The Adoption of Digital Technology by Canadian Small and Medium-sized Enterprises

The Canadian Internet Registration Authority (CIRA)

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The Canadian Internet Registration Authority (CIRA) is the organization that manages the .CA domain space on behalf of all Canadians.

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THE ADOPTION OF DIGITAL TECHNOLOGY BY CANADIAN SMALL AND MEDIUM-SIZED ENTERPRISES

INTRODUCTION

The Internet has become the global driver of a new, knowledge-based economy, and it has radically altered the ways in which we communicate with each other. It is a tool that enables any business, located anywhere in Canada, to offer their products and services to an international audience. It plays a critical role in the Canadian economy, contributing more to the nation’s Gross Domestic Product (GDP) than traditionally ‘Canadian’ industries like forestry. Furthermore, Canadians are among the most active and heavy users of the Internet.

However, small and medium-sized enterprises (SMEs), the backbone of the Canadian economy, are slow to adopt the Internet for their business. The adoption and use of Information and Communications Technologies (ICT), in particular Internet technologies, has the potential to strengthen Canadian small and medium sized enterprises (SMEs), by providing tools to meet the needs of the domestic market online, enable access to an increasingly global marketplace and leverage Canadian SMEs as a destination for foreign investment.

According to one participant at the CIRA-coordinated Canadian Internet Forum (CIF) in 2012:

“The Internet lets any small business go international from anywhere in this country. I’ve heard of small remote places in Quebec who started sites for tourism and other local-based activities. Without the Internet this simply would not happen.”

In 2013, CIRA worked with the Strategic Counsel to conduct a national survey for two reasons: first, to understand the nature and make-up of Canadian SMEs, and second, to gauge the extent to which online Canadian SMEs are utilizing Internet technologies for their business. The findings of this survey are summarized in this paper, published as part of the Canadian Internet Forum.

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WHO ARE CANADA’S SMEs?

In 2013, small businesses make up more than 98 per cent of employer businesses in Canada with medium-sized businesses accounting for an additional 1.6 per cent. SMEs employed about 10 million Canadians in 2013, accounting for almost 90 per cent of employees in Canada.²

CIRA’s research provides a breakdown of the profile of Canadian SMEs with an Internet presence:

- Most online business leaders own their business as a sole-proprietorship or with partners (62 per cent), 27 per cent are employers (small to medium businesses) and 11 per cent are employees responsible for formulating/managing Internet policies within their organization.
- By sector, 18 per cent operate in professional, scientific or technical services and 11 per cent in other services. Thirteen per cent are in retail.
- The majority (75 per cent) of Canadian SMEs operate in Canada only.
- Most business decision makers are male (60 per cent), 45-64 years of age, and have graduated from university at the undergraduate or graduate level.

STATE OF THE DIGITAL NATION

Canada is a highly connected nation. As an early adopter of Internet technologies, Canada has among the highest Internet penetration rates in the world – 87 per cent of Canadian households are connected to the Internet (ranking second among its G8 counterparts, behind only the United Kingdom).³

Those households that are connected spend more time online than the rest of the world. According to a 2014 comScore report, Canadians visit the most web pages visited per month (3,731), the highest in the world. They also ranked a close second behind the United States for the average number of hours spent online per user (41.3 hours per month). The fact is Canadians are among the world’s most engaged and savvy online users.⁴

Canada’s ICT economy accounted for $49 billion in 2010, roughly three per cent of Canada’s GDP, more than twice as much as the value of forestry to the Canadian economy and more than tourism.⁵ Our nation’s Information and communications technology (ICT) economy is expected to grow by 7.4 per cent per year through 2016 to a value of approximately $75

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billion. An info- graphic demonstrating the value of the Internet to the Canadian economy is in Appendix C.

While substantial, this three per cent contribution falls short of the G20 GDP average of over four per cent. Compared to Canada’s G20 peers, Canada ranks ninth, and our ranking continues to slip.

**INTERNET CONNECTIVITY AND ADOPTION FOR SMEs**

The ICT industry is dynamic and global. The predominant technology today may be obsolete in the near future. In its 2013 survey, CIRA asked respondents how they are connecting to the Internet:

- Internet access via mobile is common, especially among business decision-makers. In fact, SME leaders are more likely to connect to the Internet with three or four devices, versus the average Canadian Internet user who connects with only one device.
- One-fifth of SME leaders (21 per cent) spend more than 30 hours a month online. Comparatively, 26 per cent of Internet users spend more than 30 hours a month online.

CIRA also asked respondents how they thought they would access the Internet in two years:

- Desktop users are most likely to anticipate an increase in apps and key words into the address bar.
- In two years, tablet users are most likely to anticipate a rise in apps.
- One-third of mobile and tablet users anticipate that in two years they will be using apps to access the Internet more often.
- Both Internet users and business decision-makers anticipate an increase in tablet and mobile Internet use over the next two years, making the issue of broadband speed and price that much more critical.

**WHAT DO CANADIANS DO ONLINE?**

CIRA’s research shows what Canadians, and Canadian businesses, do online:

- The primary activity for the average Internet user remains email (89 per cent), followed by banking (69 per cent) and hobbies/personal interests (64 per cent).
- Email and banking are both steadily declining as reasons for using the Internet among Internet users (from 95 per cent and 81 per cent respectively in 2010).
- Online video calling services like Skype and Facetime are one of the fastest growing reasons online activities for Canadians (from 10 per cent in 2010 to 29 per cent in 2013) as is playing games (from 26 per cent in 2010 to 54 per cent in 2013).
- Comparatively, the primary online activity for SMEs is also email (89 per cent), followed by banking (79 per cent) and product research (73 per cent).
The Adoption of Digital Technology by Canadian Small and Medium-sized Enterprises

An info-graphic depicting Canadians’ Internet activities by device used can be found in Appendix D.

Interestingly, online shopping scored low on this list. The fact is, Canadian business have not been as successful with online shopping as most of its international counterparts. Canadians do, however, shop online (albeit ‘cross border’ shopping in many cases). In 2012, Canadians spent $22.3 billion online (3.4 per cent of total retail sales). While this is significantly less than other developed countries such as the United States (five per cent) and the United Kingdom (13.5 per cent), per capita Canadians lead Americans in online shopping (50 per cent of Canadians have used the Internet to order a good or service versus one third of Americans).  

While Canadians are heavy users of the Internet, Canadian businesses have been slow to develop an online presence, perhaps due to the low demand on behalf of Canadian shoppers. Only 45.5 per cent of Canadian businesses have a website, and for Canadian small businesses, this number drops to 41.1 per cent. This stands in stark contrast to the 91 per cent (2007 statistic) of large Canadian businesses that have a website.

Canadian retailers are lagging behind their international counterparts in this regard, and it is costing them. While the online retailers experienced what has been called a “breakout” holiday shopping period in 2013, a substantial amount of those transactions took place with American companies. Nearly two-thirds (63 per cent) of Canadian online shoppers made ‘cross border’ purchases from the U.S.

Canadians also tend to engage in ‘Internet-assisted’ shopping, such as ‘webrooming’ and ‘showrooming’. In a 2013 survey, 63 per cent of Canadians stated that they ‘showroomed’; that is, they used a physical store to research a product before purchasing it online. In the same survey, 74 per cent of Canadians stated they have engaged in ‘webrooming’; that is, researching a product online before purchasing it in-store. Mobile use while shopping is also becoming commonplace for Canadians with shopping, with 30 per cent indicating that they use their mobile device to help with their in-store shopping.

CIRA’s research shows that 89 per cent of Canadian SMEs do not sell their product or service online. With global e-commerce valued at $1.2 trillion in 2013 and a growing number of

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6 The Globe and Mail (May 12, 2012). “What keeps online retail in Canada from clicking?”


8 Yahoo (February 18, 2014). “Canadian online retail experienced ‘monster’ 2013 holiday season: report”

9 Accenture. Accenture Holiday Shopping Survey Reveals Canadians are “Webrooming” and “Showrooming” to Save Money.

10 e-Marketer (June 27, 2013). "B2C Ecommerce Climbs Worldwide, as Emerging Markets Drive Sales Higher"
Canadians using the Internet for retail transactions, SMEs could be missing out on an enormous opportunity to grow their business by utilizing Internet technologies.

**WHO IS THE CANADIAN INTERNET REGISTRATION AUTHORITY?**

The Canadian Internet Registration Authority (CIRA) is the organization that manages the .CA domain space, Canada's identity in the Internet's global Domain Name System (DNS), on behalf of all Canadians.

CIRA takes an active interest in policies that support Canada's Internet community and is an engaged participant in international Internet governance fora.

Started by volunteers at the University of British Columbia, the .CA domain was officially transferred to CIRA in December 2000. .CA has since grown rapidly to become one of the world’s largest country code Top-Level Domains (ccTLDs) with more than 2.2 million domains under management.

**WHAT IS THE CANADIAN INTERNET FORUM?**

The Internet has become an integral piece of the social and economic fabric of Canada. It belongs to all of us, and affects all aspects of the lives of Canadians. The Canadian Internet Forum (CIF) provides Canadians with an opportunity to have our voices heard about how we want to see it develop.

The CIF is a national discussion about Canada's Internet future, hosted by the Canadian Internet Registration Authority (CIRA). It consists of in-person meetings, a national event that brings together Canada's Internet leaders and a year-round discussion in social media on topics of interest to Canadians, including:

- Digital literacy.
- Cyber-security.
- Internet governance.

Results from the CIF are shared annually at a national event in Canada, are published in a report that is made available publicly, and are shared at the United Nations-coordinated Internet Governance Forum.

More information about the CIF can be found at [http://cif.cira.ca/](http://cif.cira.ca/).
APPENDIX A: TERMINOLOGY

Country Code Top-Level Domain: A top-level domain generally used by or reserved for a country.

Domain Name System (DNS): The Internet service that translates domain names, such as cira.ca, into IP addresses, such as 192.228.29.1, in order that computers can communicate with each other. The DNS underpins the functionality of the Internet.

Information and Communications Technologies (ICT): Technologies that provide access to information, utilizing telecommunications infrastructure. Generally, ICT includes wireless and cellular networks, the Internet and other communication mediums.

Registry: A database of all domain names registered in a top-level domain. CIRA runs the registry for .CA domain names. A registry operator, such as CIRA, is the part of the DNS that generates the zone files which convert domain names to IP addresses.

Showrooming: Refers to a behaviour where a customer uses a physical store to research a product before purchasing it online.

Top-level domain: The domains at the highest level in the hierarchical DNS. It is the information at the right of the dot in a website address. .CA is a top-level domain.

Webrooming: Refers to a behaviour where a customer researches a product online before purchasing it in-store.
APPENDIX B: BROADBAND SPEED AND PRICE

INTERNET SPEEDS AND COSTS AROUND THE WORLD

Average Download Speeds (mbps)

- 0.10
- 31-59
- 60-90
- 91+

- Nation
- Average advertised download speeds (mbps)
- Cable broadband price changes (Sept. 2010 - Sept. 2012)
- Cable broadband speed changes (Sept. 2010 - Sept. 2012)
APPENDIX C: CANADA’S INTERNET ECONOMY

50% of online Canadians used the Internet to order a good or service in 2012. In the U.S., only 33% have done so.
APPENDIX D: WHAT ARE CANADIANS DOING ONLINE (BY DEVICE)?

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<th>Device</th>
<th>Activity</th>
<th>Desktop</th>
<th>Laptop</th>
<th>Tablet</th>
<th>Mobile</th>
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<td>1 Playing games</td>
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<td>2 Social media</td>
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<td>3 General browsing</td>
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<td>3 Taking/editing photos</td>
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