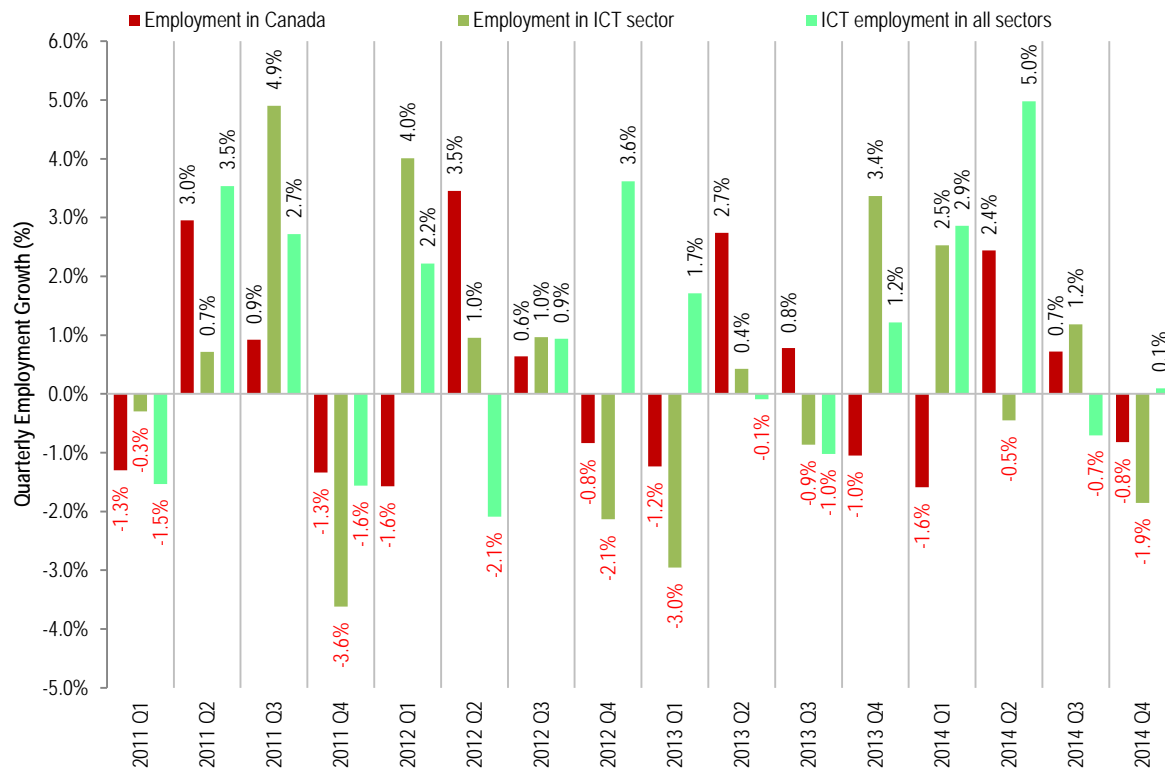


Source: ICTC; Statistics Canada

- 829,700 ICT professionals were employed in Canada in 2014 Q4, not a significant increase (↑800) from 2014 Q3.
- The jobless rate in ICT professions slightly declined to 2.4% in 2014 Q4.
- Employment in ICT sector decreased in 2014 Q4 to 612,800 (↓11,600) from 624,400 in 2014 Q3.

Takeaway: Overall employment in ICT jobs in all sectors stayed stable.

Figure 5. Employment Growth



Source: ICTC; Statistics Canada

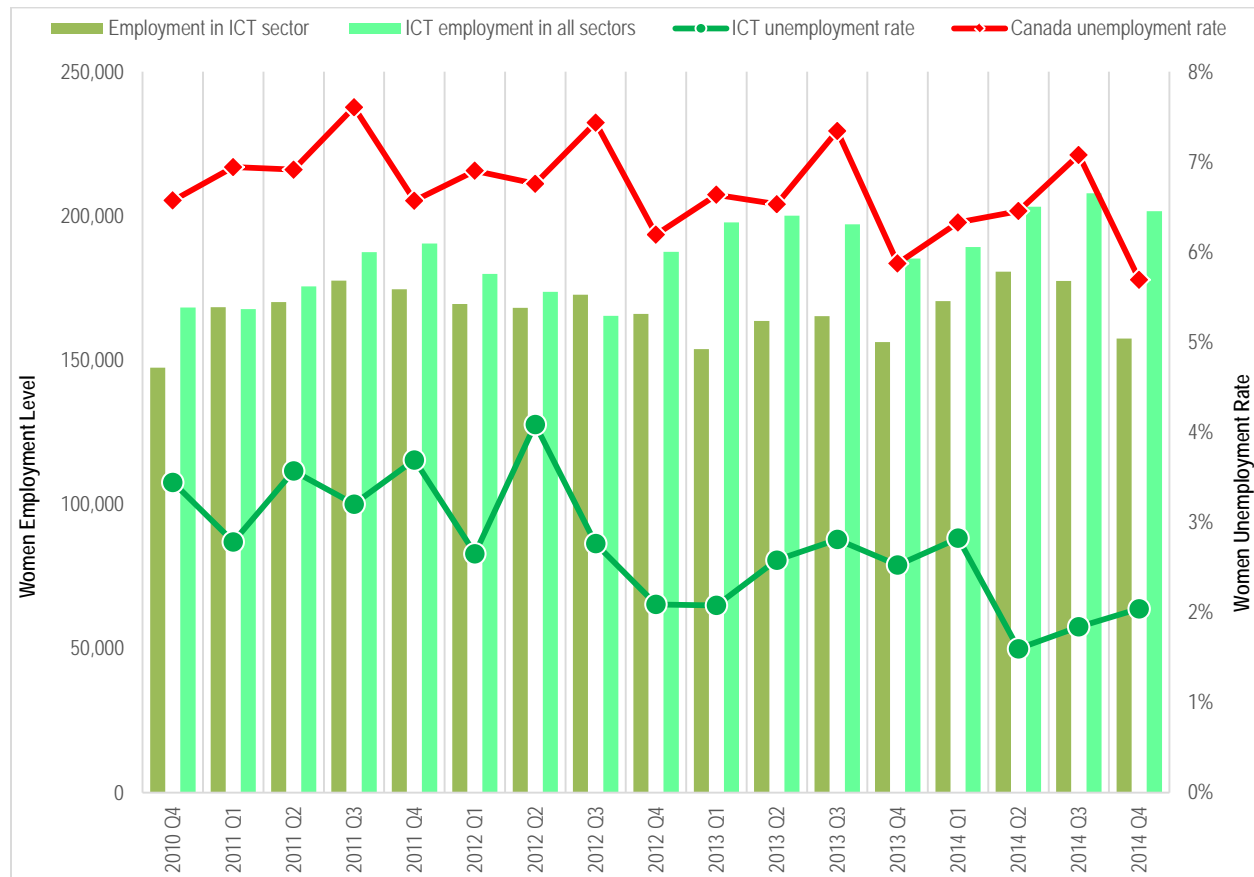
- 17.9 million workers were employed in 2014 Q4 in Canada.
- The overall Canadian labour market experienced a withdrawal in the fourth quarter, as 148,200 jobs (↓0.8%) were lost across all sectors in 2014 Q4.
- ICT employment slightly grew for four consecutive quarters during 2014 at an average rate of 0.2% per quarter.
- During the previous 12 months (four quarters of 2014), employment across all sectors in Canada increased by 124,200, of which 57,000 were ICT jobs.

Takeaway: One out of every two jobs created in Canada is a new ICT job. ICTs are playing a leading role in the growth of the overall Canadian labour market and economy, boost productivity, efficiency, and innovation in every sector of the digital economy.

For more employment and province-specific granular data for the digital economy, please visit [the e-Talent Canada Portal](#).

Gender Employment (Women)

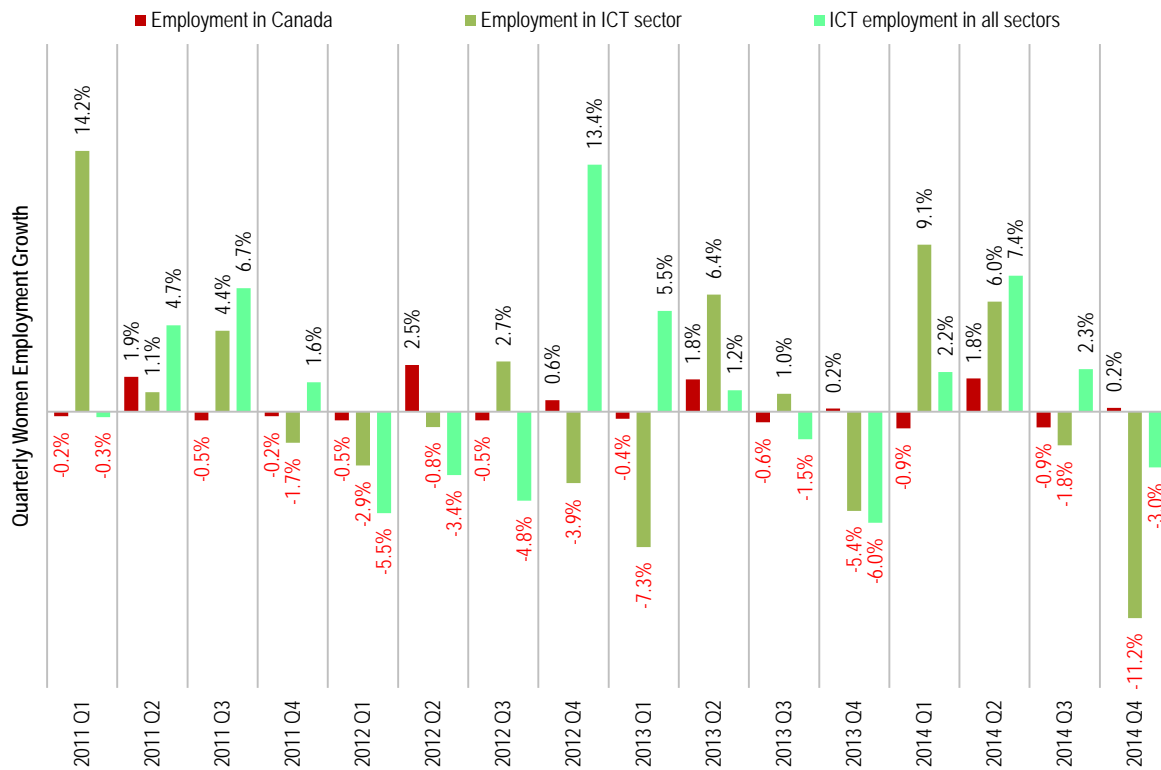
Figure 6. Women Employment Growth



Source: ICTC; Statistics Canada

- The number of women employed in ICT jobs declined in the fourth quarter (202,600) from the third quarter (207,900).
- However, there is overall a 9.0 percent growth over a year period (from 2013 Q4).

Figure 7. Women Employment



Source: ICTC; Statistics Canada

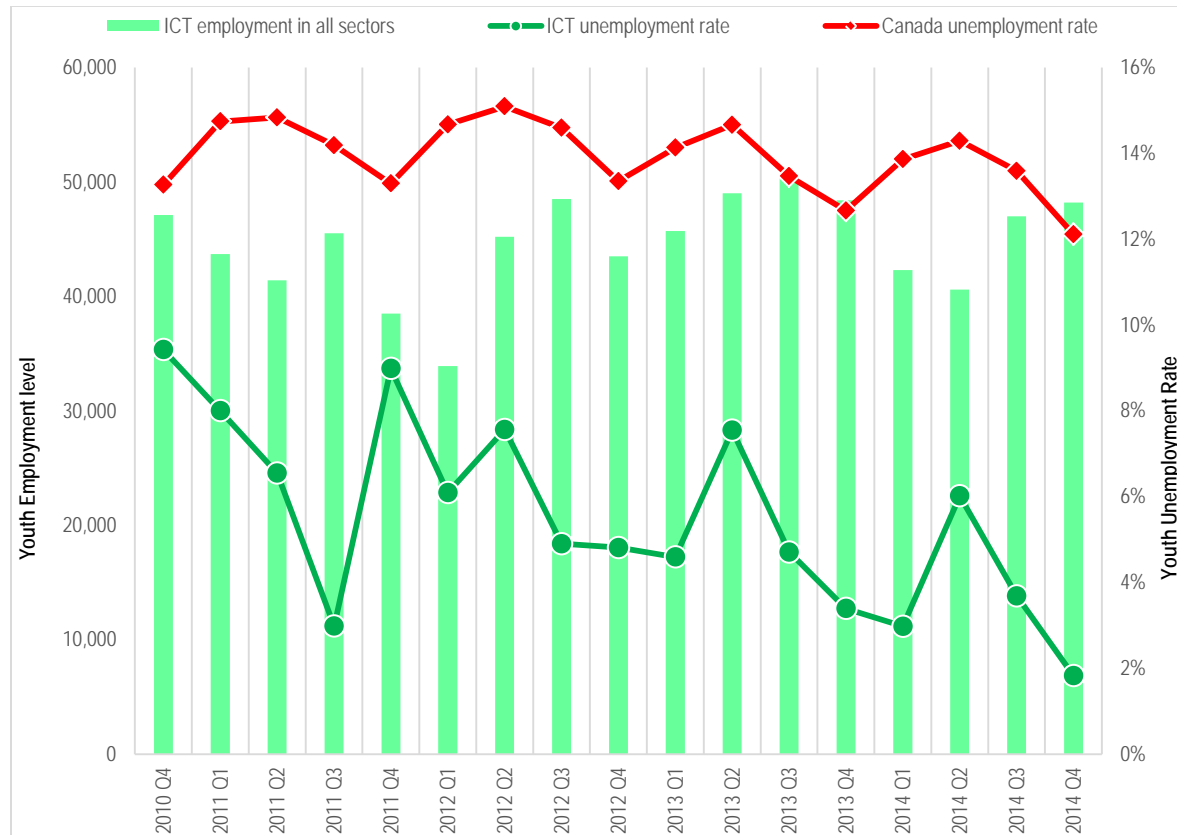
- From the third to the fourth quarter of 2014, there was an 11.2 % decrease in women employment in ICT sector.
- There is also a slight decrease in the employment rates of women in ICT jobs of all sectors (↓3.0%) from third to fourth quarter.
- However employment of women for ICT positions in all sectors slightly increased during 2014 (average ↑2.2%).

Takeaway: Even though there is a quarterly decrease in women employment (both in ICT sector and ICT employment in all the sectors), yearly trend shows a stable employment level mostly due to the second quarter with increasing women employment in Canada: When women employment increases in Canada, professional women with ICT skills are consistently employed across all sectors.

For more gender and province-specific granular data for the digital economy, please visit [the e-Talent Canada Portal](#).

Youth

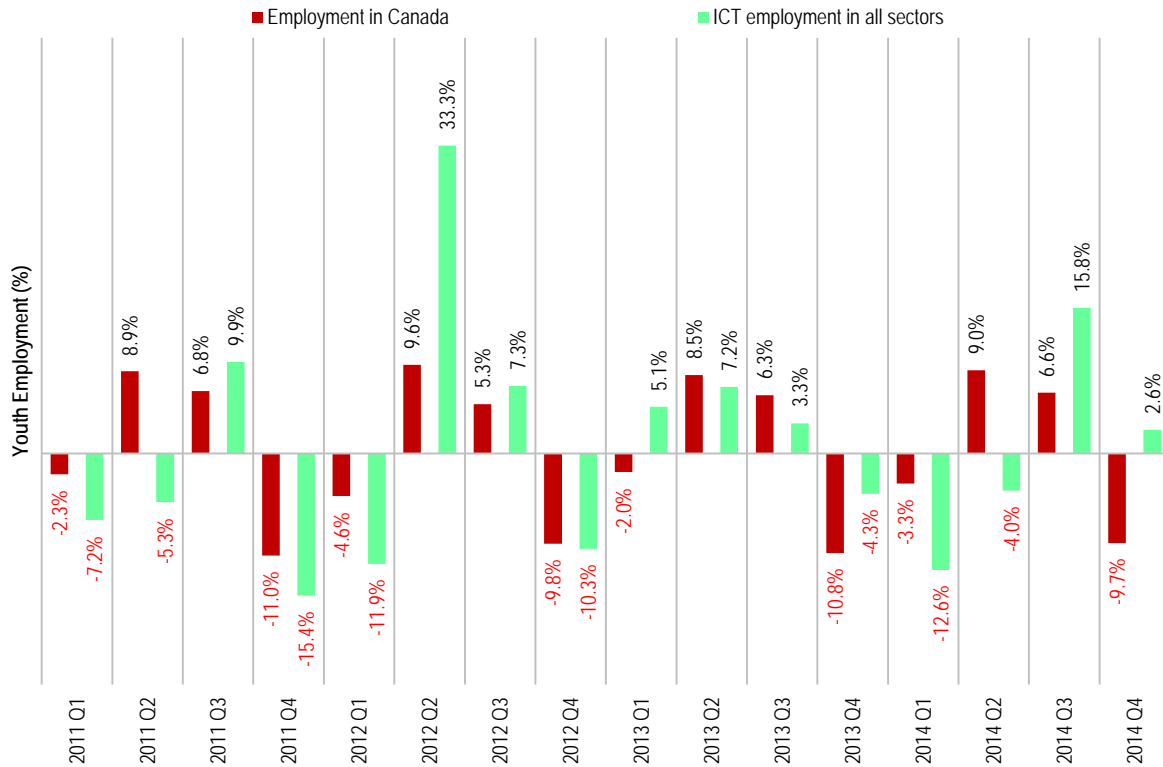
Figure 8. Youth Employment and Unemployment



Source: ICTC; Statistics Canada

- Employment in ICT occupations among those aged 25 or younger saw an increase (▲1,200) in 2014 Q4, bringing the youth employment level in ICT to 48,200.
- Only 6% of all ICT jobs are held by youth currently, compared to 14% of the jobs held by youth below 25 in the overall economy.
- The jobless rate among those aged 25 or younger in Canada is 12.1% at present, in ICT occupations on the other hand, joblessness among this age group is notably lower and is 1.8%.

Figure 9. Youth Employment Rates



Source: ICTC; Statistics Canada

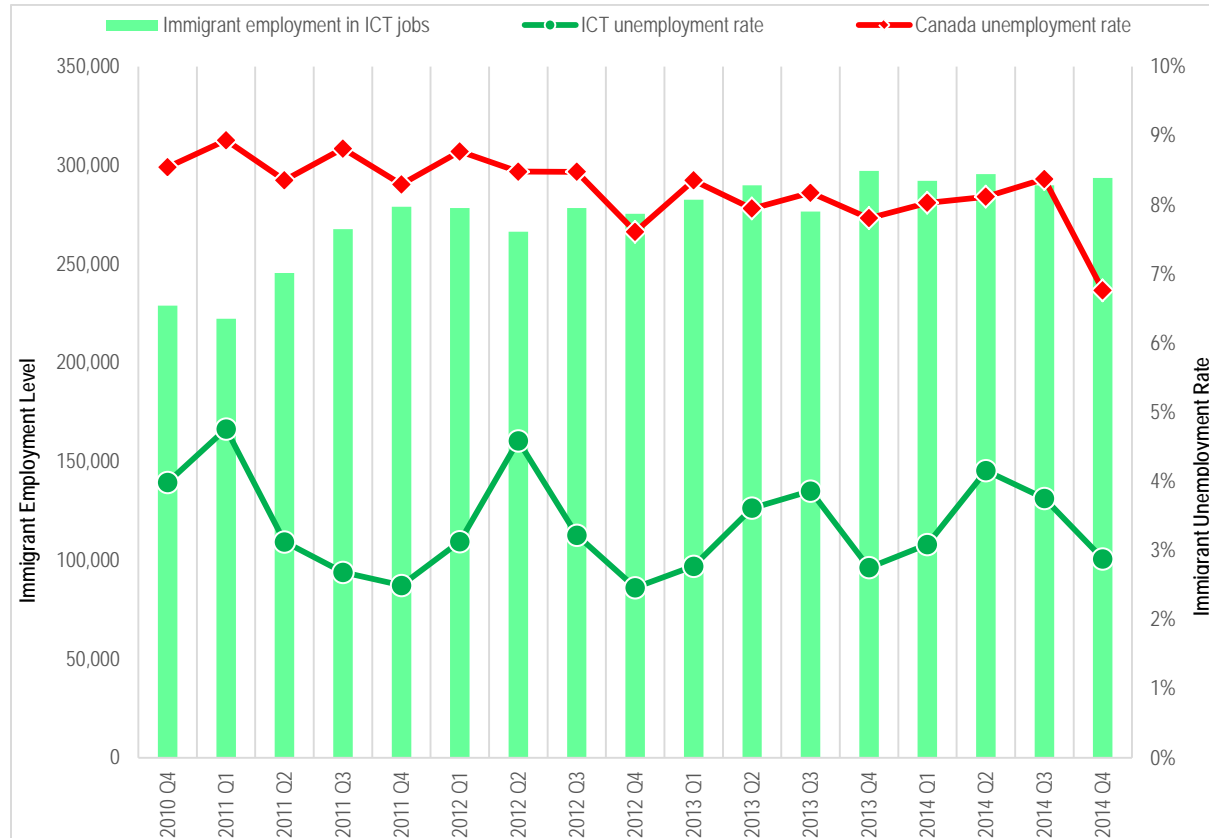
- Despite 9.7% decrease in overall youth employment in Canada, there was a 2.6% increase in ICT employment rate.

Takeaway: ICT skills of youth are critical for the digital economy. Academic and job placement [programs](#) should be available for Canada's youth from an early age for a successful transition into the labour market.

For more youth and province-specific granular data for the digital economy, please visit [the e-Talent Canada Portal](#).

Immigrants

Figure 10. Immigrant Employment and Unemployment

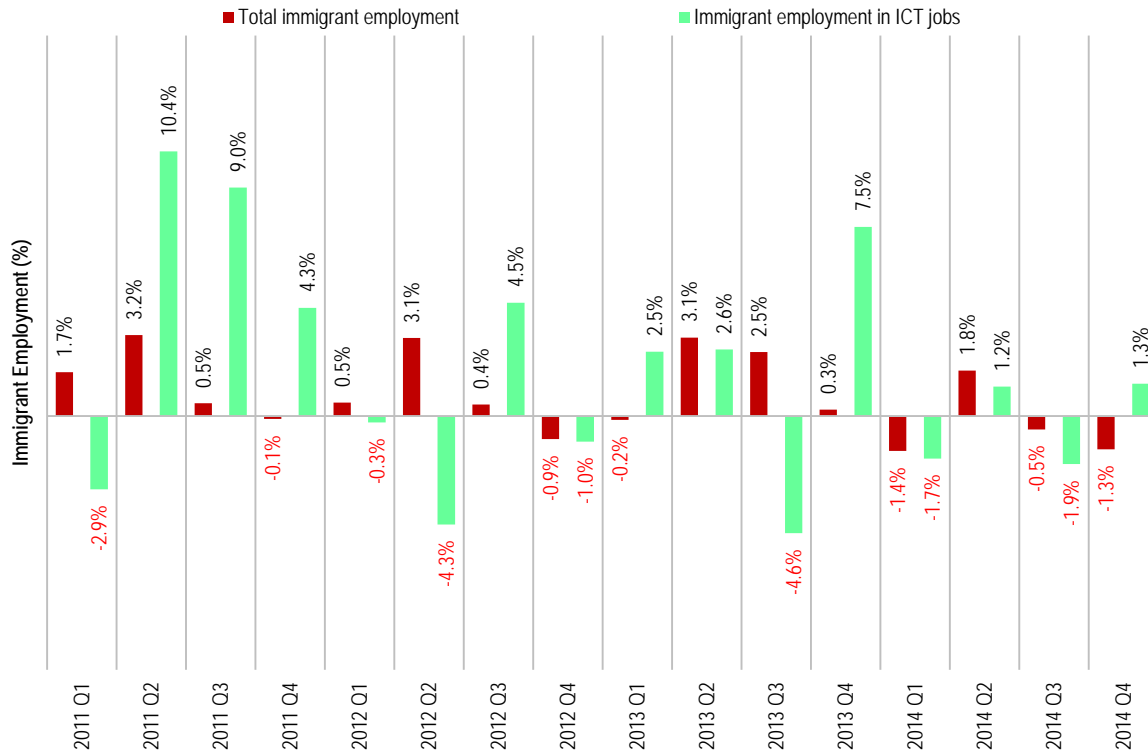


Source: ICTC; Statistics Canada

- Of the total employed workers in ICT occupations in 2014 Q4, 35% were immigrants (293,600 out of 829,700).
- The jobless rate among immigrants in Canada is 6.8% at present.
- In ICT occupations, joblessness among immigrants is consistently lower and is 2.9% at present.

Takeaway: This is the critical evidence on the need for highly skilled ICT workers: The proportion of immigrants has been consistent in recent quarters at above a third (35%) of the ICT workforce. This is in contrast with the overall economy, where only a quarter (24%) of all jobs are held by immigrants.

Figure 11. Immigrant Employment Rates



Source: ICTC; Statistics Canada

- While total immigrant employment in Canada declined 1.3%, immigrant employment in ICT jobs increased at the same rate.
- During a 4 years period (since 2010 Q4) the total immigrant employment in Canada increased at 13%; while immigrant employment in ICT jobs increased by 28%.

For more immigrant and province-specific granular data for the digital economy, please visit [the e-Talent Canada Portal](#).



In-Demand jobs

Demand for ICT skills is robust in Canada. To see an extensive listing of current ICT vacancies, please [click here](#). You can narrow your search by selecting and province from the 'Filter by province' dropdown menu.

ICT employment declining trends in Canadian job market, ICT employment in all sectors remained stable and ICT unemployment level (2.4%) stayed well below overall unemployment in Canada (6.2%).

All industrial sectors in Canada use ICT products and services. The need for top ICT talent continues to grow economy-wide as a result. This has expanded career options for ICT professionals, placing competitive pressure on the employers seeking technical ICT talent.

Digital Economy Labour Force

ICTC's labour market research captures critical economic and labour market indicators to inform competitive business and human resource strategy planning, decision-making and career development in ICT, thereby driving the development of a more prosperous Canadian ICT workforce and industry in a global digital economy.

The sum total of workers (workers that are employed in these occupations as well as workers that are currently unemployed, but actively looking for work) in these occupations and workers in all other (non-ICT) occupations in the ICT sector (ICTC's framework of Canada's ICT sector is explained below) is the total digital economy labour force in Canada. The table below summarizes the core ICT occupations:

Index	National Occupational Classification (NOC)	Occupation Title
1	0131	telecommunication carrier managers
2	0213	computer and information system managers
3	2133	electrical and electronics engineers
4	2147	computer engineers
5	2171	information systems analysts and consultants
6	2172	database analysts and data administrators
7	2173	software engineers
8	2174	computer programmers and interactive media developers
9	2175	web designers and developers
10	2241	electrical and electronics engineering technologists and technicians
11	2281	computer network technicians
12	2282	user support technicians
13	2283	systems testing technicians
14	5224	broadcast technicians
15	5241	graphic designers and illustrators

ICT Sector

The table below summarizes the ICT sector:

Index	North American Industry Classification System (NAICS)	ICT Sub-sector
1	3333	Commercial & Service Industry Mach. Manuf.
2	3341	Computer & Peripheral Equip. Manuf.
3	3342	Communications Equip. Manuf.
4	3343	Audio & Video Equip. Manuf.
5	3344	Semiconductor & Other Electronic Component Manuf.
6	3345	Navigational, Medical & Control Instruments Manuf.
7	4173	Computer & Comm. Equip. & Supplies Wholesale distribution
8	5112	Software Publishers
9	5171	Wired Telecommunications Carrier
10	5172	Wired Telecommunications Carrier (except satellite)
11	5174	Satellite Telecommunications
12	5179	Other Telecommunications
13	5182	Data Processing, Hosting, and Related Services
14	5415	Computer Systems Design & Related Serv.
15	8112	Electronic & Precision Equip. Repair & Maintenance



About ICTC

The Information and Communications Technology Council (ICTC) is a leading not-for-profit national centre of expertise conducting research, policy development, and creating talent solutions for the digital economy.

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