



RESEARCH

**QUARTERLY MONITOR
OF CANADA'S ICT LABOUR MARKET**

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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. In so doing, this data will support the continued development of a more prosperous Canadian ICT workforce and industry in a global digital economy.

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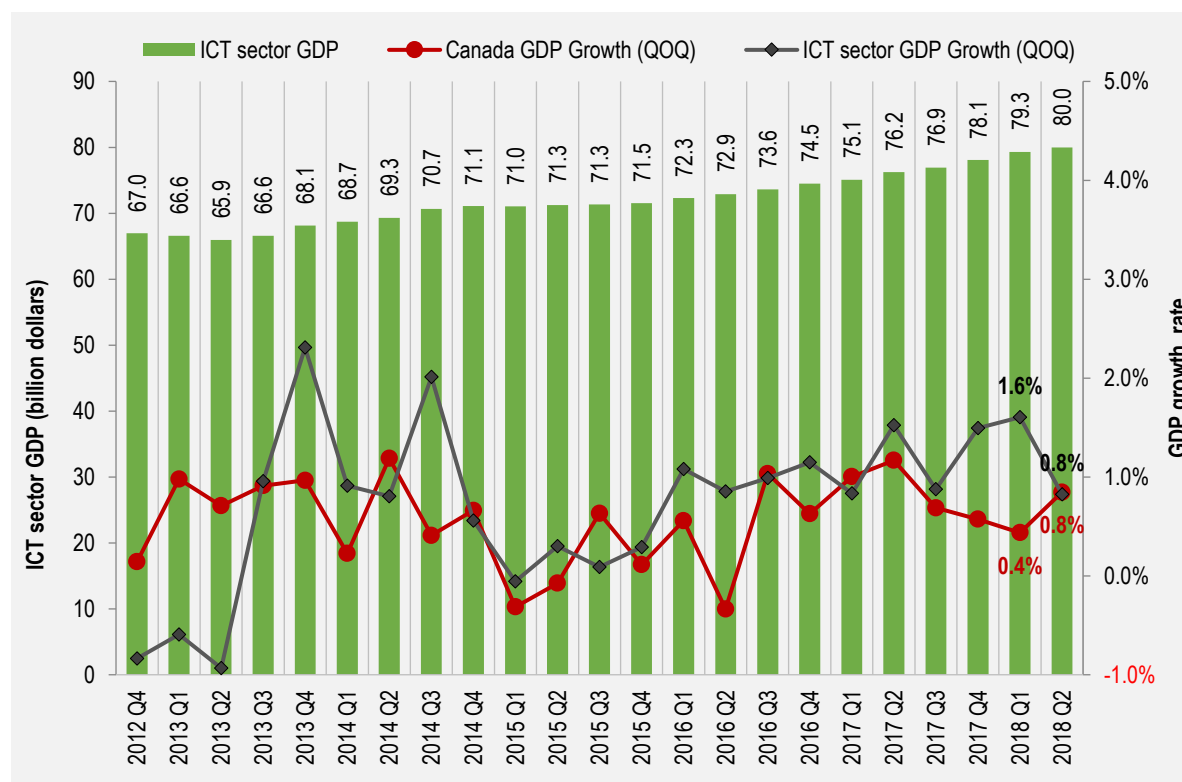
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OUTPUT AND OUTLOOK

GDP Growth

Figure 1 – ICT sector GDP



Source: ICTC; Statistics Canada

Analysis and Insights

- ❖ As technological innovation and adoption becomes more entrenched across different segments of the Canadian economy, the demand for ICT related products and services continues to expand. This has further contributed to an increase in the level of economic activity that is currently being witnessed in the ICT sector.
- ❖ Real GDP^{1,2} in the ICT sector increased by 0.8% in the second³ quarter of 2018 when compared to the previous quarter, with both the ICT manufacturing⁴ and ICT services⁵ sub-sectors recording growth of 1 and 0.8% respectively.
- ❖ The ICT sector currently contributes approximately \$80 billion in GDP to the national economy, and now accounts for roughly 4.5% of Canada's total economic output (GDP).
- ❖ Similar to the ICT sector, the broader Canadian economy also expanded at a modest pace, registering GDP growth of 0.8% in the second quarter of 2018.

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

² The underlying concepts, methods, classification systems, and data sources of the Canadian System of Macroeconomic Accounts (CSMA) have been recently updated, and these modifications are reflected in the GDP levels compared to previous editions of this research series

³ April 2018 - June 2018

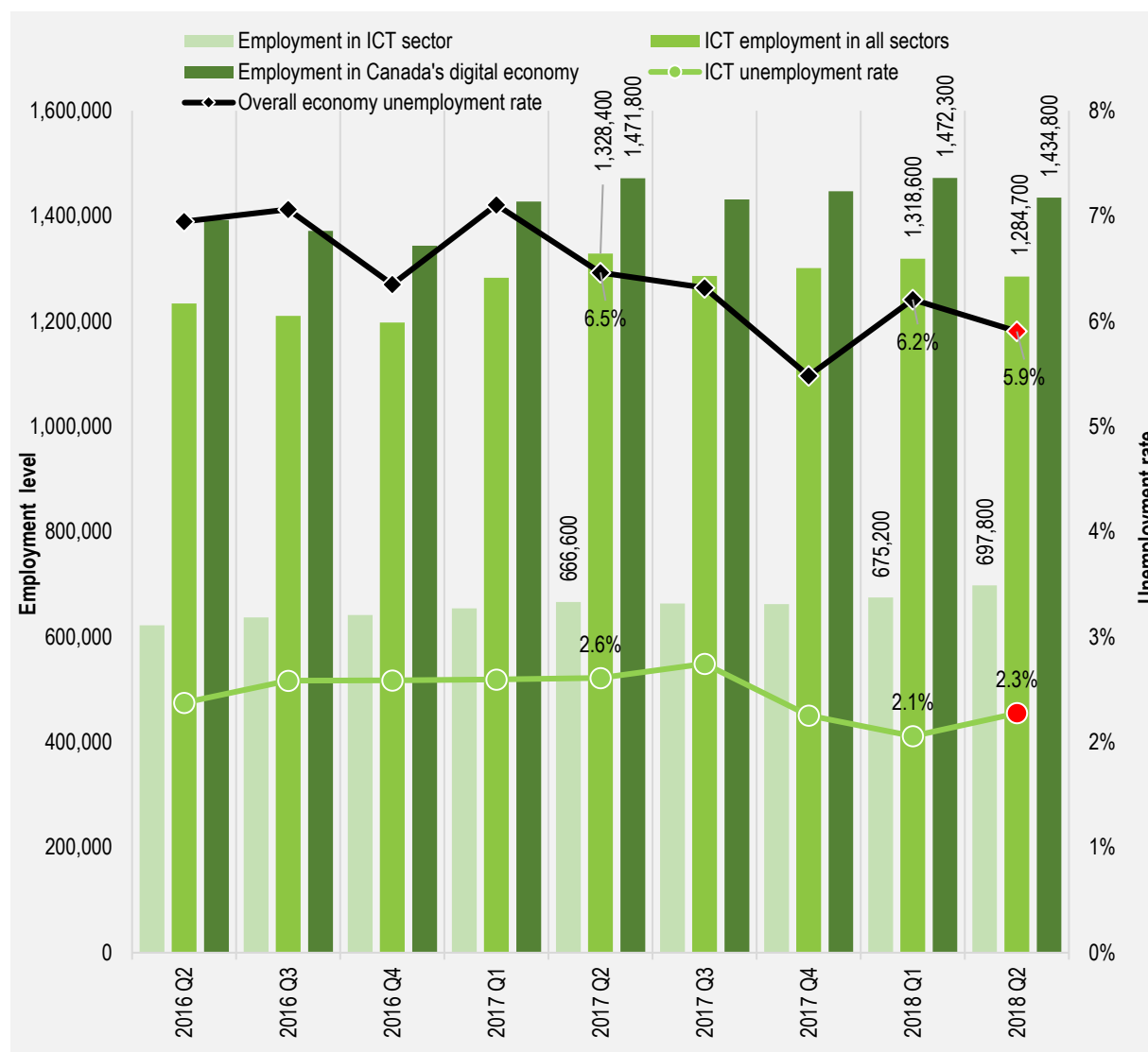
⁴ This combines the North American Industry Classification System (NAICS) codes 3341, 3342, 3343, 3344, 3346. See Appendices

⁵ This combines the North American Industry Classification System (NAICS) codes 4173, 5112, 517, 518, 5415, 8112. See Appendices

LABOUR MARKET TRENDS

Employment

Figure 2 – Employment in Canada's digital economy



Source: ICTC; Statistics Canada

Analysis and Insights

- ❖ A total of 1,434,800 individuals were employed in the Canadian digital economy in the second quarter of 2018. This included approximately 547,700 ICT professionals working in the ICT sector, 737,000 ICT professionals working in non-ICT sectors and another 150,100 non-ICT professionals working in the ICT sector.
- ❖ An estimated 1,284,700 ICT professionals were employed across all sectors of the Canadian economy in Q2 of 2018. This however represented a decline of 2.6% or approximately 33,900 jobs when compared to Q1 of 2018. Year over year ICT employment across all sectors of the economy declined by 3.3%, resulting in a net job loss of 43,700 positions when compared to Q2 of 2017.

- ❖ An additional 22,600 net new jobs were created in the Canadian ICT sector during Q2 of 2018, representing an increase of 3.3% relative to the previous quarter. Year over year employment growth was however more robust with approximately 31,200 jobs being created, which represents an increase of 4.6% when compared to Q2 of 2017.
- ❖ The unemployment rate among ICT workers averaged 2.3% throughout the second quarter of 2018, a modest increase from the 2.1% that was recorded in the first quarter of 2018. The national unemployment rate on the other hand declined by 0.3 percentage points to 5.9%.

Gender Diversity

Figure 3 – Women’s employment and unemployment



Source: ICTC; Statistics Canada

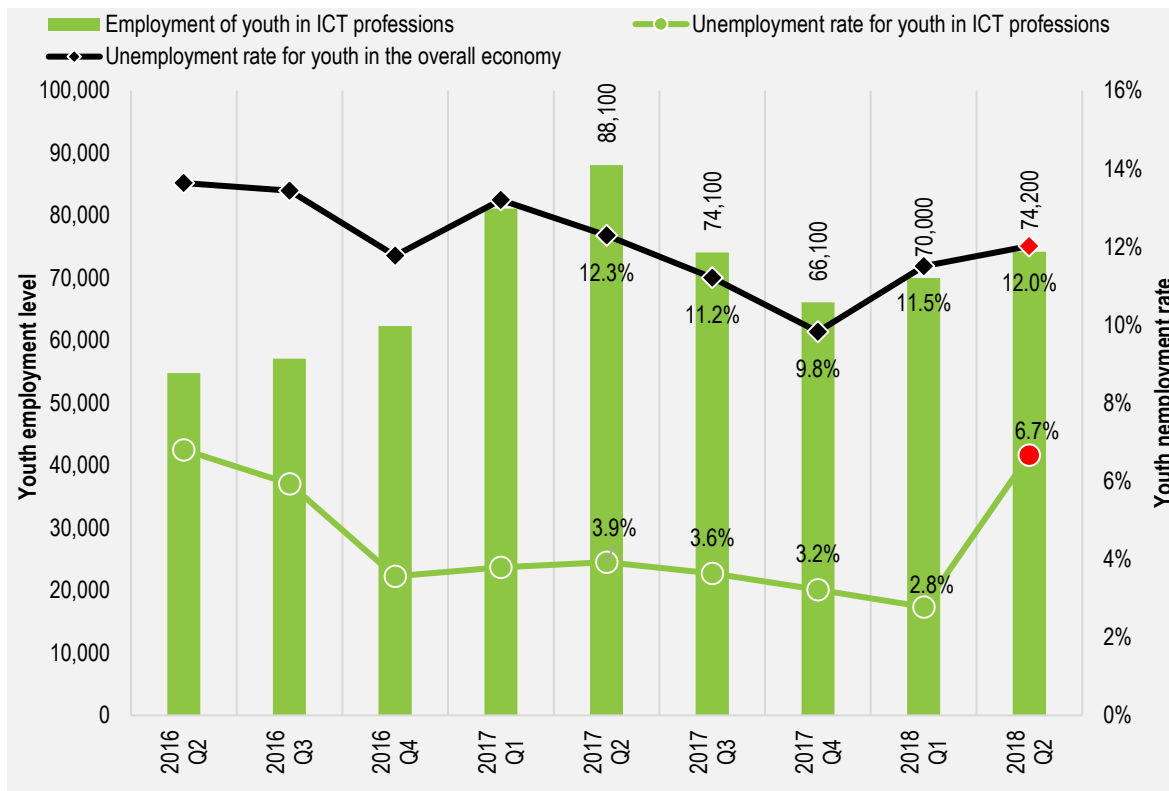
Analysis and Insights

- ❖ The number of women employed as ICT professionals increased by a modest 0.2% in the second quarter of 2018 - when compared to the previous quarter - and now stands at 326,900. Year over year growth was however somewhat stronger coming in at 3.2%.
- ❖ An additional 10,100 women were employed in ICT type jobs in the second quarter of 2018 when compared to the same period in the previous year.
- ❖ Although women account for approximately 48% of the employed workforce in Canada, they continue to be underrepresented in the ICT sector given that they account for only 25% of all the employed ICT professionals in Q2 2018.
- ❖ The unemployment rate among women in ICT related professions increase to 2.3% in Q2 2018, a 0.6 percentage point increase from the previous quarter. However, it continues to be well below the national unemployment rate among women which averaged 5.4% over that same period.



Youth Inclusion

Figure 4 – Youth employment and unemployment



Source: ICTC; Statistics Canada

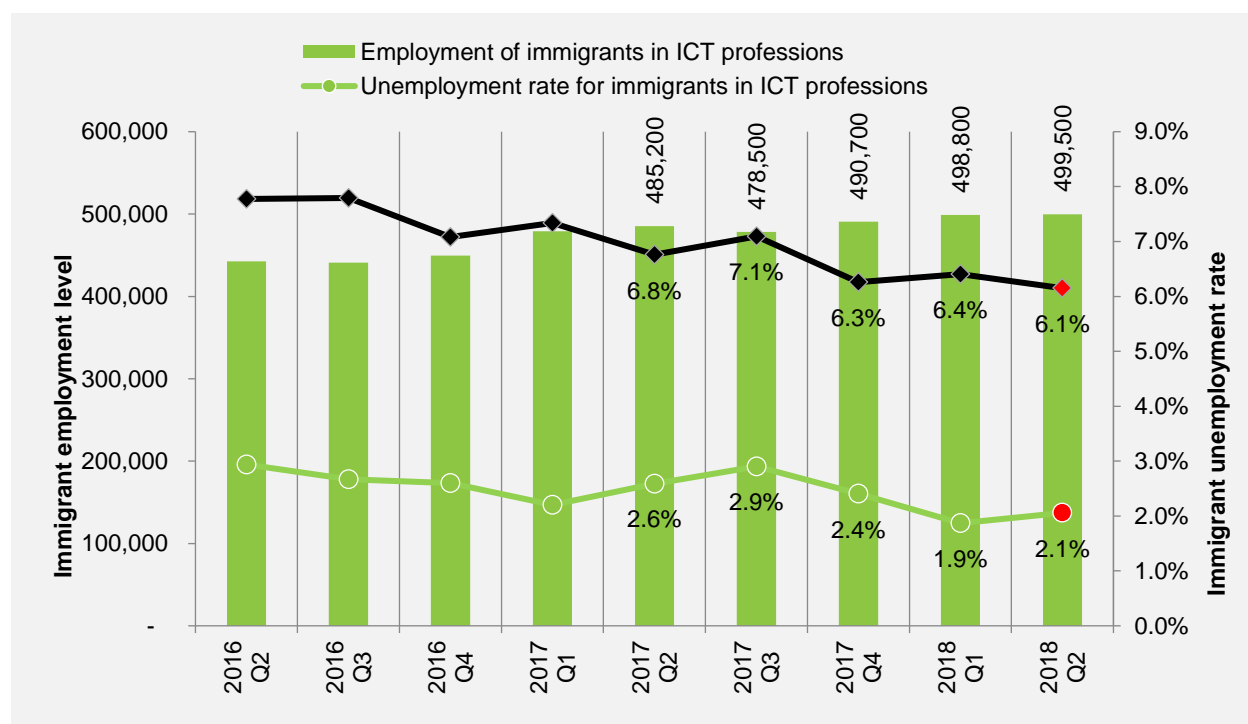
Analysis and Insights

- ❖ Youth (15-24 years old) accounted for a little over 13% of the employed workforce in Canada in Q2 2018. There were approximately 74,200 youths working in ICT related jobs over that period, and this represented approximately 3% of total youth employment.
- ❖ During Q2 of 2018, ICT employment among youth increased by 4,200 jobs or 6% relative to the previous quarter. However, on a year over year basis, the level of employment declined by 15.8% which translated to a net job loss of approximately 13,900 positions.
- ❖ Youth accounted for 5.8% of the total number of ICT workers in Canada during Q2 of 2018. This represents a modest increase from the 5.3% that was observed in Q2 of 2017.

- ❖ Despite the job gains among youths working as ICT professionals in Q2 of 2018, the unemployment rate among these individuals increased to 6.2%, up from the 2.3% that was observed in the previous quarter. This was primarily as a result of a 10.4 % increase in the number of youth labour force participants in the ICT workforce. The overall unemployment rate among youth across all sectors of the Canadian economy increased by 0.5% percentage points to 12% over that same time period.

Immigrant Integration

Figure 5 – Immigrant employment and unemployment



Source: ICTC; Statistics Canada

Analysis and Insights

- ❖ As talent scarcity becomes more prevalent, Internationally educated professionals (IEPs) will continue to play a pivotal role in Canada's ICT sector, by means of allowing Canadian businesses to tap into the pool of highly skilled talent that are needed to maintain a competitive edge in the global digital economy.
- ❖ In Q2 of 2018, there were close to 500,000 immigrants⁶ working as ICT professionals across Canada. These individuals accounted for approximately 39% of the employed ICT workforce. Immigrants however represents only 27% of the overall employed workforce across all sectors of the Canadian economy.
- ❖ In Q2 of 2018, employment among immigrants working as ICT professionals increased by a mere 0.1% when compared to the previous quarter. However, on a year over year basis, employment growth was somewhat stronger, increasing by 2.9%, which resulted in a net jobs gain of approximately 14,300 positions.
- ❖ With the level of employment among immigrants in ICT professions remaining relatively unchanged in Q2 of 2018, the unemployment rate edged up to 2.1%. This represents a 0.2 percentage point increase when compared to the previous quarter. However, this figure continues to be well below the unemployment rate for immigrants across all sectors of the Canadian economy, that which experienced a modest decline to 6.1% in Q1 of 2018.

⁶ Immigrants are defined as persons who were not born in Canada and who were not Canadian citizens by birth.

In-Demand jobs

The demand for ICT talent and skills remains very high in Canada, and is expected to increase significantly over the next five years. For a detailed understanding of medium-term supply and demand dynamics related to ICT talent and skills in Canada, please refer to [ICTC's 2021 Labour Market Outlook](#).

In Q1 of 2018, employment growth was strongest among the following ICT professions:

- ❖ Technical sales specialists - wholesale trade– 14,200 jobs, 10.1% increase from Q1 2018.
- ❖ Graphic designers and illustrators– 9,033 jobs, 14.9% increase from Q1 2018.
- ❖ Computer programmers and interactive media developers– 8,033 jobs, 5% increase from Q1 2018.
- ❖ Web designers and developers– 4,867 jobs, 14% increase from Q1 2018.
- ❖ Software engineers and designers– 2,800 jobs, 4.8% increase from Q1 2018.

To review live job postings by occupation, please [click here](#).

APPENDICIES

Digital Economy Labour Force

ICTC's labour market research captures critical economic and labour market indicators, helping to inform competitive business planning, as well as strong human resource strategies and decision-making related to the ICT sector. Combined, this research forms the foundation for driving the development of a more prosperous Canadian ICT sector, and a highly-skilled workforce able to compete in the 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 seeking employment) in these occupations and all other (non-ICT) occupations in the ICT sector (ICTC's framework of Canada's ICT sector is explained below) represent the total digital economy labour force in Canada. The table below summarizes the core ICT occupations:

Index	National Occupational Classification (NOC)	Occupation Title
1	131	Telecommunication carriers managers
2	211	Engineering managers
3	911	Computer and information systems managers
4	911	Manufacturing managers
5	1252	Health information management occupations
6	2133	Electrical and electronics engineers
7	2147	Computer engineers (except software engineers and designers)
8	2171	Information systems analysts and consultants
9	2172	Database analysts and data administrators
10	2173	Software engineers and designers
11	2174	Computer programmers and interactive media developers
12	2175	Web designers and developers
13	2241	Electrical and electronics engineering technologists and technicians
14	2242	Electronic service technicians (household and business equipment)
15	2243	Industrial instrument technicians and mechanics
16	2281	Computer network technicians
17	2282	User support technicians
18	2283	Information systems testing technicians
19	5222	Film and video camera operators
20	5223	Graphic arts technicians
21	5225	Audio and video recording technicians
22	5241	Graphic designers and illustrators
23	6221	Technical sales specialists - wholesale trade
24	9222	Supervisors, electronics manufacturing
25	9523	Electronics assemblers, fabricators, inspectors and testers



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	Wireless 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