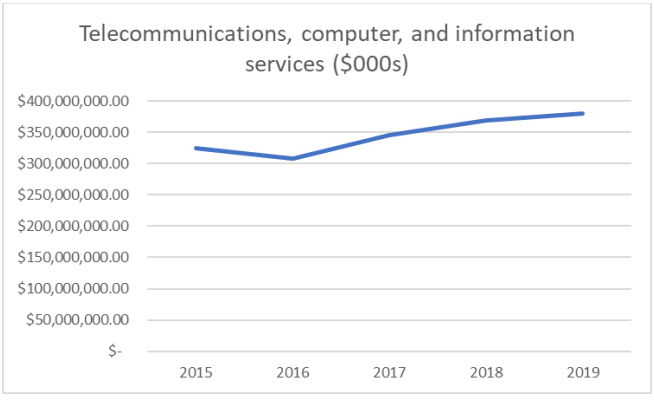
ICT Opportunities - Overview

ICT services are those services that are used to facilitate information processing and communication. ICT services include three categories of services: telecommunications services, computer services, and charges for the use of intellectual property associated with computer software. ICT-enabled services are services with outputs delivered remotely over ICT networks. There are also potentially ICT-enabled services, which include services types that can predominantly be delivered remotely over ICT networks without identifying the services that are delivered over ICT networks.



Source: ITC (https://www.trademap.org/tradestat)

World imports of ICT services are estimated at $379.5Bn. in 2019. This reflects an increase of approximately 3.0% of their level of $368.4Bn. in 2018. The chart at left shows that the trend in world imports has been increasing since 2016, following a decline relative to the 2015 levels.

Demand

The bulk of world ICT imports in 2019 were into the United States ($43.7Bn.) followed by Germany ($41.7Bn.); China ($26.8Bn.); France ($22.8Bn.); Japan ($19.9Bn.); and the Netherlands ($18.8Bn.). In terms of regional economic groupings, the EU28 accounted for $183.5Bn.; and CARICOM accounted for $235Mn.

Supply

The *United States* leads the global landscape in technology innovation. The country's competitive edge, according to the World Economic Forum's 2018 Global Competitive Index, is due to its business dynamism, strong institutional pillars, financing mechanisms, and vibrant innovation ecosystem. Innovation is a trademark feature of American competitiveness and has powered its global dominance since the post-World-War industrial revolution. Countries that lead the world in generating advanced technologies and leveraging the full productive capacity of their digital economies can gain a strategic competitive advantage. The United States leads the world in market capitalization at $873.2Bn. in 2018.

Market entry requirements

Market entry requirements for the *Canadian* market are exceptionally good. As a high demand Federal Skilled Worker occupation, experts practicing as computer and information systems managers could enter Canada very easily. Under Express Entry, Federal Skilled Workers across 347 eligible occupations who meet minimum entry criteria, submit an expression of interest profile to the Express Entry Pool. The profiles of candidates in the pool are ranked under a Comprehensive Ranking System. The highest-ranked candidates will be considered for an invitation to apply for permanent residence. Candidates receiving an invitation must submit a full application within a delay of 60-days.[1]

Entry into the *United States* can be facilitated following the same rules discussed earlier for professional services suppliers.

Entry into the *United Kingdom* can be facilitated following the same rules discussed earlier for professional services suppliers.

Current trends

Canada's ICT (Information and Communications Technologies) sector posted strong growth in 2019, and outperformed the overall Canadian economy in output, employment, and innovation growth. The sector is estimated to have contributed 4.8% of GDP or $94.1Bn. in 2019. In terms of employment, the sector is estimated to have employed 666,540 workers in 2019, growing by 2.1% compared to 2018 and the average annual salary paid in the sector was $82,221 in 2019, representing an increase of 5.7% over the average salary paid in the sector in 2018. Notably, the average annual salary paid in the sector is approximately 53.7% higher than the Canadian average making it an extremely attractive sector for workers.[2]

In revenue terms, the Canadian Average Growth Rate (CAGR) over the last five years to 2019 has been strongest for software & computer systems (8.2%); followed by ICT wholesaling (4.7%); and communications services (2%). Similarly, in employment terms the CAGR over the last five years to 2019 has been strongest for software & computer systems (5.5%); followed by ICT wholesaling (2.5%). In

[1] https://www.immigration.ca/fast-track-high-demand-occupations
[2] http://www.ic.gc.ca/eic/site/ict-tic.nsf/eng/h_it07229.html

terms of contribution to GDP, the strongest subsector contribution to GDP was software & computer systems (6.1%); followed by communications services (3.5%); and ICT wholesaling (3.5%). Importantly, the largest spending in the area of research and development is in Communications Services (14.8%); followed by software & computer systems (5.6%); and ICT wholesaling (4.7%).[3]

In the United States, in 2014, exports of ICT services were $68.4 billion, and imports of ICT services were $37.8 billion, resulting in a trade surplus in ICT services of $30.6 billion. Exports of potentially ICT-enabled services were $385.1 billion, and imports of potentially ICT-enabled services were $230.9 billion, resulting in a trade surplus of $154.2 billion.[4] From 1999 to 2014, ICT services exports and potentially ICT-enabled services exports and imports more than tripled, and ICT services imports more than doubled. Exports of both ICT and potentially ICT-enabled services grew faster than imports, leading to an increase in the trade surplus in ICT services from 1.7 percent to 2.6 percent of total trade in services (exports plus imports) and to an increase in the trade surplus in potentially ICT-enabled services from 10.9 percent to 13.0 percent of total trade in services.[5]

Future trends

In the UK, looking at the biggest revenue generators, consumer spending on internet access will bring in the most revenue rising from £13Bn this year to £16bn by 2022. In 2018, for the first time, consumers spent more on mobile internet access than fixed broadband access. PwC now expects smartphone ownership in the UK to hit more than 70 million and, as a result, mobile internet access is forecast to account for more than half of overall internet access revenue in four years' time.[6]

PwC said advertising revenue will account for a quarter of total E&M revenue by 2022, with digital spend continuing to dominate growth. Internet advertising spend will grow from £10.5Bn in 2018 to £14.3Bn by 2022. Further, data consumption in the UK will grow by 22 per cent year-on-year till 2022 and PwC expects the UK's internet access revenue to overtake France in 2021 to become the biggest market in Western Europe. The report also found that The UK's virtual reality sector remains the fastest growing E&M segment with 34 per cent CAGR forecast over the next four years. With more than 7.8m VR headsets forecast to be cumulatively sold in the UK by 2022, PwC expects the virtual reality industry will be worth £1.2Bn.

In the *Canadian* market, by 2021, 50% of companies will have matured their digital KPIs to align to business value measures. Also, the AI Hype reaches breaking point in 2020 - creates new foundation for Canadian market growth. Expected increases in productivity fuel significant investments in "Digital Coworkers" in 2020. Edge marketing went mainstream in 2019, but adoption ramps up in 2020.

By 2024, half of enterprise applications will be deployed in a containerized hybrid cloud/multi-cloud environment. By 2022, 75% of Canadian partners will have created or acquired the ability to develop custom or packaged software. Third-party partner cybersecurity risk assessments become critical in 2020 and Ubiquitous Internet of Things (IoT) is expected to be the new normal for 2020. Also, 2020 is

[3] Ibid.
[4] Trends in U.S. Trade in ICT Services (May 2016), p.2
[5] Ibid.
[6] www.insider.co.uk

expected to see the start of new smart home reality in Canada.[7] Finally, 5G Splash in 2020 is expected to lead to rollout of commercial services in 2021 in Canada.[8]

The trends of the ICT sector of the 2010s have been interrupted by the global COVID-19 pandemic and the full severity of the impact is yet to be determined. While the ICT sector is likely to weather this storm better than most sectors, it is still expected to see a significant decline in sales (IDC estimates a fall of 7.0% in Canada) creating challenges for many ICT firms. Even though all firms are not facing reduced sales, all are challenged by shifting demand, strained supply chains and altered working arrangements. Fortunately, the ICT sector is well positioned to benefit from the economy-wide recovery as demand is expected to reflect accelerating adoption of technology solutions and private and public investments in digital infrastructure.[9]

The global information technology industry is on pace to reach $5.2 trillion in 2020, according to the research consultancy IDC. The enormity of the industry is a function of many of the trends. Economies, jobs, and personal lives are becoming more digital, more connected, and more automated. Waves of innovation build over time, powering the technology growth engine that appears to be on the cusp of another major step forward. The *United States* is the largest tech market in the world, representing 32% of the total, or approximately $1.7 trillion for 2020. In the U.S., as well as in many other countries, the tech sector accounts for a significant portion of economic activity. CompTIA's Cyberstates (http://www.cyberstates.org/) report reveals that the economic impact of the U.S. tech sector, measured as a percentage of gross domestic product, exceeds that of most other industries, including notable sectors such as retail, construction, and transportation.[10]

CompTIA projects the global information technology industry will grow at a rate of 3.7% in 2020. The optimistic upside forecast is in the 5.4% range, with a downside floor of 1.9%. Growth expectations for the U.S. market are in line with the global projection. As the largest tech market in the world, U.S. forecasts and global forecasts are inextricably linked. This is a narrower forecast range than what has been seen in past years, meaning industry executives are exercising a relatively high degree of caution in an unpredictable environment.[11]

[7] https://www.idc.com/
[8] https://www.idc.com/getdoc.jsp?containerId=CA44463319
[9] http://www.ic.gc.ca/eic/site/ict-tic.nsf/eng/h_it07229.html
[10] IT industry outlook 2020: Taking the Next Step (November 2019) https://www.comptia.org/
[11] Ibid.